

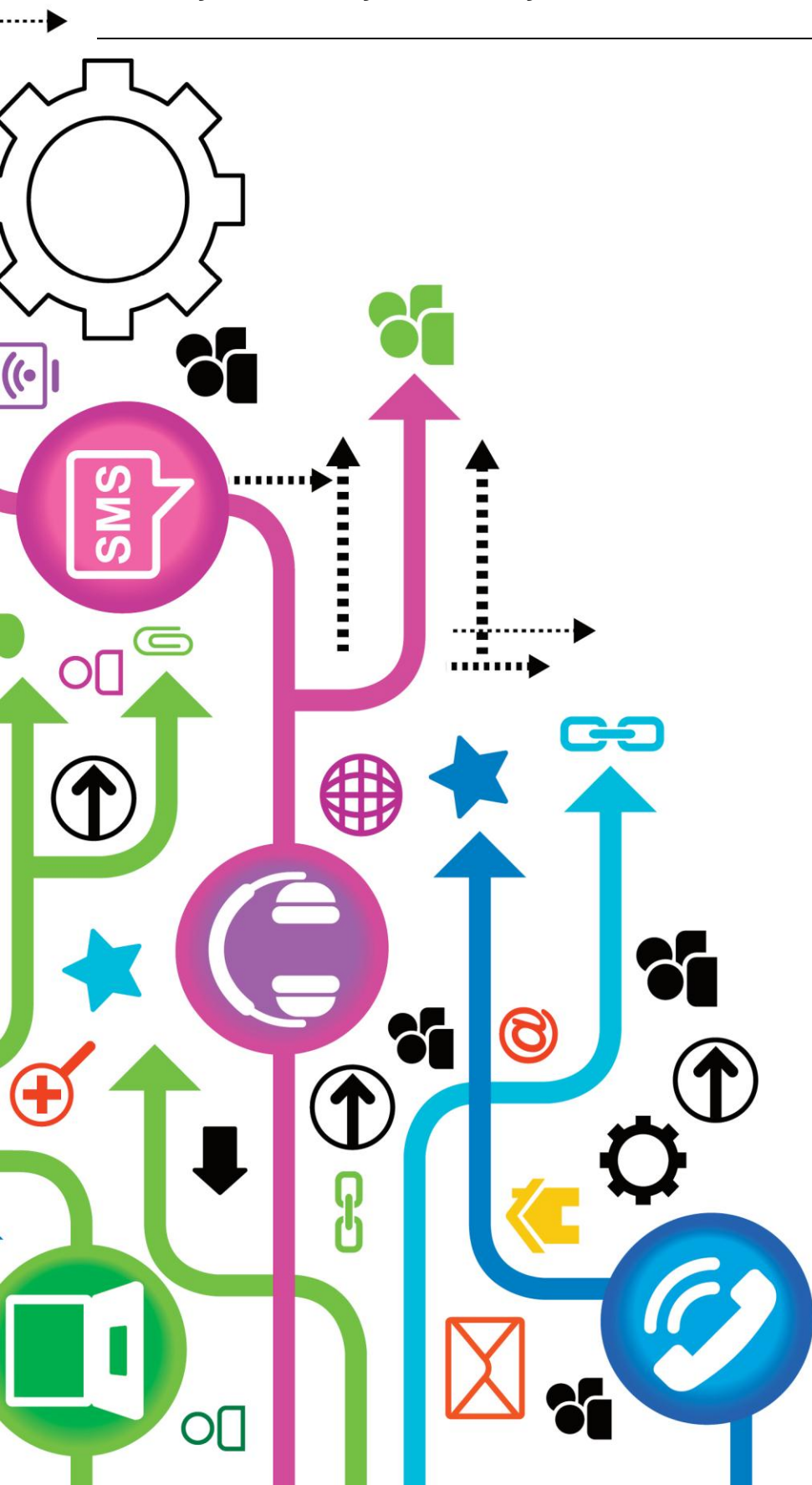
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2012

# Electronic Communication Sector Comparative Assessment

*Turkey – Country Summary*

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**European Bank**  
for Reconstruction and Development

European Bank for Reconstruction and Development (EBRD)

# 2012 Electronic Communications Sector Comparative Assessment

Turkey

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## **0: EXECUTIVE SUMMARY**

This report presents the results of an assessment of the legal and regulatory frameworks for the electronic communications markets in 31 current and prospective countries of operation of the European Bank for Reconstruction and Development (EBRD). The results indicate that the legal and regulatory risk associated in investing in the sector varies considerably from country to country. This investment risk is higher in some countries than others largely because they have not yet implemented many of the components of legal and regulatory best practice for the electronic communications sector that are now common features in lower risk countries.

The information society model used in the European Union (EU) already embraces proven best practices for the electronic communications sector. Clear policy objectives for high speed broadband for all EU citizens are implemented in fully competitive markets in all EU member states. The EU framework encourages investment and provides effective consumer and investor safeguards. Competitively neutral state subsidies are also available as part of the overall EU best practice framework in order to help private sector investment build networks into the more remote areas.

In this assessment countries with the highest legal and regulatory risk are those where the most important aspects of best practice are absent. Those aspects include:

- Slow progress in fulsome implementation of market liberalisation, characterised by policy and state-ownership conditions that still favour incumbent operators over new market entrants.
- Slow progress in the implementation by national regulators of effective competitive market safeguards. The necessary steps here range from the relatively simple introduction of number portability and the removal of tariff subsidies, to the more complex regulatory mechanism of obliging dominant incumbent operators to give new market entrants access to existing telecommunications infrastructures in order to provide a competitive choice of modern services to consumers.
- The lack of adoption by policy makers and regulators of modern spectrum management methods to ensure that sufficient spectrum is available to satisfy market needs. The lack of available spectrum in some countries is likely to become a major concern, given the very high market demand for modern high speed internet and data services (mobile and fixed broadband services).

The main recommendation of this report on assessment is for the countries which are lagging behind to accelerate the adoption of legal and regulatory best practice. Existing market players and new entrants will benefit from better laws and regulations that are now common features in low-risk countries. Modern digital technologies can free up the previously monopolistic networks and give better consumer choice, quality and value for money, as well as driving innovation. More specific recommendations are to:

- Improve the speed and effectiveness of high-level decision making in the electronic communications sector by ensuring that sector policy is precise, more clearly stated and relevant to a broadband-enabled society.
- Improve the independence of regulation in the sector so that the decisions of the regulatory agencies are taken on the merits in a manner which fairly balances the interests of sector stakeholders, principally the consumers and investors. This often involves use of a transition to a “lighter touch” in regulation, leaving the decisions to the market, via consumer and investor choice (though the timing of such a transition will depend upon the maturity of the market in question).
- Remove unnecessary market entry barriers, such as lack of available spectrum and the requirement to obtain a licence even when scarce resources are not used, to better support market growth.
- Implement the normally expected competitive market safeguards so that consumers have more market choices and also that operators have greater and fairer wholesale access to existing infrastructures.
- Support “broadband for all” policies, bringing the benefits of the information society to all citizens, including, where necessary, appropriate, non-distortionary, state subsidies to encourage private investors to expand high speed infrastructures into the more remote areas.

# 1: BACKGROUND AND OBJECTIVES

## 1.1 Background

Under the Legal Transition Programme of the European Bank for Reconstruction and Development (the “EBRD” or the “Bank”), the Bank's Legal Transition Team has focused part of its work on the development of detailed analytical assessments of the state of legal transition in a number of commercial and financial sectors of its countries of operation. These assessments benchmark the developments in these sectors in each country against recognised international best practices, providing analysis of the existing legislative framework, comparison of that framework with best practice and the identification of gaps and legal and regulatory reform needs.

During 2012, as part of this programme of assessments, the EBRD undertook an evaluation and comparative analysis of the electronic communications sector of 31 current and prospective countries of operation (the “Assessment”)<sup>1</sup>. The electronic communications sector in this context refers to the market for the supply of electronic communications services, principally across fixed or mobile platforms, or a combination of both. The countries which are the subject of Assessment are: Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Croatia, Egypt, Estonia, FYR Macedonia, Georgia, Hungary, Jordan, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Moldova, Mongolia, Montenegro, Morocco, Poland, Romania, Russia, Serbia, Slovak Republic, Slovenia, Tajikistan, Tunisia, Turkey, Turkmenistan and Ukraine.

To prepare this Assessment report, EBRD contracted international consultants Premiere Dynamics Limited<sup>2</sup> and Great Village International Consultants Inc.<sup>3</sup> (the “Consultant”), with contributing assistance from Cullen International<sup>4</sup> and other sector specialists<sup>5</sup>.

The results from the Assessment are available in this report and on the EBRD web site ([www.ebrd.com/law](http://www.ebrd.com/law)).

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2 Premiere Dynamics Limited is an independent consultancy specialising in information and communications technology. Contact [peter.lundy@btopenworld.com](mailto:peter.lundy@btopenworld.com)

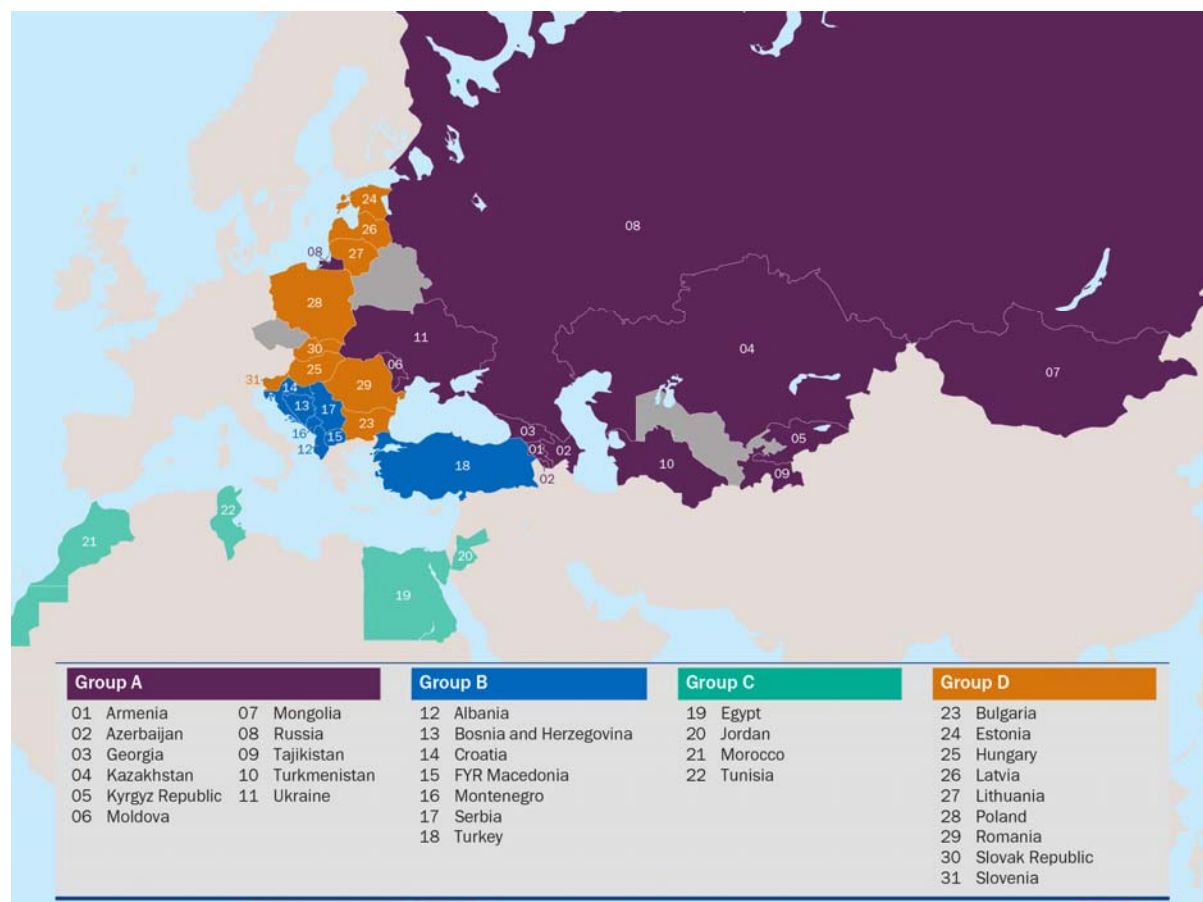
3 Great Village International Consulting Inc. ([www.greatvillage.com](http://www.greatvillage.com)) – contact [wburnfield@greatvillage.com](mailto:wburnfield@greatvillage.com) provided legal analysis for Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Croatia, Egypt, FYR Macedonia, Georgia, Jordan, Kazakhstan, Kyrgyzstan, Moldova, Mongolia, Montenegro, Morocco, Russian Federation, Serbia, Tajikistan, Tunisia, Turkey, Turkmenistan and Ukraine.

4 Cullen International SA ([www.cullen-international.com](http://www.cullen-international.com)) provided data and analysis on Albania, Bosnia and Herzegovina, Croatia, Egypt, FYR Macedonia, Jordan, Morocco, Montenegro, Serbia, Tunisia and Turkey. Contact [Philippe.Defraigne@cullen-international.com](mailto:Philippe.Defraigne@cullen-international.com)

<sup>5</sup> The Consultant also acknowledges the contributions made by the independent lawyers Ms Marina Gudtseva and Mr Dieter Kronegger, also Mr Djuro Otaseviov Law firm Nikolic Kolanovic Otasevic, Mr Steven Rawson of ICTLawyers and Mr Armen Ghalumyan.

## 1.2 Participant countries

The 31 countries participating in the 2012 Assessment are divided into four geographical groupings:



## 1.3 Objectives of the Assessment

The primary focus of the Assessment is to examine the conditions in place in the countries assessed that influence the decisions of investors in the electronic communications sector as to whether they will invest, or continue to invest, in the sector. The methodology of the Assessment is therefore an examination of whether the legal and regulatory frameworks for electronic communications in the Bank's countries of operation are sufficiently effective to secure fundamental sector transition and reform objectives. It therefore measures the state of play in the sector (such as level of approximation of local laws/regulations to recognised international standards, the level of implementation of regulatory reforms, etc.).

Through the Assessment, the EBRD also wishes to be in a position to assess the effectiveness of its technical cooperation efforts (in those countries where it has been active in this respect) as well as identifying new or additional technical cooperation that could be provided in furtherance of the Bank's mandate.

The specific objectives of the Assessment are:

- To define a best practice legal and regulatory framework that applies to a modern, competitive market for electronic communications.
- To compare the legal framework that exists in each participant country with defined best practice.
- To compare the implementation of the regulatory framework in each participant country with defined best practice.
- To produce a measure of legal/regulatory risk faced by investors in each country.
- To make recommendations that will move countries closer to a best practice legal and regulatory framework for the electronic communications sector.

## **1.4 The electronic communications sector**

The focus of this report is the market for electronic communications, which includes fixed-line telephony and mobile communications services. The market also now includes broadband services, which provide consumers with digital capacity that enables voice, internet and broadcast services to be delivered to fixed connections (fixed broadband) and mobile users (mobile broadband).

The legal and regulatory frameworks which relate to the market that supplies and uses these services have undergone significant changes since the latter part of the 20th century. These changes have been driven by the rapid development of digital technologies and the internet. The traditional telecommunications and broadcast media services markets are being transformed by the influences of these technological developments. In particular, the traditional model of state-owned monopoly telecommunications and broadcasting supply has been largely replaced by the more sophisticated competitive supply of fixed and mobile services to meet the more sophisticated consumer demands for better quality services, mobility and higher speed of internet access.

The speed at which the electronic communications markets have been transformed has varied from country to country. One of the significant determinants of the speed of transition from monopolistic to competitive markets has been the progress made by each country's policy makers in adopting the enabling legal and regulatory frameworks. To put in place modern digital network infrastructures and competitive service delivery, the legal and regulatory frameworks need to be enablers, not barriers to investment. Investors, whether existing operators or new market entrants, require confidence in the legal and regulatory framework to induce them to invest. Since the wave of privatisations across the electronic communications sector in the 1990's and 2000's, the majority of investments in the sector are now private sector investments.

This Assessment takes an investor's perspective in examining the legal and regulatory framework for the electronic communications sector in each of the 31 participant countries. Where a country has a framework that is close to best practice, investors can be confident in the legal and regulatory conditions. With respect to these conditions, an investor can consider the electronic communications market to be low risk. Where the regulatory framework differs significantly from best practice, investors will be less confident and the risk will be higher, so the resulting investment is likely to be lower.

The results of the Assessment apply only to the electronic communications markets and in the context of the perceived investment risk in the legal and regulatory conditions applying to those markets.



## 2: ASSESSMENT METHODOLOGY

### 2.1 Taking an investor's view

The Assessment has studied the legal and regulatory conditions applying to the electronic communications sector in a wide variety of national markets. Investors take into account many factors before they decide whether to invest or not. This Assessment looks only at those factors which could influence their view on the legal and regulatory risk evident in the electronic communications sector in each country.

To conduct the Assessment, the legal and regulatory conditions have been examined in comparison with what investors would generally consider to be legal and regulatory best practice applying to the electronic communications sector. This approach attempts to put a value on how much legal and regulatory risk they face in each country, compared to a country where a best practice legal and regulatory framework is applied.

The countries with the highest implementation of best practice in the electronic communications sector present the lowest legal/regulatory risk to investors in that sector. The countries where best practice is not generally evident present the highest legal/regulatory risk to investors.

This section of the Assessment report provides a definition of legal and regulatory best practice in the electronic communications sector. It also describes the methodology for assessing the evidence of implementation in each country. In total there were eight components of legal evidence that were sought and five components of regulatory evidence, which together were used in the overall legal/regulatory risk Assessment.

This section also describes how numerical values have been placed on the degree of compliance of the country with the various benchmarks of legal and regulatory best practice, taking account of the eight legal components and five regulatory components. Lastly, the methodology describes how the various components have been weighted and combined to produce the overall legal/regulatory risk result.

### 2.2 What is legal and regulatory best practice in today's electronic communications sector?

The starting point for the legal and regulatory benchmarks used in the Assessment is the World Trade Organisation (WTO) 1997 reference paper<sup>6</sup>, which was used by WTO members to open their markets for telecommunications services. In addition to the WTO principles, the next descriptor of legal/regulatory best practice is the found in the European Union (EU), whose member states have implemented a harmonised and effective legal and regulatory framework since 1998 based on the 1997 WTO open market principles. Competitive markets now exist within each of the EU's current 27 member states.

The EU's legal and regulatory framework (or "*acquis communautaire*"- the accumulated legislation, legal acts and court decisions that constitute the body of European Union law) has been adopted in the legal acts in each EU member state.

Many non-EU countries have also decided to implement the EU framework. Croatia has already fully adopted the framework in full preparation for its anticipated entry into the EU in 2013. Another six countries included in the Assessment are either EU candidate or potential EU candidate countries (Albania, Bosnia and Herzegovina, FYR Macedonia, Montenegro, Serbia and Turkey). Their progress towards full implementation is monitored regularly by the EU's executive arm, the European Commission. The latest progress report "Supply of services in monitoring regulatory and market developments for electronic communications and information society services in Enlargement Countries<sup>7</sup>" has been used extensively in this Assessment because it describes all the detailed evidence of implementation across a range of legal and regulatory developments in all the EU candidate and potential candidate countries.

In some other countries, notably Armenia, Azerbaijan, Egypt, Georgia, Jordan, Moldova, Morocco, Tunisia and Ukraine, some progress towards the implementation of the EU legal and regulatory framework has

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<sup>6</sup> [http://www.wto.org/english/tratop\\_e/serv\\_e/telecom\\_e/telecom\\_posturuguay\\_neg\\_e.htm](http://www.wto.org/english/tratop_e/serv_e/telecom_e/telecom_posturuguay_neg_e.htm)

<sup>7</sup> [www.cullen-international.com/cullen/main.htm](http://www.cullen-international.com/cullen/main.htm)



been initiated including actions resulting from various bi-lateral/multi-lateral initiatives, namely the European Neighbourhood Policy<sup>8</sup> (ENP) and Eastern Partnership<sup>9</sup> (EaP).

In the remaining six countries of this Assessment (Kazakhstan, Kyrgyz Republic, Mongolia, Russia, Tajikistan, Turkmenistan) some features of legal and regulatory best practice have been adopted. For example, Russia has recently made significant amounts of spectrum available in order for competing operators to develop the market for high speed broadband services. In all countries, there are some features of best practice implementation, for example in ensuring that competing operators interconnect. However, many components of legal/regulatory best practice are not fully implemented in these countries. Notably absent are:

- A modern system of market definition and market analysis leading to proportionate market remedies for lack of competition.
- A modern cost basis for interconnection and infrastructure access charges.
- The removal of regulatory licensing barriers when there are no scarce resources involved.

The same evidence of progress towards legal/regulatory best practice for the electronic communications markets has been collected for all the countries of this Assessment.

### **2.3 Definition of best practice for legal/regulatory principles and implementation in the electronic communications sector**

The Assessment considers key components of the electronic communications legal and regulatory framework of the countries studied as measured against the same key components of international best practice. The context of the Assessment is the overall legal and regulatory risk faced by investors in the sector. This focus means that the key components selected are related to the reliability of the legal and regulatory framework (in terms of legal and regulatory certainty and risk) as perceived by investors. In their eyes, the legal and regulatory framework needs to provide an enabling, not a restricting environment. The framework needs to provide ease of market entry, with no artificial legal/regulatory barriers. The framework also needs effective competitive safeguards to ensure that incumbent dominant players do not have more rights than new entrants and do not use their market position to limit consumer choice or to erect barriers to competitors.

Legal and regulatory best practice therefore supports investment and competition. The WTO Reference Paper provides the starting principles for a best practice legal framework. The WTO framework has been chosen because nearly all the countries in the Assessment are members (or candidate members) of WTO and are therefore committed to open and liberalised markets.

The EU electronic communications framework provides the key features of best practice for the legal and regulatory implementation of the WTO principles. The EU framework has been chosen because the significant majority of the countries assessed have already adopted, or are making progress towards adopting it.

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<sup>8</sup> [http://ec.europa.eu/world/enp/index\\_en.htm](http://ec.europa.eu/world/enp/index_en.htm)

<sup>9</sup> [http://eeas.europa.eu/eastern/index\\_en.htm](http://eeas.europa.eu/eastern/index_en.htm)

## The WTO principles relating to the electronic communications sector

In 1997 a total of 70 countries agreed to open their markets for basic telecommunications services in a multilateral agreement. Since then, more countries have become WTO Members and/or signatories to the agreement on basic telecommunications services<sup>10</sup>. The agreement itself is complex and allows each signatory to define its own set of commitments, for example, which services can be open for international competition, the categories of business models that would be allowed and whether to extend these commitments to other countries or not, through “most-favoured-nation” clauses.

The WTO agreement also includes provisions for how this international competition should be regulated. This is done through a “Reference Paper”<sup>11</sup>, which defines a set of regulatory principles for the establishment of fair market conditions. In the context of the trade negotiations that took place, the countries were given the choice of making a formal commitment to accept the Reference Paper. Most WTO Members made this commitment. From a legal point of view, a commitment to the Reference Paper means that it is part of the international treaty and therefore binding on the WTO Members.

The WTO Reference Paper itself is a short document that sets out rather broad and general principles that have achieved a high degree of consensus. Its main points are:

### Competitive safeguards

- Prevention of anti-competitive practices.
- Safeguards, including with respect to the use of consumer and technical information and the removal of anti-competitive cross subsidies.

### Interconnection

- Interconnection to be ensured.
- Public availability of the procedures for interconnection negotiations.
- Transparency of interconnection arrangements.
- Interconnection dispute settlement.

### Universal service

- Obligations that are transparent and not anti-competitive.

### Public availability of licensing criteria

- Timely decisions and reasons for denial.
- Publicly available licence conditions.

### Independent regulators

- Independence from operators.
- Impartial decisions and procedures.

### Allocation and use of scarce resources

- Any procedures for the allocation and use of scarce resources, including frequencies numbers and rights of way, will be carried out in an objective, timely, transparent and non-discriminatory manner.
- Published spectrum allocations.

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<sup>10</sup> The full name of the agreement is Scheduled Commitments on basic telecommunications services annexed to the Fourth Protocol of the GATS (15 February 1997)

<sup>11</sup> [http://www.wto.org/english/tratop\\_e/serv\\_e/telecom\\_e/tel23\\_e.htm](http://www.wto.org/english/tratop_e/serv_e/telecom_e/tel23_e.htm)

## The EU framework for electronic communications

Technology and market developments, particularly in the latter part of the 20th century in electronic communications, gave rise to the development of a new regulatory framework within the EU. Its main aim was to strengthen market competition by making market entry easier and by stimulating investment in the sector. In 1998 all EU member states brought into force European legislation to liberalise their electronic communications markets. Since 1998 a number of additions to the EU framework have been made to improve competition and investment and to encourage a single European market. These measures (which have the status of legal directives that have to be adopted by all member states) have collectively been referred to as the “EU 2003 regulatory framework for electronic communications” and the “EU 2009 regulatory framework for electronic communications”.

The EU 2003 regulatory framework for electronic communications consists of five directives and provides the legal and regulatory basis for the development of competitive markets for telecommunications services. The five directives are:

**Framework Directive 2002/21/EC** contains the legal basis for independent regulatory authorities which regularly analyse the electronic communications markets, based on the principles of European competition law, and adopt necessary remedies when they identify market failures.

**Access Directive 2002/19/EC** describes in more detail the obligations that national regulatory authorities may impose on operators with significant market power (SMP) to ensure competition. In particular, SMP operators can be required to grant access to their networks and services under non-discriminatory, transparent and cost-oriented conditions.

**Authorisation Directive 2002/20/EC** ensures that everybody can provide electronic communications networks and services without requiring a licence and without paying inappropriate fees or taxes. This framework of general authorisation ensures easy market access and creates a competitive environment.

**Universal Service Directive 2002/22/EC** ensures that a basic set of electronic communications services is available in the whole country, even where it would not be provided in an open and competitive market. This directive also contains many consumer protection provisions.

**Privacy and Electronic Communications (e-Privacy) Directive 2002/58/EC** protects the personal data of users and subscribers of electronic communications networks and services.

In 2009 the European Union amended the above directives, without changing the main objectives (directives 2009/136/EC and 2009/140/EC). The amended directives are collectively called the EU 2009 regulatory framework for electronic communications and include the following main reforms:

- The right of European consumers to change, in one working day, their fixed or mobile operator while keeping their old phone number.
- Better consumer information.
- Protecting citizens' rights relating to internet access by a new internet freedom provision.
- New guarantees for an open and more "neutral" network.
- Consumer protection against personal data breaches and spam.
- Better access to emergency services and 112 emergency number.
- Greater independence for national telecoms regulators.
- A new European Telecoms Authority (called BEREC<sup>12</sup>) that will help ensure fair competition and more consistency of regulation.
- New European Commission opinion on the competition remedies for electronic communications markets.
- Functional separation of operators as a remedy to overcome competition problems.
- Accelerating broadband access for all Europeans.
- Encouraging competition and investment in next generation access networks.

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12 The Body of European Regulators for Electronic Communications <http://berec.europa.eu/>

Components of EU 2003 and 2009 Regulatory Frameworks<sup>13</sup>

EU 2003 Regulatory Framework	EU 2009 Regulatory Framework
Framework Directive 2002/21/EC Access Directive 2002/19/EC Authorisation Directive 2002/20/EC	Amended by: Better Regulation Directive 2009/140/EC
Universal Service Directive 2002/22/EC Privacy and Electronic Communications (e-Privacy) Directive 2002/58/EC	Amended by: Citizen's Rights Directive 2009/136/EC
Competition Directive 2002/77/EC	Not amended
Radio Spectrum Decision 676/2002/EC	Not amended
-	BEREC Regulation EC/1211/2009

## 2.4 Converting the best practice principles and frameworks into a set of assessment criteria.

The legal and regulatory principles and implementation frameworks of the WTO and EU have been referenced in this Assessment because they have been widely recognised as best practice. Nearly all the countries of the Assessment are WTO members or candidate countries and the majority have already adopted or taken steps toward the adoption of the EU regulatory framework.

### Legislative benchmarks for best practice

The legislative benchmarks have been defined with reference to the WTO principles and the implementation experience of the EU regulatory framework.

There are eight key benchmarks used in the legal framework part of the Assessment, which are summarised in the table below. For each benchmark, the situation in each country is compared with legal best practice to provide a score. To make up the overall legal component of the Assessment, these individual scores are weighted by the percentage shown in the table.

These percentages have been chosen to reflect the importance attached to the benchmark by investors. For example, the legal requirement for a regulator to make independent decisions based on clear evidence-based market analysis is highly valued by investors, because it gives them confidence that the regulator is concerned only with the best interests of the market, not other political or bureaucratic interests. For this reason the components concerned with regulatory independence, market analysis and enforcement are given the highest ratings.

<sup>13</sup> [http://europa.eu/legislation\\_summaries/information\\_society/legislative\\_framework/l24216a\\_en.htm](http://europa.eu/legislation_summaries/information_society/legislative_framework/l24216a_en.htm)

## Legal benchmarks, weightings and components

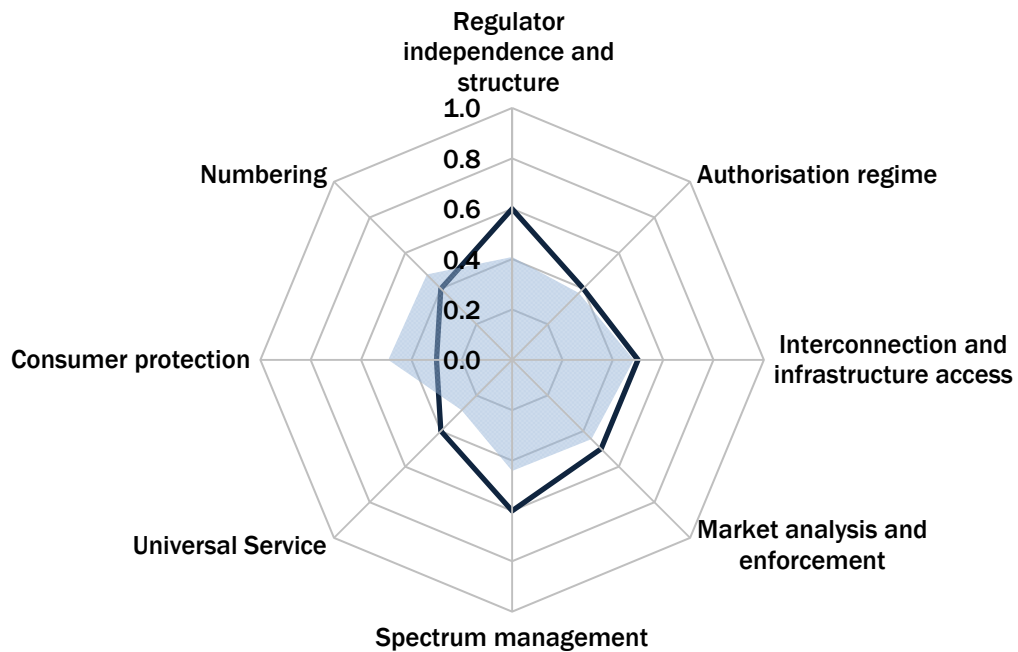
Weightings	Benchmarks	Components
20%	Regulator independence and structure	Separation of policy, regulatory and operational functions Structure and operation of the regulator
10%	Authorisation regime	Effective authorisation and licensing powers Where relevant, includes interim provisions transitioning from old to new legislative (particularly licensing) framework
10%	Interconnection and infrastructure access	Well defined interconnect, access, facilities sharing, and unbundling rights and obligations
20%	Market analysis and enforcement	Appropriate market analysis and other processes for designation of significant market power/dominance. Effective powers to impose and enforce additional obligations on dominant operators to prevent discrimination and abuse of dominance, including appropriate tariff regulation and other remedies. Effective dispute resolution powers and procedures Sufficient powers for the regulatory authority to enforce the law, impose fines or other effective penalties
10%	Spectrum management	Fully defined and effective spectrum management regime
10%	Universal service	Effective universal access/universal service powers and enabling framework Avoidance of competitive market distortions
10%	Consumer protection	Effective consumer protection provisions
10%	Numbering	Effective numbering administration
100%	Total weighting	The legal benchmarks together contribute 30% of the overall legal/regulatory risk assessment.

The legislative part of the Assessment is also intended to highlight situations where (as in many countries) the legislative regime lags behind the implemented regulatory environment in terms of alignment with international best practice. This typically occurs when national regulatory authorities or ministries have taken the lead in interpreting existing legislation (which can often be difficult and slow to amend) in a way that supports competition and market liberalisation and to promote higher investment in the sector.

The legal part of the Assessment is intended to provide a readable analysis that may be easily absorbed by investors, operators, international financial institutions, ministries, regulators and other key stakeholders.

## Example of chart showing legal framework assessment results

### Legal framework



Key: Extremities of the chart = International best practice  
Subject country = Solid line  
Regional average = Shaded area

## Regulatory benchmarks for best practice

The regulatory benchmarks have been defined with reference to the WTO principles and the implementation experience of the EU regulatory framework. Firstly, it has been assumed in the Assessment that in every country the markets for electronic communications have already been legally liberalised. This assumption means that in the legal framework of the country there is already provision for the entry of competitors into the market for all electronic communications services, including the provision of a fixed-lines and local calls, national and international calls, mobile calls, leased lines, internet, broadband and broadcast services, all provided individually or in service bundles.

In some countries there are still some restrictions to what competitors can legally do, for example in some countries interconnection has to take place via a certain network operator. In other countries, international calls, or international internet links have to be routed via a single gateway or single operator, which negotiates the international arrangements. Where such examples of retained monopolies are still allowed in the law, the country can only achieve a low score on conformity to international best practice.

It is important to note that the regulatory part of the assessment is concerned only with the situation as it is found in practice. If there is a legal requirement that is not implemented by the authorities in a particular country, or not enforced properly, then the regulatory assessment is likely to be low.

A particularly important part of regulatory best practice is the implementation of ex-ante (anticipatory) measures to improve market competitiveness (for the benefit of consumers and suppliers in the future). This means that the regulator uses modern procedures to define and analyse relevant markets, based on evidence from the market. If this evidence leads to a finding that a particular operator or operators have significant market power, then the regulator should decide and implement proportionate market remedies (in the form of legal obligations on operators with significant market power) to ensure that this power is not used anti-competitively.

The EU regulatory framework includes best practices in the area of ex-ante regulation when applied specifically to relevant electronic communications markets. Best practice includes the enforcement of the market remedies expected by investors (in particular the competitive safeguards that ensure number portability plus wholesale infrastructure access, wholesale broadband access and local loop unbundling plus the cost-orientation of the charges for these wholesale services). These factors are included in the regulatory part of the assessment in the components concerned with market conditions for wired and wireless services.

The five key benchmarks used in the regulatory part of the Assessment are summarised below. For each benchmark, the situation in each country is compared with the components of the benchmark to provide a score. To make up the overall regulatory assessment, these scores are weighted by the percentage shown. These percentages have been chosen to reflect the importance attached to the benchmark by investors. For example, a very significant part of investment is currently occurring in services requiring frequency spectrum (including mobile services and fixed wireless services). This component ("market conditions for wireless networks and services") is therefore given the highest weighting.



## Regulatory benchmarks, weightings and components

Weightings	Benchmarks	Components
15%	Sector organisation and governance	The structure of the electronic communications sector, including ownership, regulation funding and procedures.
30%	Market entry for wired networks and services (including licensing).	Ease of market entry by operators and service providers who base their services on metallic, as opposed to wireless (spectrum) based methods. The competitive conditions in the market - what the new entrant is and is not allowed to do.
35%	Market entry for wireless networks and services (including licensing/authorisations).	Ease of market entry by operators and service providers who base their services on wireless (spectrum) methods. This includes mobile services and fixed wireless services. The competitive conditions in the market - what the new entrant is and is not allowed to do.
10%	Fees and taxation on electronic communications services.	The types of payments required from operators/ service providers to the regulator or ministry in order to start and continue providing their services.
5%	Progress towards implementation of Information Society.	The country's environment for conducting business and providing services electronically
100%	Total weighting	The regulatory benchmarks together contribute 70% of the overall legal/ regulatory risk assessment

## 2.5 Putting the legal and regulatory scores into an overall risk assessment

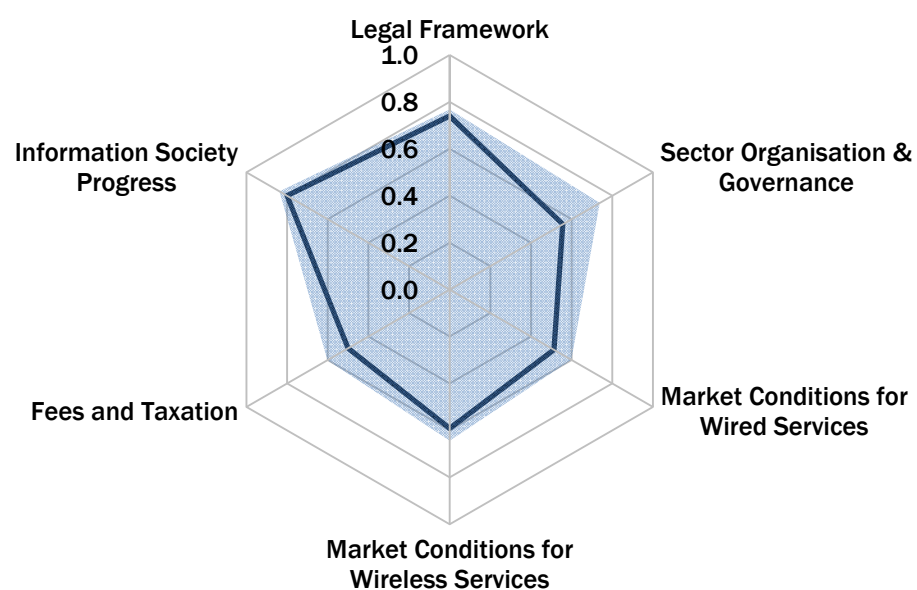
The eight components of the legal part of the assessment and five components of the regulatory part of the assessment are combined to form an overall legal/regulatory risk assessment. This produces an overall score, which aims to reflect the relative legal/regulatory risk faced by investors in the electronic communications markets in each country.

### Calculation of the overall legal/ regulatory risk index

Weighting	Score used	Key Components
30%	Legal assessment score	Legal framework
10%	Regulatory assessment score 1	Sector organisation and governance
20%	Regulatory assessment score 2	Market conditions for wired services
25%	Regulatory assessment score 3	Market conditions for wireless services
10%	Regulatory assessment score 4	Fees and taxation
5%	Regulatory assessment score 5	Information society progress
Total 100 %	Combined legal/ regulatory risk	8 legal components and 5 regulatory components

**Example of chart showing overall legal/ regulatory risk scores**

**Overall legal/ regulatory risk**



Key: Extremities of the chart = International best practice

Subject country = Solid line

Regional average = Shaded area

**Overall legal/ regulatory risk = 66 (0 is the highest risk, 100 is the lowest)**

## 2.6 Information sources

The Consultant has drawn upon a variety of sector data and information, both inside and outside each country. Some background information was readily available and easily accessible for desk research. These sources included:

- The European Commission
- The International Telecommunications Union
- EBRD.

Together with the web sites of:

- National regulatory authorities
- National governments and their constituent ministries
- Official national data sources
- Local technical and general news and industry web sites
- Published operating company reports
- Other international organisations and consultancies.

For the Group A countries (Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Mongolia, Russia, Tajikistan, Turkmenistan, Ukraine, Georgia and Mongolia) and Group C countries (Egypt, Jordan, Morocco and Tunisia), we have relied on questionnaires sent to the national regulatory agencies in each country, backed up by discussions with ministries, national regulatory agencies and market participants.

For the Group B countries (Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia and Turkey) the required data was collected alongside the parallel European Commission project “Supply of Services in Monitoring Regulatory and Market Developments for Electronic Communications and Information Society Services in Enlargement Countries” This project was awarded to Cullen International in 2010. The latest monitoring report was published in July 2012 on Cullen International’s web site<sup>14</sup>.

For the Group D countries (Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, Slovenia) we have relied on the various reports issued by the Body of European Regulators for Electronic Communications (BEREC) and The Communications Committee (COCOM), plus the official web sites of the national regulatory agencies in each country.

Where possible, face-to-face meetings were arranged with the national regulatory agencies in each country to add clarity to the understanding of the legal and regulatory frameworks and the status of implementation of key legal/regulatory features (such as number portability, access to infrastructure, interconnection arrangements, market analysis progress, availability of spectrum for sector development and status of information society implementation). Wherever possible, existing service providers were consulted to gauge their confidence in the applied legal and regulatory frameworks, and to assess the current investment priorities in the sector.

The specific information used in the assessment (for all countries) was as follows:

- The existing primary legislation current and published at the end of 2011, with amendments, where available<sup>15</sup>.
- The internet usage data from the 2010 ITU World Telecommunication/ICT Indicators database.
- Any secondary legislation relevant to the sector and published on the national regulatory agencies’ web sites, or made available directly from the sector regulator.
- The responses to the regulatory questionnaire (where returned) and/or the answers given during discussions with the regulator during face-to-face meetings or by email and/or telephone conversation.

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<sup>14</sup> [www.cullen-international.com/other-services/studies.htm?lng=en](http://www.cullen-international.com/other-services/studies.htm?lng=en) (see Enlargement countries telecommunications monitoring – 3, 2011-2013.)

<sup>15</sup> Efforts were made to obtain relevant amendments to national legislation impacting the sector, however in some cases all such amendments were not available or it was not possible to confirm that amendments obtained were comprehensive. In some cases official translations of legislation and regulations were not available so unofficial translations were used.

### Assessment methodology

A draft summary report for each country was provided to the relevant national regulator for review and comment. Where comments were received from the national regulator on the draft report for their country, these comments were taken into consideration in finalising this report.

## 2.7 The regulatory assessment questionnaire

A questionnaire was designed by the Consultant, for completion by the national regulatory agencies in those countries where the required information on the implementation of the regulatory framework was not available directly from the national regulatory agency web sites, or from up-to-date reports produced by BEREC, the European Commission or Cullen International. This regulatory questionnaire contained a total of 65 questions seeking two types of data:

- Simple yes/no responses (so that the absence or presence of a particular condition could be determined, for example number portability).
- Descriptive data about the market and its regulation (for example, the level of regulated interconnection charges).

## 2.8 Data consistency

The data used in this assessment can assume to be (unless otherwise stated):

- For items of quantitative data (for example market penetration figures) the data are correct at the end of December 2011.
- For descriptive data about the implementation of a key regulatory measure, for existence of number portability) the data are correct up to the end of June 2012.

### Special note on mobile broadband penetration

At present there is no consistent measurement method applied to mobile broadband penetration across all the participant countries. The standard definition used in the EU is the number of active users with data subscriptions separate from the voice subscription (or part of a bundle containing paid voice and data usage). In some Group A countries, the reported number of mobile broadband users is simply the number of subscribers who are served by broadband enabled technology (for example 3G), regardless of whether the subscribers have separate or bundled data subscriptions. Typically, when changing networks from GSM to 3G service capability, the service providers report that around 25 to 35 per cent of their existing voice subscribers take up a separate or bundled data subscription.

To ensure comparative data for mobile broadband subscribers, where the EU definition is not used by a country when reporting its mobile broadband subscribers, it has been assumed that the number of mobile broadband subscribers is 25 per cent of the total number of mobile subscribers being served by 3G networks

## **3: ASSESSMENT RESULTS**

Following the collation and analysis of collected data, the results were assembled into two comparator sets: firstly, sub-regional comparison, dividing the 31 countries into 4 sub-regional groupings; and secondly, full cross country comparison, comparing all 31 countries individually against international best practice and against each other. The results of the sub-regional comparison can be found immediately below, while the full cross country comparison can be found towards the end of the Assessment.

The four sub-regional groupings used for regional comparison immediately below are:

- Group A countries comprise Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Mongolia, Russia, Tajikistan, Turkmenistan and Ukraine.
- Group B countries comprise Albania, Bosnia-Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia and Turkey.
- Group C countries comprise Egypt, Jordan, Morocco and Tunisia.
- Group D countries comprise Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic and Slovenia.

### **Group B countries**

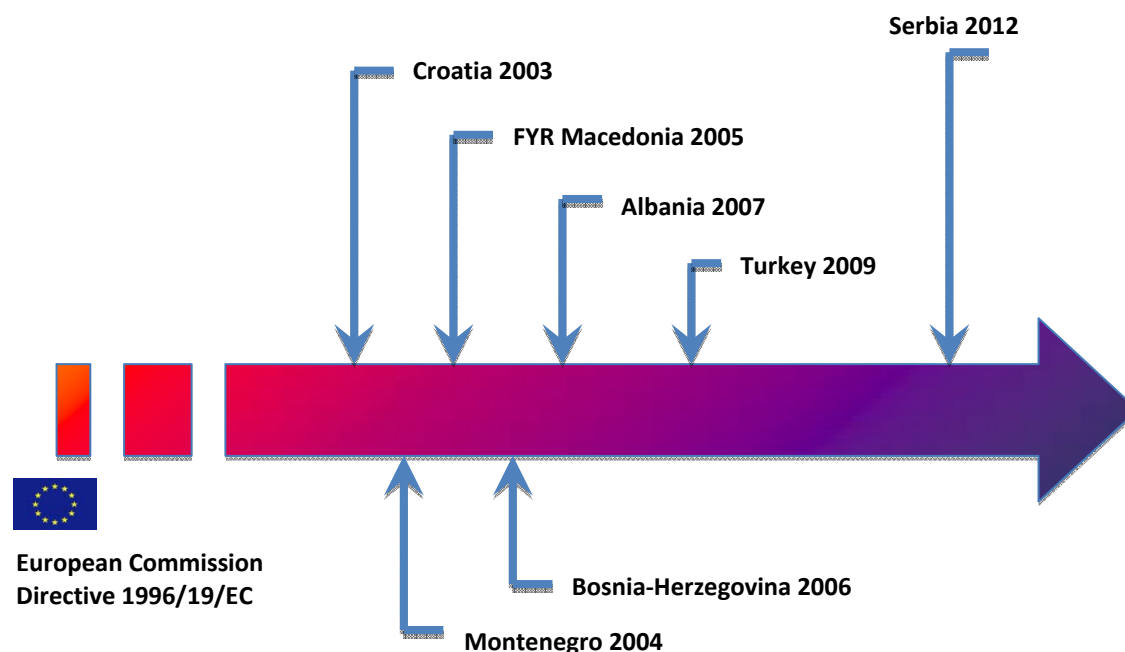
#### **Regional overview**

The seven countries assessed (Albania, Bosnia-Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia and Turkey) have a total population of around 95 million (2011), with Turkey the largest (74 million) and Montenegro the smallest (0.6 million). Apart from Croatia and Serbia, penetration of telecommunications services is low by EU standards, and in the case of Albania, very low.

Fixed-line penetration averages 23/100 population for the Group B countries, compared to an average EU penetration of 40/100 population. Fixed-line penetration reaches the EU average in Serbia and Croatia, but the remaining countries are below the EU average, with Albania having a rate of less than one third of the EU.

Average mobile subscriber penetration in the region is 97/100 compared with the EU rate of 127. Montenegro and Albania have the highest rates at around 185/100 population, Serbia also has higher levels than the EU (140/100 population). The remaining countries are below the EU average, with Bosnia-Herzegovina the lowest at 83/100.

Broadband services are still at an early stage, with penetration levels of total broadband subscriptions (fixed plus mobile) in all countries well below the EU level of 71/100 population. Croatia and Montenegro have the highest at around 27/100, Albania the lowest at around 6/100 population.

**Legislative dates of market liberalisation in Group B countries**

[source: Cullen International]

All countries now have formally liberalised markets, with their legislative and regulatory frameworks based on the EU regulatory framework. Fixed-line competition has only just begun in Serbia (where it was only liberalised at the start of 2012).

Mobile communications has been the main competitive growth market, with three licensed mobile operators in each country (except Albania with four).

Broadband communications are showing the greatest growth potential in markets that are becoming generally more competitive.

## EBRD 2012 Electronic Communications Sector Comparative Assessment

### Assessment results

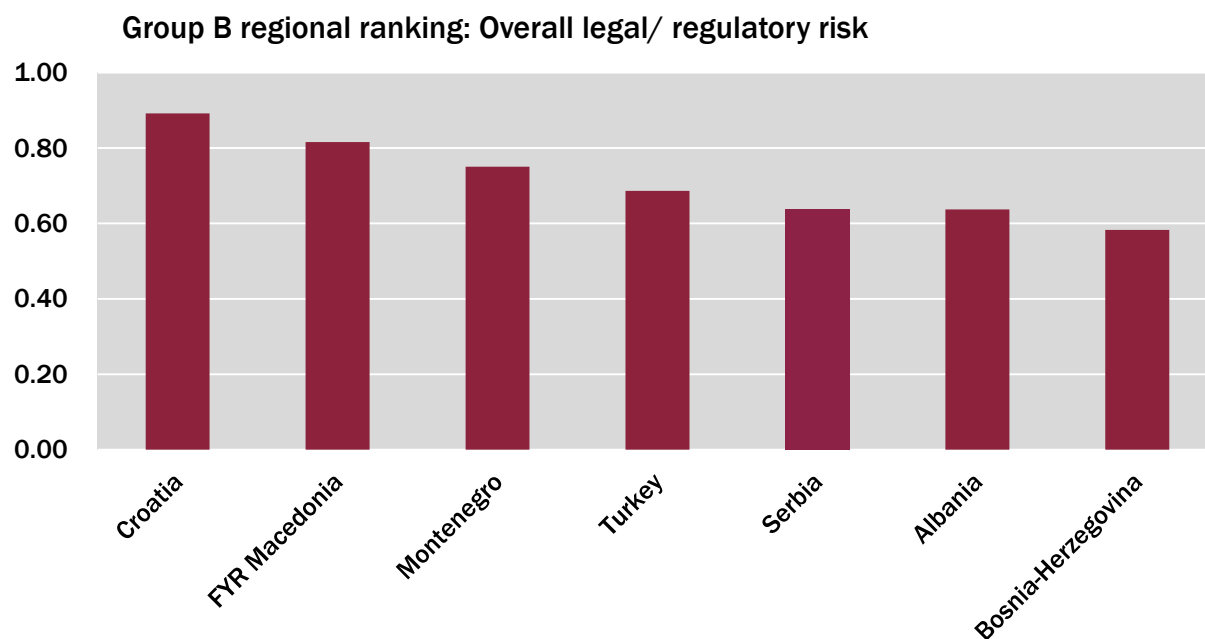
#### Overall market summary

	Albania	Bosnia and Herzegovina	Croatia	FYR Macedonia	Montenegro	Serbia	Turkey
Population	2.8m	3.8m	4.4m	2.1m	0.6m	7.3m	72.8m
Remaining state ownership in fixed operator	25%	90%/ 50%*	0%	35%	0%	100%	30%
Date of full sector liberalisation	2007	2006	2003	2005	2004	2012	2009
Market share of fixed incumbent (by revenue)	60%	96%	67%	78%	99%	100%	82%
No. of mobile network operators	4	3	3	3	3	3	3
Penetration of fixed-lines per 100 population	12	23.8	39.9	20.5	27.6	39.6	20.6
Penetration of mobile subscribers per 100 population	185	82.5	116	108	188	140	88.6
Penetration of fixed broadband per 100 population	4.9	11.2	19.4	13.7	13.6	13.4	10.3
Penetration of mobile broadband per 100 population	1.2	2.5	6.5	0.8	13.6	3.4	6.7
Internet usage per 100 population	48	42	59	52	50	56	44
Overall legal/ regulatory risk index (100 =lowest risk)**	64	58	89	82	75	64	69

[Source: Cullen International and EBRD analysis]

\*BH Telecom is 90 per cent and HT Mostar is 50 per cent owned by the Federation of Bosnia and Herzegovina. Telekom Srpske is fully privatised.





**100 is the lowest risk, zero is the highest**

[Source: EBRD analysis]

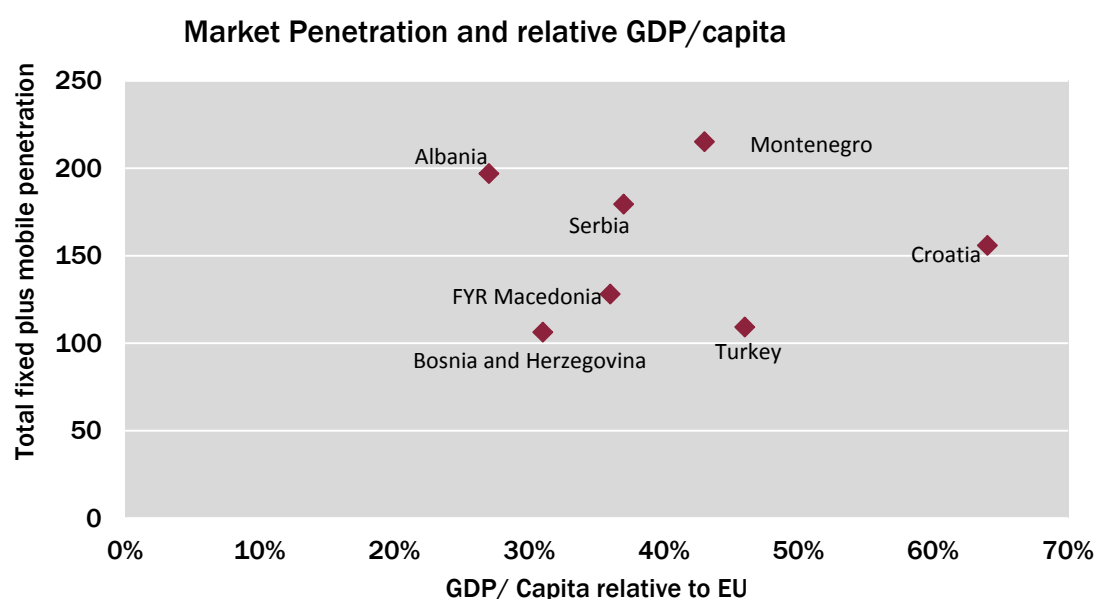
The Overall Legal/ Regulatory Risk Index is a summation of a number of components, as defined in section 2 of this report:

- 1) **Legal Framework.** This component assesses if the degree of conformity with a modern legislative framework for an efficient competitive market for electronic communications. (Weighting = 30 per cent.)
- 2) **Sector organisation and governance.** This relates to the structure of the electronic communications sector including ownership, regulation and the main regulatory procedures. (Weighting = 10 per cent.)
- 3) **Market conditions for wired networks and services.** This relates to the market entry conditions faced by operators and service providers who base their services on metallic, as opposed to wireless (spectrum) based methods. It also explores the competitive safeguards in the market - what the new entrant is and is not allowed to do. (Weighting = 20 per cent.)
- 4) **Market conditions for wireless networks and services.** These relate to market entry by operators and service providers who base their services on wireless (spectrum) methods. This includes mobile services and fixed wireless services. It also explores the competitive safeguards in the market - what the new entrant is and is not allowed to do. (Weighting = 25 per cent.)
- 5) **Fees and taxation on electronic communications services.** This relates to the types of payments required from operators/ service providers to the state and/or regulatory agency in order to start and continue providing services. (Weighting = 10 per cent.)
- 6) **Progress towards implementation of Information Society.** This relates to the country's environment for conducting business and providing services electronically. (Weighting = 5 per cent.)

### Market commentary

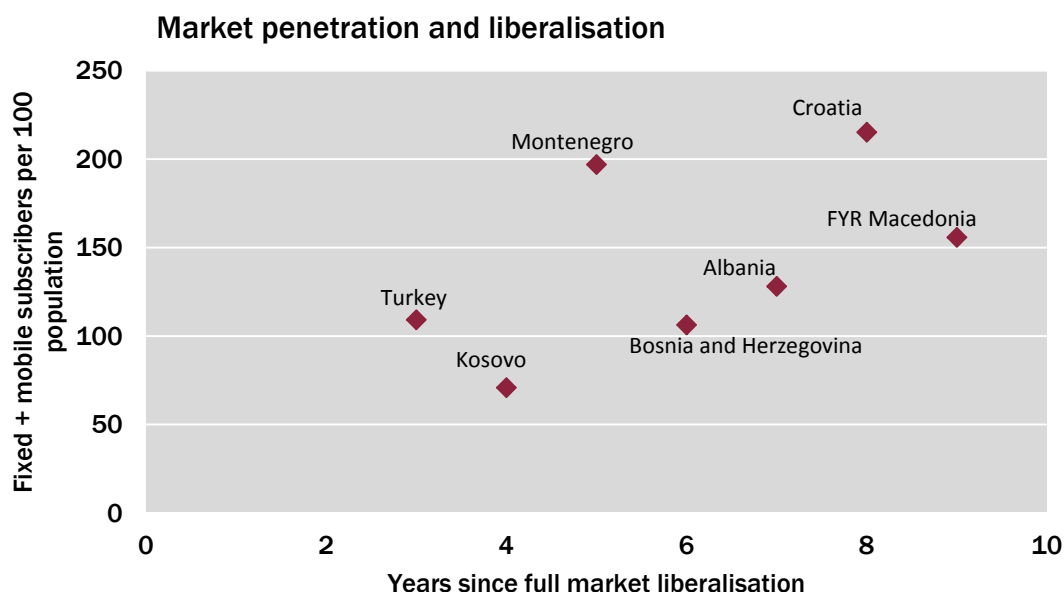
Apart from Croatia and Serbia, the fixed market has been poorly developed, with full market liberalisation occurring only within the last nine years. The mobile sector has filled the gap quickly, especially in the countries where competitive mobile services have been in place for at least 10 years (Albania, Croatia, Montenegro and FYR Macedonia). Bosnia Herzegovina and Turkey still lag behind in both fixed and mobile penetration.

Total market penetration (the sum of fixed and mobile penetration per 100 population) does not appear to correlate with relative wealth (GDP/capita) in the Group B countries, with (for example) Albania, Montenegro and Serbia all achieving very high market penetration despite having significantly lower GDP/capita than the EU average. This may be due in part to the use of multiple sim cards in some countries to reduce expensive off net calling and the purchase by tourists of sim cards for short term holiday use in several countries such as Montenegro and Croatia.



[Source: EBRD analysis]

Competition has been effectively implemented in all mobile markets, there are three active network operators licensed in each country, except Albania where there are four. Generally speaking, the liberalisation of markets does appear to have had an impact on overall market penetration, as shown below.



[Source: EBRD analysis]

Broadband services are showing significant growth, especially in Bosnia-Herzegovina, Montenegro and Serbia, where fixed broadband penetration has now exceeded the regional average following growth rates of over 10 per cent per annum in the last two years, fuelled by the extensive use of xDSL technology by the incumbent fixed operators.

Mobile broadband has only really advanced rapidly in Croatia and Montenegro, where 3G services have been available for over five years and penetration rates are already approaching EU levels. In the other countries, mobile broadband trails EU rates by some margin. The fastest growth in mobile broadband is in Albania (where 3G service was introduced only in 2010).

There is still a majority state ownership of incumbent operators in Bosnia-Herzegovina and Serbia, plus minority state holdings remaining in FYR Macedonia, Turkey and Albania.

Croatia has already adopted the EU 2009 legal and regulatory framework, with all relevant service provider safeguards and consumer protection mechanisms in place. The market will develop faster in the other countries when all the necessary competitive entry and safeguarding conditions are implemented.

Some reforms to the sector have already been introduced in the region, most noticeably in the improvement of market access conditions. All countries except Bosnia-Herzegovina have introduced general authorisation regimes, easing market entry conditions. In all countries, newcomers can gain access to existing international gateways and negotiate their own international settlement deals for voice and data traffic.

The main areas where better conditions still need to be enforced are:

- Access to public and private rights of way remains problematic in all countries, despite some recent legislative initiatives to improve procedures for granting construction permits.
- Passive infrastructure access (for example ducting) where only Croatia and Turkey have made this mandatory.
- Spectrum should be granted on a first-come, first-served basis, or by open and transparent comparative selection or auction procedure, without undue political interference. This is yet to be implemented in Albania and Bosnia Herzegovina.
- Basic spectrum liberalisation using re-farming of existing GSM bands and technological neutrality has yet to be implemented in Albania, Serbia and Turkey.

None of the countries yet allow secondary spectrum trading. None of the incumbent fixed-line operators have completed tariff rebalancing of their retail telephony services. The artificially low tariff charged for basic fixed-line service presents a significant entry barrier to potential competitors in the fixed telephony market.

**Assessment results**
**Conditions for market access**

	Albania	Bosnia and Herzegovina	Croatia	FYR Macedonia	Montenegro	Serbia	Turkey
General authorisation procedure	✓	x	✓	✓	✓	✓	✓
Technology neutrality for fixed licences	✓	✓	✓	✓	✓	✓	✓
Technology neutrality for mobile licences	x	✓*	✓	✓*	✓	x	x
Reasonable access to rights of way	x	x	x	x	x	x	x
Infrastructure sharing mandated	x	x	✓	x	✓	x	✓
Regulated interconnection charges	✓	✓	✓	✓	✓	✓	✓
Access to international gateways	✓	✓	✓	✓	✓	✓	✓
Spectrum granted on fair, transparent basis	x	x	✓	✓	✓	✓	✓
Spectrum secondary trading allowed	x	x	x	x	x	x	x
Fixed-line retail tariff rebalancing completed?	x	x	x	x	x	x	x

[Source: Cullen International]

Note: \*UMTS services are allowed in the 900/1800 MHz bands but not LTE.

Some progress has been made by the electronic communications market regulators to introduce the normally expected competitive market safeguards. These safeguards include number portability plus a range of wholesale access devices to improve completion at the retail level in fixed, mobile and broadband services. Croatia and FYR Macedonia have all the normally expected market safeguards in place, with Turkey the next best market.

**Assessment results**

Progress on the normally expected range of competitive market safeguards is as follows:

- Number portability has been fully implemented in Croatia, FYR Macedonia, Montenegro and Turkey. Albania and Serbia have mobile, but not yet fixed number portability. Bosnia-Herzegovina has fixed, but not mobile number portability.
- All countries have reference offers for interconnection with incumbent fixed operators and mobile operators.
- To enable fixed broadband markets, local loop unbundling and/or wholesale broadband access have now been introduced in all countries.
- Competition in the voice markets has been improved by having carrier selection/pre-selection and/or wholesale line rental options in all countries except Serbia.
- In mobile services national roaming is either mandated or available on commercial basis.
- Mobile Virtual Network Operators are permitted in all countries except Serbia. So far, none have appeared as competitive market players.

**Implementation of competitive safeguards**

	Albania	Bosnia and Herzegovina	Croatia	FYR Macedonia	Montenegro	Serbia	Turkey
Fixed number portability	x *	✓	✓	✓	✓	x	✓
Mobile number portability	✓	x	✓	✓	✓	✓	✓
Reference Interconnection Offer (Fixed)	✓	✓	✓	✓	✓	✓	✓
Reference Interconnection Offer (Mobile)	✓	✓	✓	✓	✓	✓	✓
Local loop unbundling	✓	✓	✓	✓	✓	✓	✓
Wholesale broadband access	x	x	✓	✓	✓	✓	✓
Carrier selection/ pre-selection	✓	✓	✓	✓	✓	x	✓
Wholesale line rental	x	x	✓	✓	✓	x	✓
National mobile roaming	✓	✓	✓	✓	✓	✓	✓
Mobile Virtual Network Operators	✓	✓	✓	✓	✓	x	✓

[Source: Cullen International]

\*Albania has a firm date to implement fixed number portability in September 2012

The governments of all countries have published strategy documents for the information society in general and eGovernment in particular. Progress with implementation has been good, with only Turkey and Bosnia still needing to adopt key elements.

**Implementation of information society safeguards**

	Albania	Bosnia and - Herzegovina	Croatia	Macedonia	Montenegro	Serbia	Turkey
Basic internet freedom of expression	✓	✓	✓	✓	✓	✓	x *
Ease of setting up internet business	✓	✓	✓	✓	✓	✓	x
Legal basis for electronic documents and signatures	✓	✓	✓	✓	✓	✓	✓
Legal basis for data protection	✓	✓	✓	✓	✓	✓	✓
Safeguards against cybercrime	✓	x	✓	✓	✓	✓	✓

[Source: EBRD Analysis]

Note: \*There is a remaining concern in Turkey regarding censorship of popular web sites.

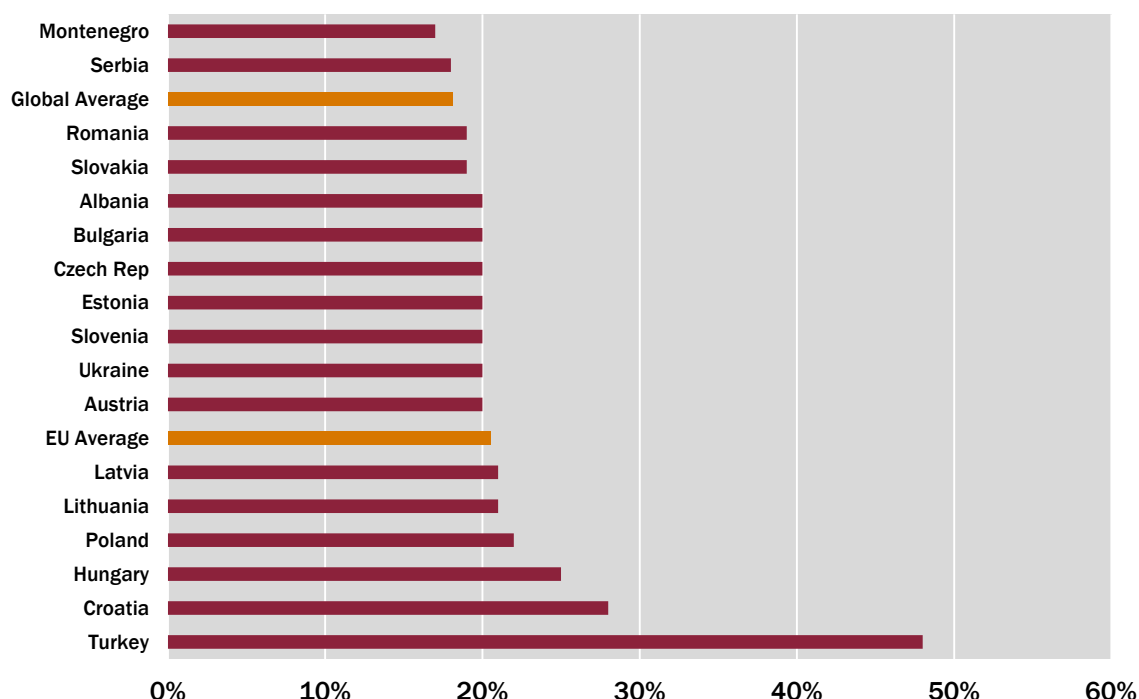
The normal fees paid by licensed operators are generally transparent and reasonable throughout the region. Initial licensing fees are zero in Albania, Croatia, FYR Macedonia, Turkey and Serbia. Montenegro and Bosnia-Herzegovina charge €1,000 or less. Annual licence fees are generally set as a percentage of the annual revenues of the operators, typically 0.5 per cent or less. Montenegro has an average of 0.8 per cent and fees are capped at €255,000 in Bosnia-Herzegovina and €250,000 in FYR Macedonia.

Fees paid for mobile licences at auction or beauty contest have been generally lower in Group B than other regions (averaging €3 per head of population over the last 10 years).

A worrying trend in recent years has been the propensity of governments to take additional taxes from the electronic communications sector, in particular the mobile operators. These taxes are usually in the form of simple percentages of revenues, rather than profits. In Serbia the tax was 10 per cent, and is itemised separately on all customers' bills. The Serbian government abolished the tax in 2011 following criticism from the mobile phone operators. In Croatia there has been a tax of 6 per cent on all mobile operators' revenues since 2009. This is imposed directly on the mobile operators with no transparency on customer bills. The Croatian government removed the tax from 1 July 2012.

Turkey's consumers are the most taxed. There is a special tax levied on electronic communications in addition to 18 per cent VAT, amounting to a further 15 per cent tax on fixed services, 5 per cent on internet services and 25 per cent on mobile services revenues.

### Tax as proportion of cost of mobile ownership



[Source: Deloitte Global Mobile Tax Review 2011]

Note: Croatia removed the 6 per cent special tax on mobile operators' revenues on 1 July 2012.

According to the mobile operators, the imposition of high taxes affects the investment potential of the telecommunications sector with indirect repercussions on the country's GDP. Special mobile tax measures have also been heavily criticised by the GSM association<sup>16</sup> and the European Commission. As most mobile operators in the region are foreign-owned, the imposition of special taxes is seen as an investment risk for foreign investors in telecommunications.

## Regional summary and outlook

The fixed telephony market has an overall Group B regional penetration of 23 per 100 population, while the mobile market has grown to reach a regional penetration of 97 per 100 population. Both these are significantly below the average for EU countries, but the averages mask significant differences within the Group B region. Whereas Croatia and Serbia have matched EU average fixed penetration levels, all the other countries of the Group B region have significantly less fixed penetration.

Overall for the Group B region, the fixed-line market is declining at around 4 per cent per annum, while the mobile voice market is still increasing by around 5 per cent per annum. The broadband market is growing at 33 per cent per annum, with mobile broadband taking most of the new sales, as 3G services become more competitive across the region.

16 <http://serving.webgen.gsm.org/5926DA9A-2DD6-48E7-BAD4-50D4CD3AF30A/assets/taxreview0607.pdf>



## Assessment results

The market growth leader is Albania, with annual growth (2011) in fixed-lines at +2 per cent, mobile subscriptions at +16 per cent and broadband at +46 per cent. FYR Macedonia and Montenegro also showed growth in all parts of the market, especially in mobile broadband. Most countries showed a doubling of mobile broadband penetration in 2011. Serbia's market remained sluggish, with a decline of 7 per cent in fixed-lines and a rise of only 3 per cent in mobile subscriptions and 14 per cent in broadband.

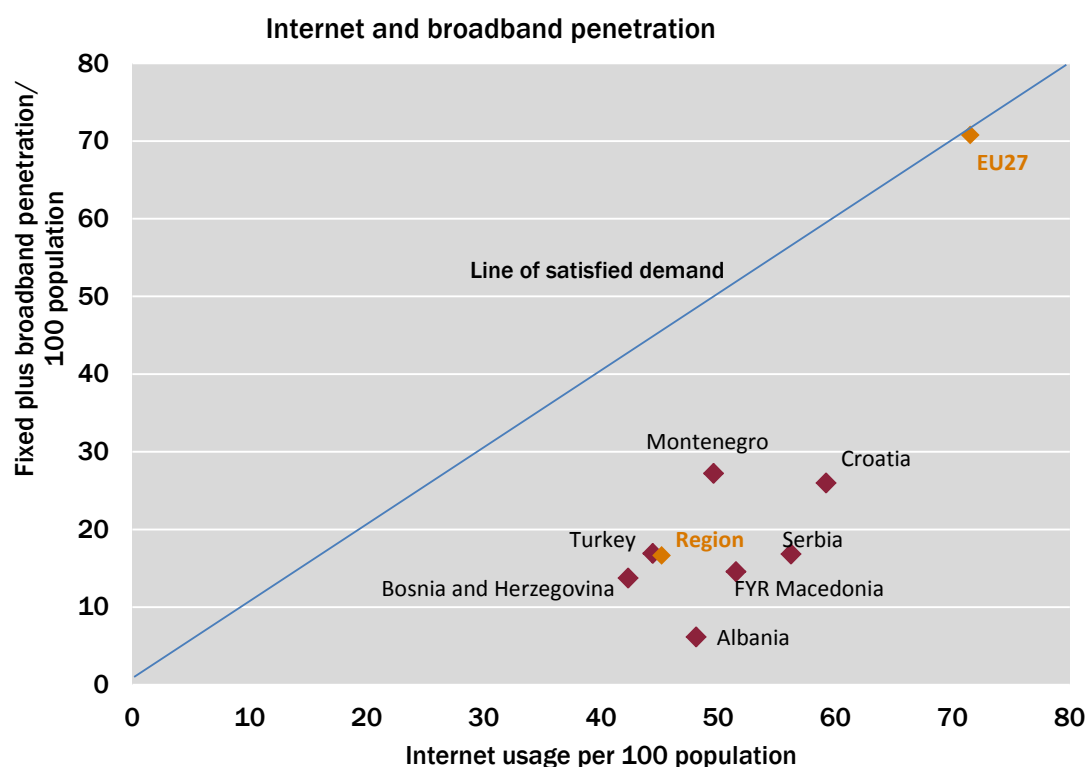
All the Group B countries are now introducing changes to their regulatory frameworks for the electronic communications sector to become aligned with the EU framework. The investment required to enable the Group B countries to catch up with the EU in terms of market efficiency depends on the level of demand and the speed of implementation of the required regulatory conditions. There is evidence of significant new growth in the Group B region for broadband services, following the recent EU experience. Although the existing penetration of fixed and mobile broadband is still significantly below EU levels, the growth in Group B is starting to accelerate, driven by high levels of internet usage and the roll-out of 3G mobile networks.

With the present rates of growth in competitive broadband markets, a key point will be reached where fixed broadband lines will overtake ordinary fixed-lines, a trend which is expected to spread across all Group B countries, following the same transition to broadband in the EU.

In the Group B region, new spectrum has generally not been released for mobile broadband as fast as other regions and only now is the Group B region experiencing take off in mobile broadband, with growth expected to remain strong over the next few years. New investment will be needed to cope with the very high data growth rates being experienced across network infrastructures.

New investment in high speed broadband networks has already started in urban areas, including fibre access networks, fixed wireless access and the launch of commercial 4G/LTE services. The key challenge for the region remains the creation of attractive investment conditions for building out these high speed infrastructures to rural areas.

The following chart shows the internet usage (percentage of population who regularly use the internet) compared with the penetration of broadband services. The blue line is where, in country average terms, the internet users' demand is fully met by broadband. All countries to the right of this line have latent demand for broadband services; that is where internet users have not yet been supplied with broadband.



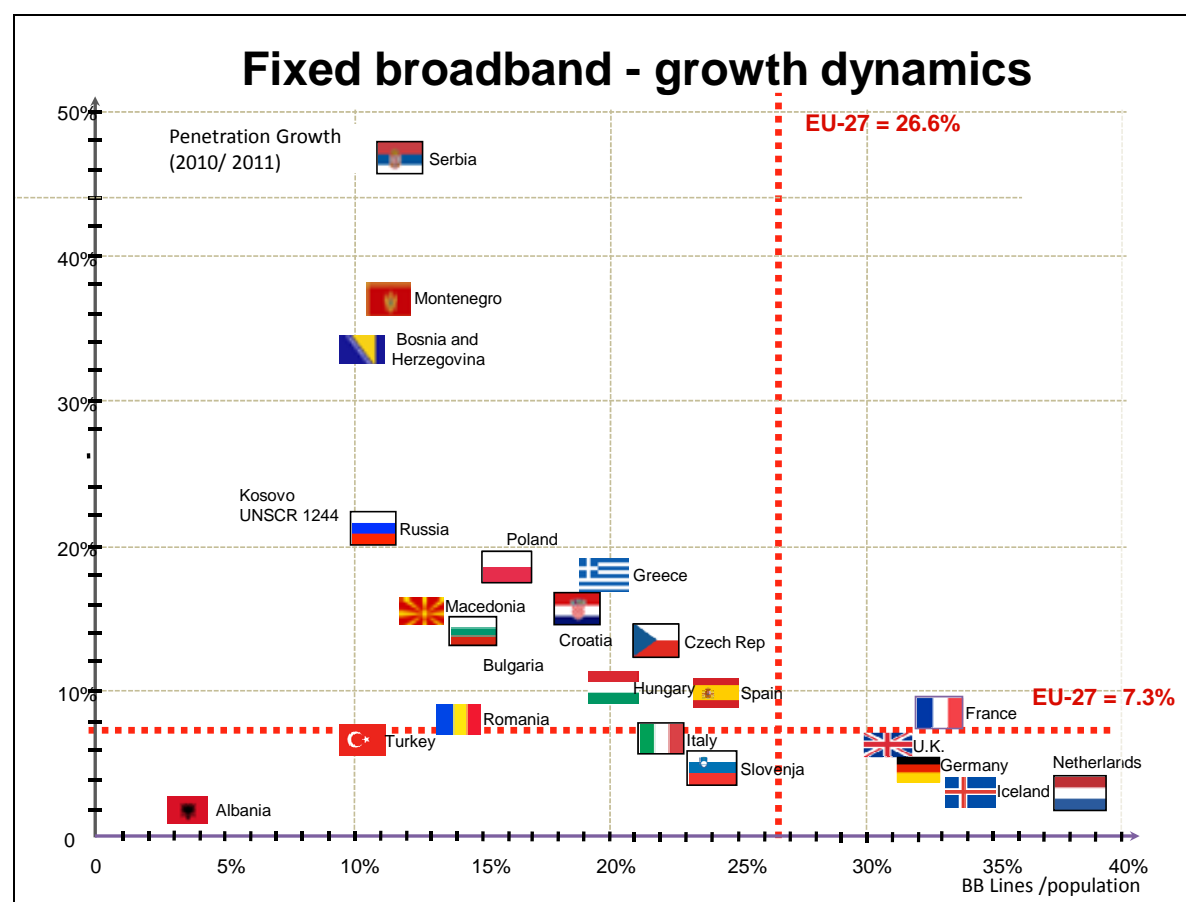
[Source: EBRD Analysis]

One way of estimating the potential for broadband growth and investment is by examining the extent of internet usage and comparing this with the penetration of broadband. All countries of the region have

**Assessment results**

greater percentage of the population using the internet than the penetration rate of broadband (all countries are to the right of the diagonal line). In the chart above, the further towards the bottom right, the more potential there is for broadband growth. Albania has the most pent-up demand for broadband service, with nearly 50 per cent of its population being internet users and less than 10 per cent connected via broadband. Similarly, there is significant latent potential in Bosnia, FYR Macedonia, Serbia and Turkey, which all have relatively high numbers of internet users, yet only low penetrations of broadband subscriptions. All countries have a significant gap with the EU, where on average, broadband subscriptions and penetration are significantly higher and demand is being satisfied by broadband.

Incumbents in most countries still tend to dominate in fixed broadband markets. By far the majority of fixed broadband connections are based on existing copper loops. Alternative infrastructures, such as cable TV and fixed wireless access networks are making inroads, mostly in the urban areas. The mobile broadband market continues to be the most dynamic segment and the penetration rate of dedicated 3G mobile data cards/wireless modems is doubling every year in most of the enlargement countries.



[Source: Cullen International]

This analysis of fixed broadband market growth during 2010 shows that Serbia, Montenegro and Bosnia-Herzegovina had the highest growth in penetration (vertical axis), while Albania and Turkey had the slowest. From a much lower penetration base in 2010 (horizontal axis), growth during 2010 (vertical axis) beat the EU average in most Group B countries. No Group B country has yet reached the EU average penetration rate, but Croatia, Montenegro and Bosnia-Herzegovina should catch up fast.

# TURKEY

## At a glance

Market penetration	
Population	74m
Fixed penetration*	21
Mobile penetration*	89
Broadband penetration*	17

\*Per 100 population

Key Institutions	
Policy and legislation	Ministry of Transport, Maritime Affairs and Communications
National regulatory authority	Information and Communications Technologies Authority

Market access	
General authorisation	✓
Technological neutrality	✓*
Rights of way	x
Infrastructure sharing	✓
Granting of spectrum	✓

\*fixed only

Competitive safeguards	
Number portability	✓
Interconnection offers	✓
Wholesale broadband offers	✓
Mobile national roaming and MVNO	✓

Information society	
Internet penetration per 100 population	44
Ease of setting up internet business	x
Legal basis for electronic documents and signatures	✓
Safeguards against cybercrime	✓

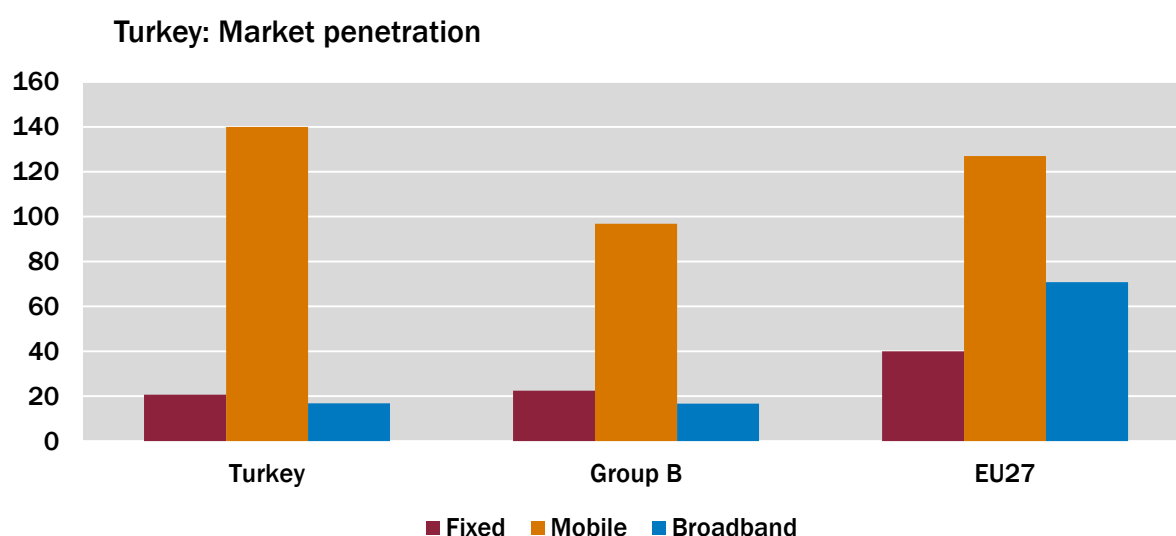
## Turkey

## Market liberalisation

Full liberalisation of fixed voice telephony has been a slow process. Long-distance and international networks were liberalised in 2004 and data networks in 2006, but it was not until 2009 that the exclusive right of Türk Telekom over local services was removed. This followed the new Electronic Communications Law that came into force in 2008 applying a general authorisation framework. Fixed-line penetration has actually decreased from 29/100 population in 2005 to 21/100 in 2011. Fixed Broadband lines are growing fast, with penetration already over 10.4/100 population, easily beating mobile broadband penetration.

There are three mobile network operators, with privately-owned Turkcell having more than a 50 per cent market share. The overall penetration of mobile, at 89/100 population, is significantly below the EU level. Mobile broadband penetration is 6.7/100 population with very high growth in 2011.

**Chart 1: Market penetration of main services per 100 population in Turkey, compared with the Group B regional averages**



Group B average is for Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia and Turkey.

## Legal framework

Turkish legislation governing the telecommunications sector is a complex hierarchy of laws, bylaws and regulations. The new Electronic Communications Law adopted in 2008 (the 2008 law) is relatively concise, and some important issues are addressed mainly in secondary legislation or other laws, which can result in overlapping of provisions of different regulations. Turkey does not have specific plans to transpose the EU 2009 regulatory framework, though some regulations adopted after 2009 fulfil some of the additional requirements of 2009 Framework. The Turkish legislative framework is generally aligned with EU 2003 framework with respect to regimes for interconnection and access, tariff setting, market analysis, numbering, consumer protection and national security, emergencies and legal interception. The sector regulator, the Information and Communications Technologies Authority (ICTA) appears to have sufficient enforcement authority to impose meaningful penalties (including fines up to 3 per cent of net sales) directly without the need to resort to the courts.

The 2008 law did not entirely replace previous laws addressing the sector. In particular, the Law on Telegrams and Telephones (enacted in 1924) and the Wireless Law (enacted in 1983) are still in force, although most other applicable laws have been either repealed or replaced. The Telegrams and Telephones Law now mainly addresses the incumbent fixed-line operator's legal status, and provides the legal basis for a telecommunications tax. The Wireless Law is now titled the "Law on the Establishment of the Information and Communications Authority" and provides details of the structure and operation of the ICTA.

## Turkey

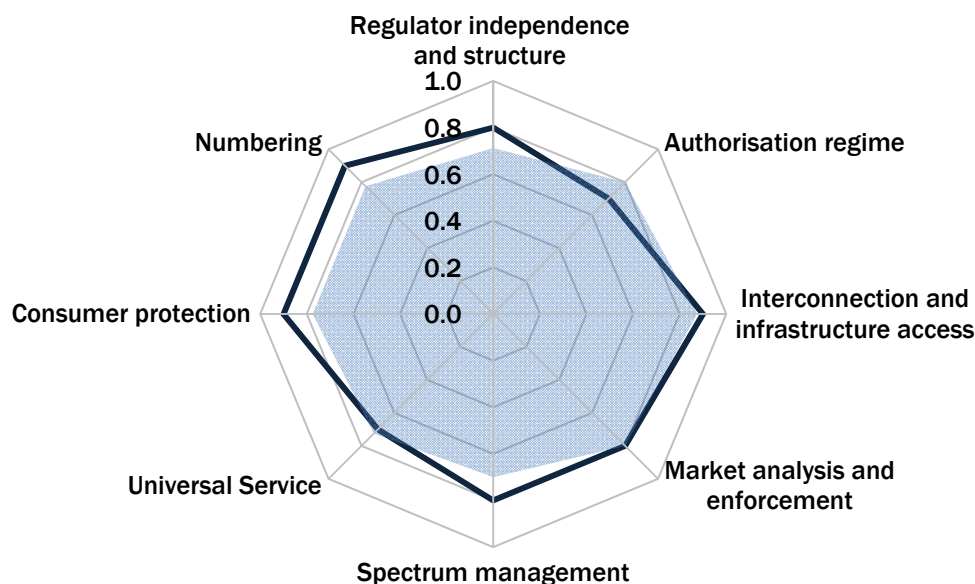
The 2008 law introduced a clearer distinction between the competencies of the regulator, ICTA, and the Ministry of Transport, Maritime Affairs and Communications (the Ministry) and provided for substantially increased independence of the ICTA. However, the Ministry is responsible for the implementation of universal service and has the authority to launch tender procedures for spectrum authorisations if it chooses. The ICTA has significant independence from the Ministry. However, deficiencies exist with respect to budgeting and appeal mechanisms, and Law 2813 states that the ICTA is “associated with the Ministry of Transport”.

Turkey is the last of the enlargement countries to adopt legislation transposing the Electronic Commerce Directive: a draft law was prepared by the Ministry of Justice with the contribution of other institutions and submitted to the Grand National Assembly of Turkey on 27 December 2010, but has not yet been adopted.

Turkey has generally adequate provisions for spectrum management, but the law creates some uncertainty regarding potential for involvement by the Ministry, which is authorised to initiate tenders for spectrum when it deems it necessary, which introduces uncertainty. Although there is no specific requirement that spectrum and numbering assignments be technologically neutral, open, objective and proportionate as required by the EU framework, the Electronic Communications Law states that the principles to be applied in assigning spectrum and numbering resources include the “... promotion of qualitative and quantitative sustainability, regularity, reliability, productivity, clarity, transparency and the efficient use of resources”. Timeframes specified for decisions on spectrum and numbering do not fully meet the short EU framework requirements. In addition, the ICTA can decide not to announce an open tender to grant rights of use for frequencies and may instead conduct it among specified candidates, which (while acceptable within EU framework if sufficient transparency is assured) raises issues of transparency. This exception is used for example to “top up” spectrum needed by existing operators.

Rights of way are covered by a 2011 decree which authorises the Ministry to determine general criteria and implementation procedures and principles regarding rights of way. There are standard timescales for receiving rights of way onto public and private property. While provisions for rights of way are generally aligned with EU framework, no methodology is provided to determine fees where parties cannot reach agreement on their own. In addition, there is no requirement that fees for rights of way must be justified, transparent, non-discriminatory and proportionate in relation to their intended use.

## Turkey

**Chart 2: Comparison of the legal framework for telecommunications in Turkey with international practice and regional performance****Turkey: Legal framework**

Key: Extremities of the chart = International best practice

Turkey = Solid line

Regional average = Shaded area

**Sector organisation and governance**

Following part privatisation in 2005, the state now holds 30 per cent and a golden share of Türk Telekom, the incumbent operator. Indirectly, through Türk Telekom, the state also owns 24 per cent of the mobile operator Avea. The state also controls the satellite and cable TV operator Türksat.

The Ministry of Transport, Maritime Affairs and Communications (the Ministry) is responsible for policy making in the electronic communications sector, although a separate Ministry of Development (which took over responsibilities of the State Planning Organisation in June 2011) retains responsibility for long-term strategies.

The key functions of the government and the regulator were redefined in the laws adopted in 2008. The new Ministry of Development is responsible for policy-making across all sectors, including the preparation of a new version of its comprehensive information society strategy and action plan (the current version covers the years 2006 to 2010). Specific regulatory decisions are still subject to government approval; the Turkish government still decides on universal service and the government is also involved in determining the amount of the fees for the use of limited resources (numbering and spectrum).

Parliament is responsible for the approval of the ICTA activity plans and financial plans as well as in the review of the annual reports. Additional audits of the ICTA financial plans and annual reports can be performed by the Court of Accounts, Inspection Council of the Prime Minister and the State Inspection Council of the Presidency of the Turkish Republic. All decisions of ICTA may be appealed: appeals against ICTA general decisions on the sector can be brought to the Council of State within 60 days from the announcement of decisions and appeals against ICTA decisions on administrative fines can be brought to the Administrative Court within 60 days from the announcement of decisions. Execution of an administrative act by ICTA is not automatically suspended during the appeal process. ICTA must make the Board's decisions concerning the operators and consumers publicly available with its rationale and processes.



## Turkey

ICTA appears to have adequate resources and is funded primarily from usage fees. The board members are appointed by the Council of Ministers subject to the final approval by the President of the country. There is no separate position of the executive director and this function is assigned to the chairperson of the managing collegial body. The ICTA publishes its decisions on its web site, even though it has no obligation for this. The procedures for settlement of disputes between operators are published and there are separate consumer courts organised for handling disputes between consumers and service providers. Appeals against regulatory decisions are decided by courts (Council of State or Administrative Court).

Frequency assignment for broadcasting is carried out by a separate broadcasting authority, the Radio and Television Supreme Council. A Competition Authority has existed since 1997, which has a well-functioning cooperation with the ICTA.

Turkey has been a member of the WTO since 1995 and is therefore committed to liberalisation. It has been granted the status of an EU candidate country and accession negotiations are ongoing.

### Regulatory conditions for wired networks

A general authorisation regime for all categories of electronic communications services has been implemented. Although Turkey is actively adopting new laws, the legislation is complex. Newly adopted legislation is not always based on the EU *acquis* and sometimes does not aim at full alignment. For example, the adoption of the general authorisation scheme in the law of 2008 did not abolish pre-existing concessions. This means that any concession agreements issued before the entry into force of the Electronic Communications Law of November 2008 will remain in force until their expiry (due in 2029), annulment or termination. The specific obligations and conditions stemming from the respective authorisation and concession agreements also continue to apply to the authorisation holders. Therefore, market restrictions still apply, even after the general authorisation process was introduced in 2009. However, Turkey committed to review existing concession and authorisation agreements so that full alignment with the EU regulatory framework will be accomplished by accession.

The operation of cable TV networks is subject to a general authorisation regime with a simple notification to ICTA.

The ICTA decided in 2011, for the purpose of encouraging new investments, and particularly fibre internet access services and improving infrastructure-based competition, that:

- Fibre access is excluded from its market analyses process for a five-year period or until the percentage of fibre internet subscribers reaches 25 per cent of all fixed broadband subscribers.
- Türk Telekom (the fixed incumbent) is required to comply with its 2011 commitment that it provides resale and bitstream access at wholesale level on fibre infrastructure to internet service providers on a non-discriminatory basis and that it notifies such wholesale tariffs to ICTA before entering into force.

Fixed-line retail tariffs are subject regulatory controls requiring advance notification for the incumbent Türk Telekom and a lower limit is applicable to all fixed operators. Tariff rebalancing by Türk Telekom is well advanced. Its reference interconnection offer was updated in 2011, but its fixed call termination charges (at €0.006 per minute for local termination, €0.0073 per minute for single transit and €0.0096 per minute for double transit) are around the EU average. ICTA imposed a full set of regulatory obligations in fixed markets with number portability, carrier selection and pre-selection already available (since 2009) and a new obligation of wholesale line rental imposed on Türk Telekom for residential and business access. Türk Telekom has an obligation to unbundle its local loops and wholesale rates are below the EU average. However, very few loops have been provided to alternative operators, with the operators preferring the Bitstream alternative from Türk Telekom.

### Regulatory conditions for services requiring frequency spectrum

Three mobile operators have been competing in the market since 2000 and all launched 3G licences in 2009, later than most Group B countries. The mobile licences are not technologically neutral, although the regulator has proposed to the Ministry so that frequencies allocated to GSM (both at 900 MHz and 1800 MHz) are opened for 3G services. It also proposed a re-farming scheme whereby some existing GSM spectrum may be auctioned to operators that currently hold less than 10 MHz of spectrum in the 900 MHz band. Similarly, two blocks of 2x15 MHz in the 1800 MHz band may be auctioned to operators that do not have frequencies in this band.

## Turkey

The largest operator, Turkcell is obliged to offer mobile access (including national roaming and virtual mobile access) but these have not been established so far. No licences for provision of broadband wireless access services have been issued so far.

Retail price controls in a form of price caps apply to mobile telephony prices, an obligation stemming from concession agreements that are still in place. A major cut in wholesale mobile termination charges (by over 50 per cent) was imposed by the regulator in April 2010. This followed a 30 per cent decrease already implemented in March 2009. The current rates are different for each mobile operator, averaging €0.0144 per minute, which is significantly below the EU average.

Currently, the three mobile providers operate under concession agreements. As indicated above, older authorisation and concession agreements that were signed before 2009 have not been aligned with the new legal framework and will remain in force until they expire (until 2029), are annulled or terminated. This prevents existing operators from becoming a virtual mobile service provider.

## Payments required from operators

Turkey puts the highest tax burden of any Group B country on the electronic communications sector and the tax burden on mobile subscribers appears to be among the highest in the world.

In October 2011 the government further increased the tax rates applied to mobile phones. This increased the flat rate tax from 40 liras (€17) to 100 liras (€40) and the revenue tax from 20 per cent to 25 per cent. It is estimated that 48 per cent of the cost of using a mobile phone in Turkey is due to taxes, whereas the average for the countries surveyed by the GSM association is 18 per cent<sup>17</sup>. This historically high tax rate has kept the penetration of mobile phones down in Turkey to below 90/100 population, against the Group B regional average of 97 and the EU average of 127/100.

All telecommunications operators are also charged a yearly fee of 0.35 per cent of their revenues as payment for the large staffing of the sector regulator ICTA, which employs over 700 people (significantly higher than the other Group B countries). Some €582 million is collected from the industry by ICTA, of which about €290 million is transferred to the state budget and €104 million to the universal service fund, which is managed by the Treasury.

As a further contribution, a universal service fund collects from various sources, including revenue-based contributions from telecommunications operators and transfers from the ICTA budget. These contributions are allocated to the universal service fund kept by the Undersecretary of the Treasury but no decision on compensation to the universal service providers has been made so far. A portion of revenues collected is earmarked for the universal service purpose and transferred to the fund kept by the Treasury. The universal service legislation has not been applied in practice and universal service is provided by Türk Telekom under the requirements set out in its concession agreement. The Universal Service Law of 2005 envisages a tender procedure for the designation of universal service providers, but this has not been implemented in practice.

## Information society safeguards

Turkey has yet to adopt legislation transposing the EU Electronic Commerce Directive. Furthermore, the Turkish law regulating internet content raises concerns about restrictions to freedom of expression and citizens' right to access information. All countries except Turkey implemented the Electronic Commerce Directive 2000/31/EC. Turkey is preparing a draft transposing the directive. The Turkish Law no. 5651 addresses some of the topics regulated in the directive, but is not aligned with it and would not be replaced by the new law. In particular, liability of internet service providers would not be regulated as in the EC directive.

Regarding electronic contracts and signatures, Turkey has adopted an electronic signature law based on the EC Directive 1999/93. There is also a new Code of Obligations, a new Code of Commerce and a new Code of Civil Procedure. According to E-Signature Law and Code of Obligations, secure electronic signatures and handwritten signatures have the same legal effect. The Code of Commerce obliges stock companies to establish a web site and to publish certain documents online. Executive Board meetings may

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<sup>17</sup> See [www.gsma.com/articles/growing-mobile-tax-burden-in-turkey-holds-back-economic-growth/17824](http://www.gsma.com/articles/growing-mobile-tax-burden-in-turkey-holds-back-economic-growth/17824)

## Turkey

be held electronically. The Code of Civil Procedure foresees the introduction of an e-Justice system and amendments to another law provide a legal basis for delivering official notifications electronically – for natural persons on request, but for certain companies compulsory. Turkey has secondary legislation on electronic documents standards.

There is a new by-law regulating internet domain name registrations that will enter into force in November 2012 and according to this new by-law, registry and registrar functions will be strictly separated. Also, domain names with “com.tr” extension will be registered on first-come, first-served basis. Turkey signed the Council of Europe Convention on Cybercrime in 2010. It has not yet ratified the convention, but the Turkish legislation has already been aligned with it.

## Summary and outlook

Turkey has made significant progress in aligning its legislation with the EU regulatory framework and implementing competitive safeguards. However, major inconsistencies still remain in the market entry regime, as well as regulation of retail tariffs and spectrum management.

There is still work to be done to ensure effective implementation of regulatory obligations, in particular in fixed voice and broadband markets. The electronic communications sector regulator ICTA’s draft work plan for 2012 includes a project to review Turkish regulation in line with recent updates in the EU regulation.

Legislative alignment in the field of information society issues is progressing slowly and there are some major discrepancies from the EU rules. The provisions on internet content that may potentially limit the freedom of expression present a particular area of concern.

Spectrum management needs to be made technologically neutral, open, objective and proportionate with timeframes specified for decisions that align with EU norms in order to make the process less uncertain for investors.

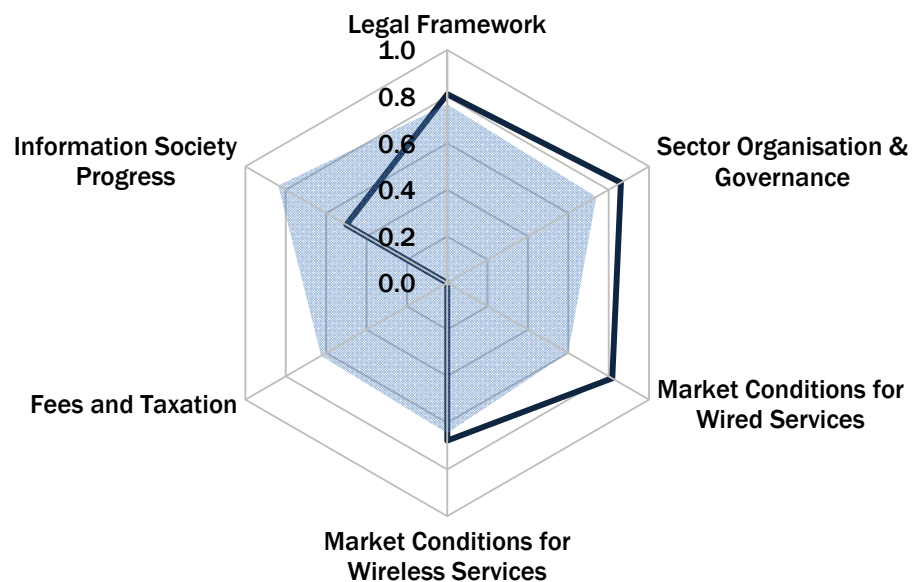
The very high tax burden on mobile phones could be expected to have limited the growth of the sector/100. Mobile penetration is low by Group B and EU standards and the late launch of mobile broadband services has meant lower broadband penetration levels too, lagging significantly behind the EU. This means that there is a pent-up demand for broadband waiting to be met, with internet users at over 40/100 population and total fixed plus mobile broadband penetration still only 17/100.

The potential for high growth in broadband services has attracted investors to establish alternative fibre networks in the main cities. The incumbent fixed operator has also announced a 10-year national fibre investment programme. Against the EU practice, the Turkish telecoms regulator has excluded fibre from open-access requirements for five years, or until fibre subscriptions reach a 25 per cent share of the fixed broadband market. The decision has been taken in order to encourage investment in fibre infrastructure. However, this risks reducing demand, as the greater investment will feed into higher retail prices for consumers.

Turkey

Chart 3: Comparison of the overall legal/regulatory risk for telecommunications in Turkey with international practice and regional performance

Turkey: Overall legal/ regulatory risk



Key: Extremities of the chart = International best practice  
Turkey = Solid line  
Regional average = Shaded area

Overall legal/ regulatory risk = 69 (100 is the lowest risk)

## 4: CONCLUSIONS FROM THE ASSESSMENT

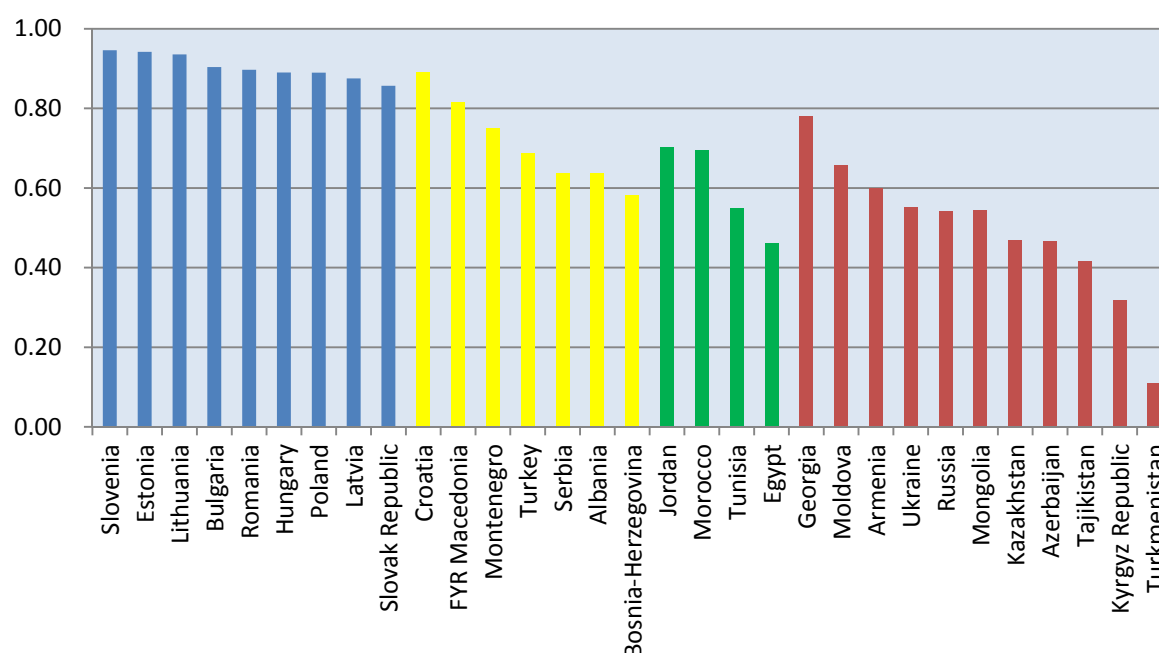
The overall ranking of legal/ regulatory risk for the 31 participant countries is shown in the following 7 charts.

- Regional rankings: Overall legal/regulatory risk
- Regional rankings: Legal framework
- Regional rankings: Sector organisation and governance
- Regional rankings: Market conditions for wired services
- Regional rankings: Market conditions for wireless services
- Regional rankings: Fees and taxation
- Regional rankings: Information society progress.

In this section, some broader conclusions are firstly drawn from the Assessment results, as shown in the regional rankings, with more specific conclusions regarding the improvement of conditions for investment in the electronic communications sector then following.

The criteria that were used to arrive at the ranked scores in the Assessment are described in section 2 of this report and are summarised at the foot of each chart below.

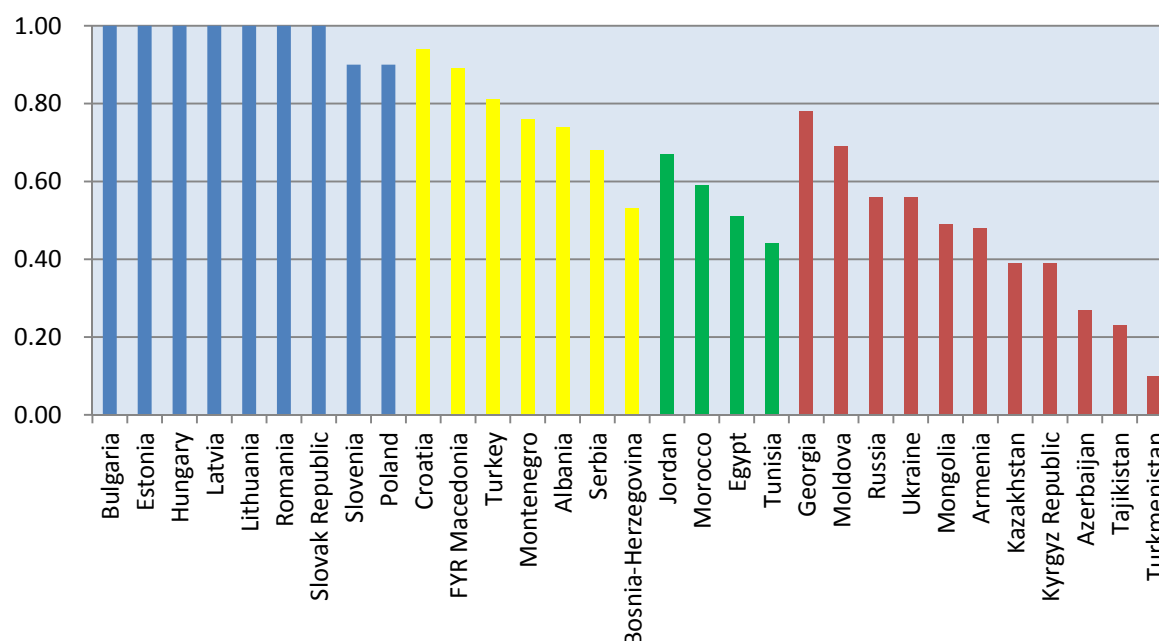
### Regional rankings: Overall legal and regulatory risk



The Overall Legal/Regulatory Risk Index is a summation of a number of components, as defined in section 2 of this report.

- 1) **Legal Framework.** This component assesses if the degree of conformity with a modern legislative framework for an efficient competitive market for electronic communications. (Weighting = 30 per cent)
- 2) **Sector organisation and governance.** This relates to the structure of the electronic communications sector including ownership, regulation and the main regulatory procedures. (Weighting = 10 per cent)
- 3) **Market conditions for wired networks and services.** This relates to the market entry conditions faced by operators and service providers who base their services on metallic, as opposed to wireless (spectrum) based methods. It also explores the competitive safeguards in the market - what the new entrant is and is not allowed to do. (Weighting = 20 per cent)
- 4) **Market conditions for wireless networks and services.** These relate to market entry by operators and service providers who base their services on wireless (spectrum) methods. This includes mobile services and fixed wireless services. It also explores the competitive safeguards in the market - what the new entrant is and is not allowed to do. (Weighting = 25 per cent)
- 5) **Fees and taxation on electronic communications services.** This relates to the types of payments required from operators/service providers to the state and/or regulatory agency in order to start and continue providing services. (Weighting = 10 per cent)
- 6) **Progress towards implementation of Information Society.** This relates to the country's environment for conducting business and providing services electronically. (Weighting = 5 per cent)

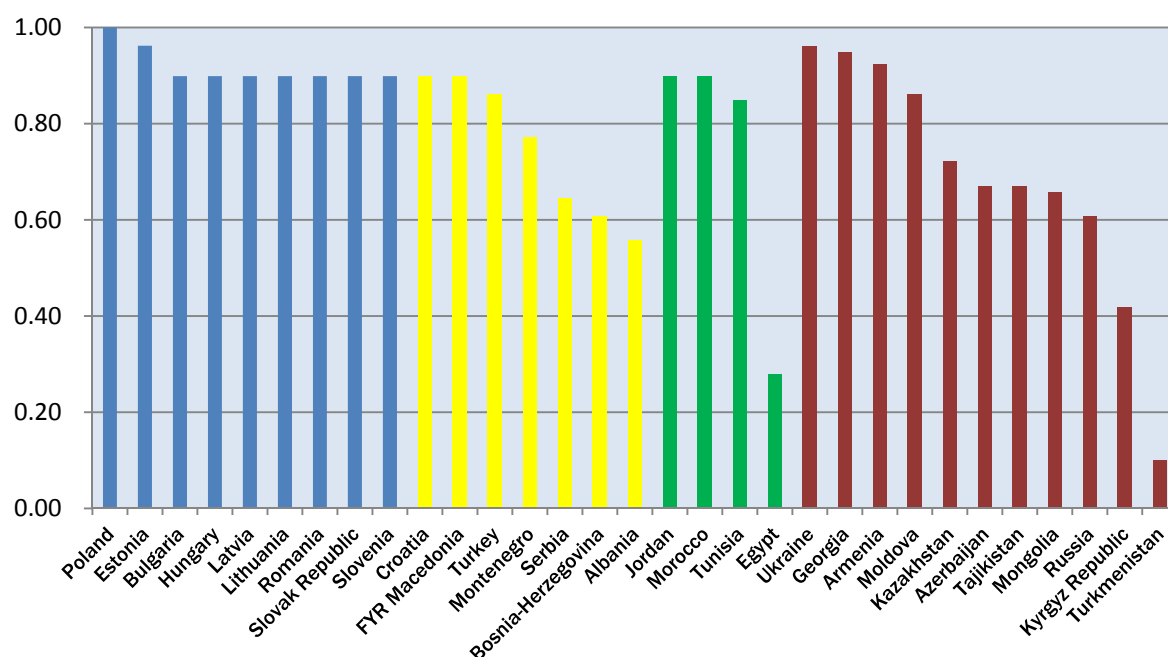
## Regional rankings: Legal framework



The **legal framework** score is a summation of a number of components, as defined in section 2 of this report. The legal benchmarks together contribute 30 per cent of the overall legal/regulatory risk assessment. The key components are:

- 1) **Regulator independence and structure.** This examines the legal basis for separation of policy, regulatory and operational functions, plus the structure and operation of regulator. (Internal weighting 20 per cent)
- 2) **Authorisation regime.** This examines the legal basis for authorisation and licensing powers and where relevant, includes interim provisions transitioning from old to a modern legislative framework. (Internal weighting 10 per cent)
- 3) **Interconnection and infrastructure access.** This examines the legal basis for a well-defined interconnection, access, facilities sharing, and for unbundling rights and obligations. (Internal weighting 10 per cent)
- 4) **Market analysis and enforcement.** This examines the legal basis for market analysis and other processes for the designation of significant market power, the effective regulatory powers to impose and enforce additional obligations on dominant operators to prevent discrimination and abuse of dominance, plus effective dispute resolution powers and procedures and the powers for the regulatory authority to enforce the law, impose fines or other effective penalties. (Internal weighting 20 per cent)
- 5) **Spectrum management.** This examines the legal basis for a fully defined and effective spectrum management regime. (Internal weighting 10 per cent)
- 6) **Universal Service.** This examines the legal basis for an effective universal access/universal service regime and enabling framework. (Internal weighting 10 per cent)
- 7) **Consumer protection.** This examines the legal basis for effective consumer protection using international best practice. (Internal weighting 10 per cent)
- 8) **Numbering.** This examines the legal basis for effective numbering administration. (Internal weighting 10 per cent)

Regional rankings: Sector organisation and governance

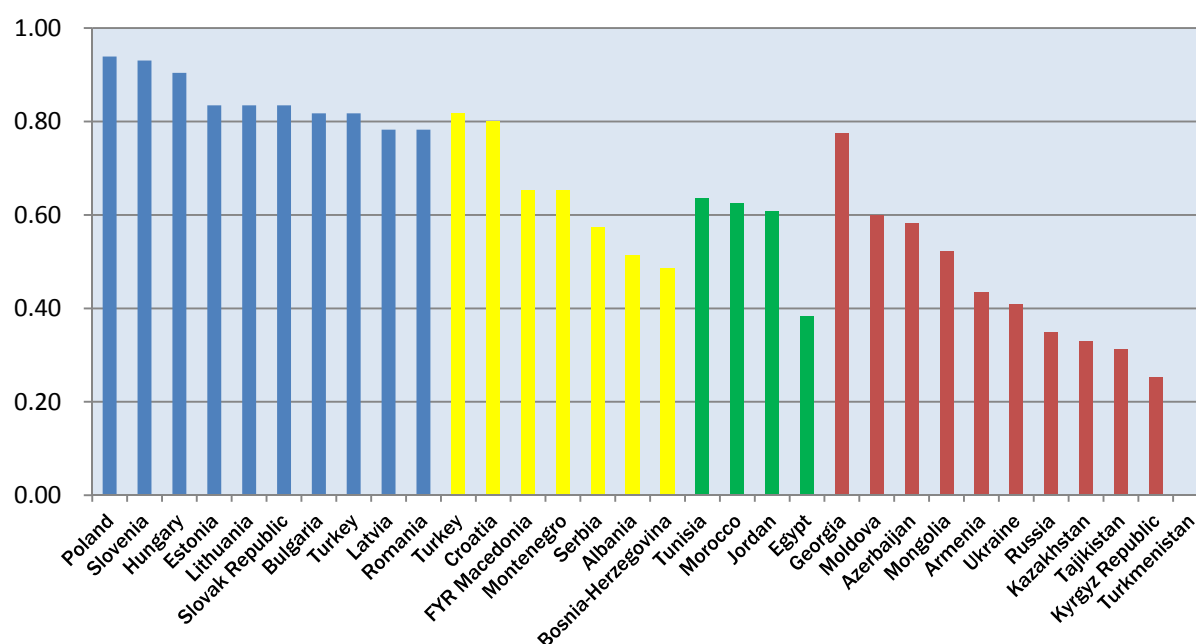


The **sector organisation and governance** score involves a total of 13 individual elements (as defined in Section 2 of this report). The assessment considers the structure of the electronic communications sector including ownership, regulation structure, funding and the regulatory procedures enabling competitive market development. The individual factors include a clear division of policy and regulatory functions, remaining state ownership or retained rights, appointment of regulatory officials, dispute resolution, appeals procedures, public consultations, publication of regulatory decisions, the relationship between the sector regulator and the competition authority, resources of the regulatory agency, funding, plus the country's membership of WTO.

The organisation and governance benchmarks together contribute 10 per cent of the overall legal/regulatory risk assessment.



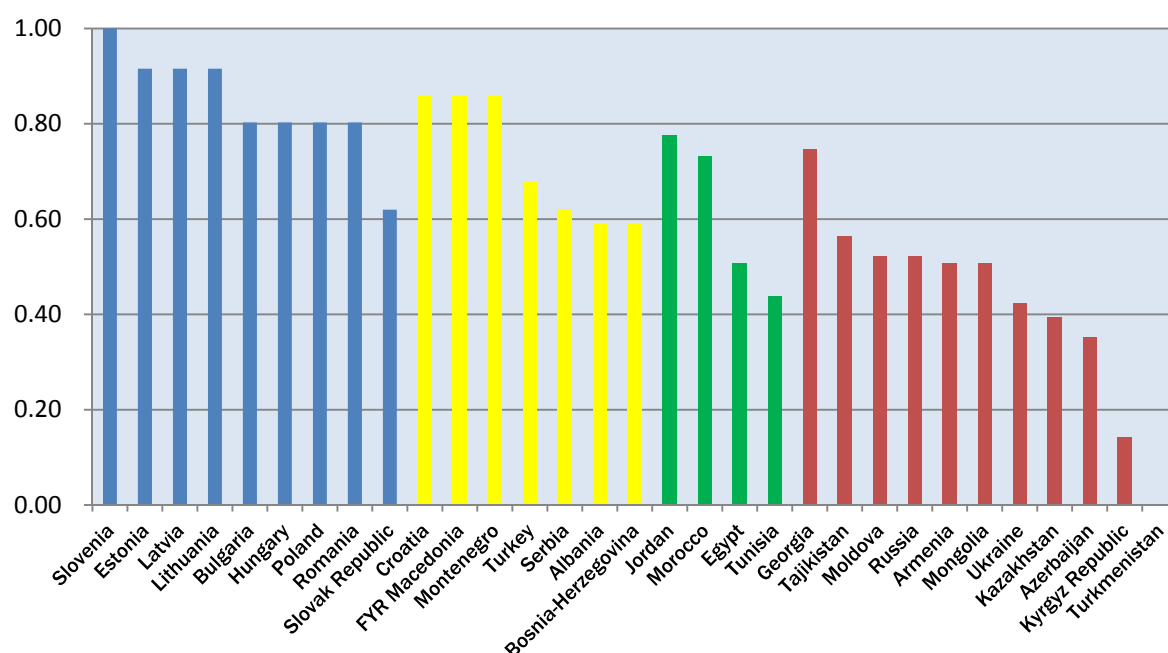
## Regional rankings: Market conditions for wired services



The score for **market conditions for wired services** involves a total of 17 individual elements (as defined in Section 2 of this report). This part of the regulatory assessment looks at the competitive conditions in the market for operators and service providers who base their services on metallic, as opposed to wireless (spectrum) based methods. The assessment focuses on the implementation of good market entry conditions and normally expected competitive market safeguards. The list of includes the implementation of a general authorisation regime, with simple notification procedures eliminating any requirement for explicit decision by the regulator, technology neutrality, reasonable timeframes for obtaining rights-of-way permits from private or public property owners, the mandating of passive infrastructure sharing (ducts, poles, towers, masts, buildings and other facilities), alternative operator access to passive network elements owned by an existing operator at fair, cost-related charges, completion of fixed-line retail tariff rebalancing, implementation of fixed number portability, carrier selection, carrier pre-selection and wholesale line rental, access to the fixed incumbent's international gateways, the publication of reference interconnection and unbundling offers, the regulation of interconnection charges, the regulation of local loop unbundling charges and the existence of a significant number of the incumbent's unbundled local loops, the availability and extent of wholesale broadband access, the existence of a competitive triple play market.

The benchmarks regarding market conditions for wired services together contribute 30 per cent of the overall legal/regulatory risk assessment.

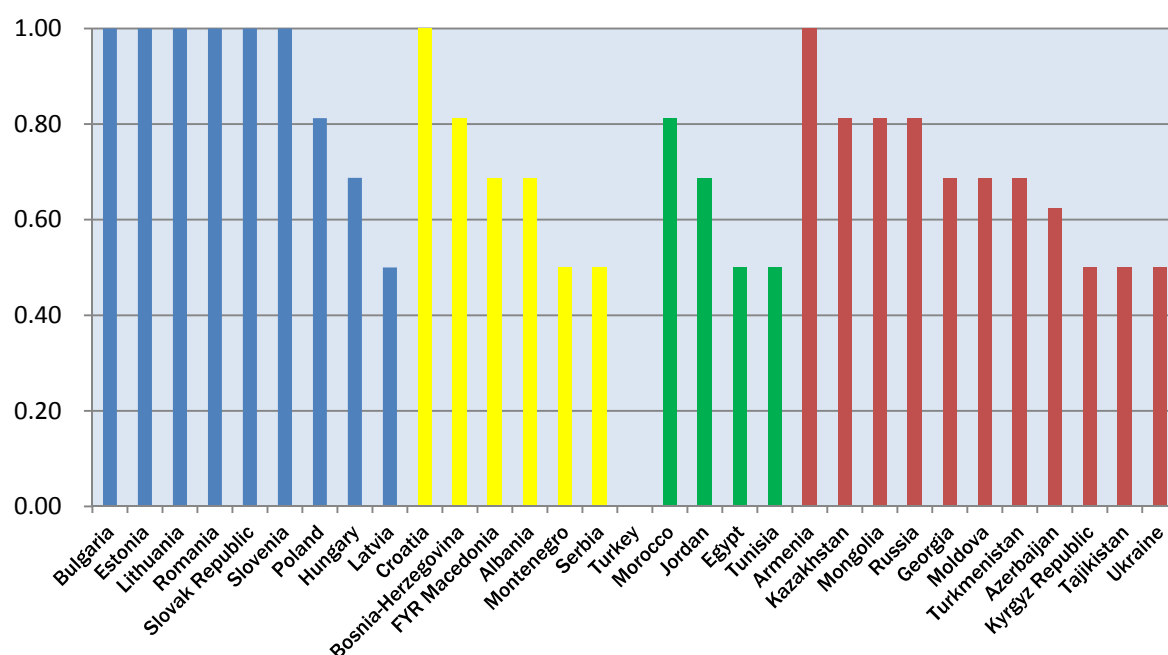
Regional rankings: Market conditions for wireless services



The score for **market conditions for wireless services** involves a total of 10 individual elements (as defined in Section 2 of this report). This part of the regulatory assessment looks at the competitive conditions in the market for operators and service providers who base their services on wireless (spectrum) based methods, including mobile and fixed wireless services. These factors consider the implementation of good market entry conditions and normally expected competitive market safeguards. The list includes the granting of spectrum to applicants on a first-come-first-serve basis or, if spectrum in particular bands is scarce, by a transparent public contest (for example, public auction or beauty contest), the technologically-neutral use of spectrum, the allowance and existence of mobile virtual network operators, the re-farming of the 900 and 1,800MHz frequency bands, the allowance of secondary spectrum trading, interconnection charges regulation (mobile call termination and origination), publication of reference interconnection offers by mobile operators, the requirement for national roaming.

The benchmarks regarding market conditions for wireless services together contribute 35 per cent of the overall legal/regulatory risk assessment.

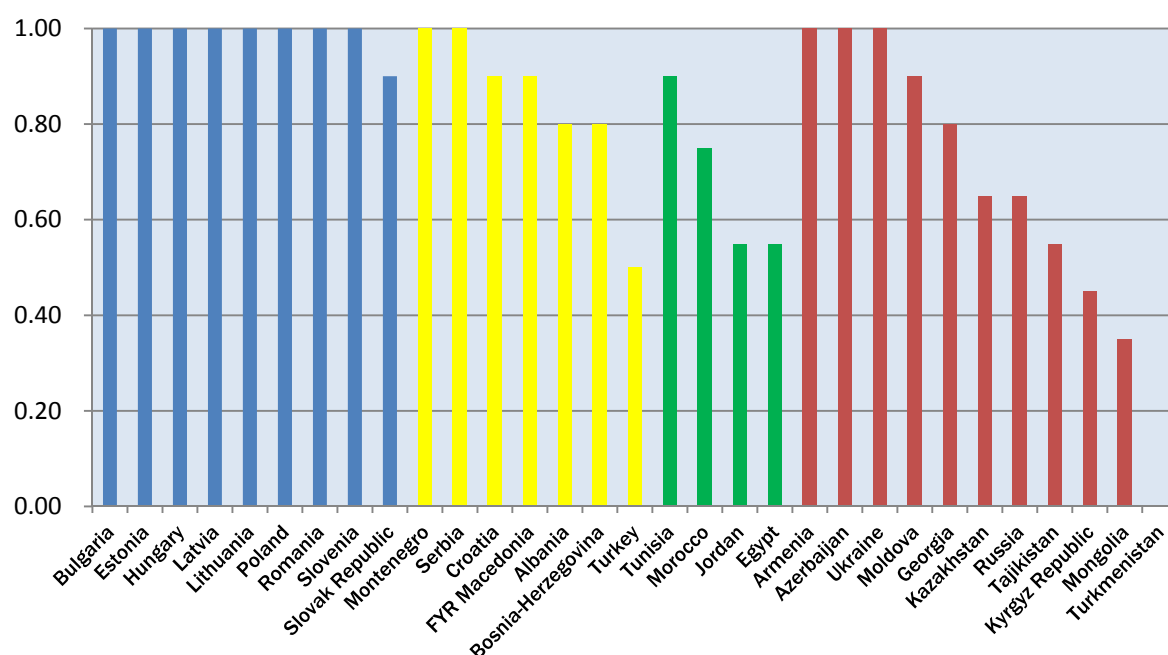
### Regional rankings: Fees and taxation



The score for **fees and taxation** involves a total of 4 individual elements (as defined in Section 2 of this report). This part of the regulatory assessment looks at the types of payments required from operators/ service providers to the regulatory authority or ministry in order to start and continue providing the operators' services. The individual factors include the cost basis of the administrative fees to be paid to the regulator or ministry, the arrangements for operators/ service providers to pay into a universal services fund, the imposition of any special taxes for electronic communications services (besides the normal corporate or VAT taxes) plus the clarity, stability and transparency of the full system of payments required from operators/service providers.

The benchmarks regarding market conditions for wireless services together contribute 10 per cent of the overall legal/regulatory risk assessment.

Regional rankings: Information society progress



The score for **information society progress** involves a total of 4 individual elements (as defined in Section 2 of this report). This part of the regulatory assessment looks at the country's environment for conducting business and providing services electronically. The individual factors include the ease of starting a wide range of internet services without any prior authorisations, a liberalised approach to the freedom of expression and information, the legal framework for recognising electronic contracts and signatures, liberalised domain registration (i.e. not limited to a single domain registrar), a functioning legal framework for protection of personal data plus adoption of an internationally recognised convention on cybercrime.

The benchmarks regarding market conditions for wireless services together contribute 5 per cent of the overall legal/regulatory risk assessment.

## General conclusions from the Assessment results

The regional rankings show that there are varied levels of implementation of legal and regulatory best practice across the 31 countries included in the Assessment. In general:

- Group A countries (Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Mongolia, Russia, Tajikistan, Turkmenistan and Ukraine) display higher overall legal/regulatory risk, though the levels of that risk vary widely amongst those countries.
- Group B countries (Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia and Turkey) are increasing harmonisation with EU member states thereby reducing the overall legal/regulatory risk.
- Group C countries (Egypt, Jordan, Morocco and Tunisia) also have varying though declining levels of overall legal/ regulatory risk.
- Group D countries (Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic and Slovenia) have already reduced the overall legal/regulatory risk significantly by largely adopting best practice.

The following paragraphs describe the main areas where key aspects of legal/regulatory best practice remain to be implemented amongst the country groupings. A summary of the recommendations for each country is given in section 5 of this report.

### Group B countries

(Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia and Turkey)

- **The legal framework** in most Group B countries has been significantly overhauled in recent years to incorporate best practices, through adopting the EU 2009 framework (Croatia) or the EU 2003 framework (Albania, FYR Macedonia, Montenegro, Serbia and Turkey). Notably, Bosnia and Herzegovina has, so far, only implemented the EU 1998 framework. Consumer protection provisions in particular need strengthening in most Group B countries to the level now adopted by Croatia from the EU 2009 framework.
- **Sector organisation and governance.** Apart from Croatia and Montenegro, there is still some state ownership in main operators in the Group B countries. Although all countries have structural separation of policy, ownership and regulatory functions, further improvements to the financial or operational independence of the sector regulator are needed generally to improve the independence of regulatory decision making.
- **Market conditions for wired services** are moving towards best practice for Group B countries, with only Bosnia and Herzegovina yet to implement a general authorisation scheme with simple notification for market entry. Fixed number portability has been implemented, except in Albania and Serbia. Fixed-line retail tariff rebalancing has yet to be achieved in any Group B country. Rights of way into public and private property do not appear strong enough in the Group B countries. With respect to measuring the competitiveness of markets, all countries use the EU best practice for market definition, analysis and determination of significant market power. However, the remaining competitive market safeguards need to be enforced/re-enforced, in particular through stronger infrastructure access and sharing provisions and cost oriented wholesale charging based on modern cost models.
- **Market conditions for wireless services** with best practice is increasing in Group B countries, with evident strong competition and growth in mobile markets. Mobile number portability is fully implemented in all Group B countries, except Bosnia and Herzegovina. National roaming is present in all countries, and although the regulatory enablers for virtual mobile operators to enter the market are generally in place, MVNOs exist only in Albania and Montenegro. The switch off of analogue broadcasting is being left to 2015 in Albania, FYR Macedonia, Serbia and Turkey, delaying valuable spectrum redeployment for broadband expansion, especially in rural areas.
- **Fees and taxation.** A special tax is imposed in Turkey and operators also have to pay a contribution to a universal service fund. In other countries, the fees paid are generally low, although the level of transparency and predictability of operators' required payments needs to be improved to give better confidence that operators only pay the true administrative costs of the regulatory function.
- **Information society progress.** Good progress has been made in Group B countries in implementing the required information society safeguards. Bosnia and Herzegovina still needs to implement

### Conclusions from the assessment

adequate cybercrime protections, Albania and FYR Macedonia have not yet liberalised domain name registration.

## Improving conditions for investment

The continuing high demand for broadband services will attract investment, provided that the enabling legal and regulatory frameworks provide the easy market entry and competitive safeguards now expected by investors, following the reforms introduced throughout the EU. The best practice legal and regulatory conditions are already in place in Croatia, which will join the EU in 2013. In total, 25 of the 31 countries assessed in this report have either adopted substantial components of the EU regulatory framework for electronic communications, or have committed through their agreements with the EU to its adoption. The remaining 6 countries (Kazakhstan, Kyrgyz Republic, Mongolia, Russia, Tajikistan and Turkmenistan) have implemented some reforms, but the overall legal/regulatory risk will remain higher in these countries until the best practices that are features of the EU framework are adopted. The speed at which a country adopts legal and regulatory best practice is critical to investment confidence.

The following features of the EU framework are a priority with respect to the attraction of investment, especially in building the high capacity network infrastructures required to meet the very high growth in broadband demand from consumers.

### Spectrum liberalisation:

Key aspects of spectrum which the countries of the region should focus on are:

- Spectrum should be made available to meet demand, as determined by the market. To achieve this, spectrum management needs to be better coordinated across the telecommunications and broadcasting markets and the regulatory process needs to be independent, fair and transparent in order to ensure that the economic value of the national spectrum resource is optimised.
- At the moment, most countries use a legacy process of spectrum management, which is over-reliant on analogue technology methods and political considerations. The planned switchover from analogue to digital broadcasting is already underway. The analogue switch-off must be completed by mid-2015, at the latest, to comply with international obligations. In some cases (for example Croatia and Georgia) suitable spectrum for is already available but the necessary cross-border co-ordination will delay the exploitation for broadband expansion because the same frequencies are used for analogue broadcasting in neighbouring countries. In parallel with the digital switchover plans, spectrum management must be modernised, in order to ensure the best economic outcomes that are available from the “digital dividend” made possible by the release of the spectrum previously used by analogue terrestrial broadcasting.
- The release of this analogue broadcasting spectrum will make available a very large amount of valuable “digital dividend” spectrum that can be exploited by electronic communications providers to the expected growth in broadband services. If this challenge is met in all countries over the next 2-3 years, then the demands of rural, as well as urban citizens can be met with more cost-effective investment, giving better quality and value for money to consumers.

### Infrastructure sharing

Since market liberalisation, new entrants have generally invested in separate telecommunications infrastructures to bring their services to local and national markets. In the mobile sector, each country has (typically) three network operators that have built three separate networks each with its own switches and transmission masts. There has been some exploitation by mobile companies of the existing network infrastructures generally controlled by the incumbent fixed operator. However, where these legacy networks have used older technologies, or where the network has insufficient capacity, the mobile companies have invested in their own dedicated transmission network infrastructures.

New entrants to the fixed access markets (telephony and broadband) have also generally built alternative network infrastructures, starting in the larger cities where the higher demand can justify these new investments. Although investors should have the freedom to invest in their own infrastructures, in many cases, the costs associated with this duplicative infrastructure deter investment, especially in areas where demand has yet to develop, or where the costs of building the infrastructure are currently high.

Overreliance on separate duplicative infrastructures (the “infrastructure competition” model) results in the expansion of modern services being generally slower and more expensive than necessary, due to the construction of redundant network infrastructure. This leaves many geographical areas underserved,

### Conclusions from the assessment

because the investment case for separate infrastructures is not sufficient to create good market conditions. To ensure that network investment is more responsive to demand, operators should be allowed and encouraged to exploit infrastructure sharing options, to improve the commercial case. This issue will be particularly important in meeting the demand for new broadband services (fixed and mobile). The commercial case for multiple investments in urban areas is already strong, with high consumer and business demand. The commercial case for expansion of high capacity infrastructure to meet the demand in more rural areas is greatly improved when options for infrastructure sharing are considered,

Key aspects of infrastructure sharing which the countries of the region should focus on are:

- Modern digital technologies allow several channels to use the same infrastructure, for example the Asynchronous Digital Subscriber Line (ADSL) technology can provide two services over one copper loop. In many countries, the regulatory conditions have been slow to adapt to provide for new market entrants to share the existing infrastructures that are in place in order to give the end consumers a choice of retail service provider under fair competitive market conditions.
- Many of the barriers to infrastructure sharing have come from the incumbent fixed operators, with their legacy of monopoly markets often under state control. Although the building of separate network infrastructure investment may make commercial sense in high density urban areas, it becomes less attractive as the network expands. This results in poorer service and lack of choice for rural citizens.
- In most of the countries assessed, fixed network penetration has been historically low, so substantial investment in access technologies (both fixed and mobile) will now be needed to meet the demands from consumers for new services. Where demand will justify investment in only one high-capacity infrastructure, as in most rural areas, the need for infrastructure sharing is most pressing.
- In all parts of the network, a fully open and competitive market needs the option of infrastructure sharing, so that investors can make a free choice between making new investments or leasing capacity from other existing networks. In this way, the introduction of new services in a competitive market can take place faster, in response to demand. Regulators in the EU have introduced market oriented obligations on existing network operators to make their capacity available on a fair, transparent basis at wholesale charges that are related to incremental costs and acceptable rates of return.
- These standard regulatory tools can and should be introduced in countries outside the EU to create effective wholesale markets that can bring faster introduction of competitive broadband services, especially in rural areas. The new wave of next generation networks and access (NGN and NGA) investments will be maximised if the best practice infrastructure access and sharing regulations are implemented. This will result in more choice to consumers without the added expense of (for example) multiple radio masts and multiple fibre investments where they are not needed.

**Conclusions from the assessment****Special tax burdens on operators**

The Assessment has identified examples where special taxes are imposed on the electronic communications sector. Special taxes are imposed on mobile operators in Egypt, Georgia, Hungary, Jordan, Moldova, Tunisia, Turkey, Tajikistan and Ukraine. According to the mobile operators, the imposition of high taxes affects their investment plans with indirect repercussions on the country's GDP. A recent Global Mobile Tax Review report<sup>18</sup> stated that;

“High taxes on mobile services run counter to government’s commitments to improving access to communications. At the World Summit on the Information Society in 2003, 175 countries signed up to a commitment to give more than half the world’s population access to information and communications technologies by 2015.....the direct impact of reducing mobile phone specific taxation is, in most cases, almost fully counterbalanced through indirect taxation and growth impacts.”

Special mobile tax measures have also been condemned by the GSM Association<sup>19</sup> and the European Commission. The GSMA report concluded that;

“In some cases, lowering taxes on mobile communications could actually increase government's total tax revenue in the longer-term. Each new mobile phone user would generate an additional US\$25 a year in service tax revenues at the current levels of taxation on usage.

“Eliminating all telecom-specific and other special taxes would boost the number of mobile users in the 19 affected markets by 34 million by 2010 and mobile voice traffic in these markets by 25%.

“Of the 50 countries in the study, Turkey levies the highest rate of taxes on mobile communications - nearly 44% of the cost of owning and using a mobile phone is made up of taxes. That represents an average of US\$73 in taxes each year for each user.”

The imposition of special taxes remains a significant investment risk for investors in telecommunications.

**Summary of key priorities for improvement of the investment climate:**

- Full spectrum liberalisation
- Analogue to digital broadcasting switchover
- Non-discriminatory access to rights of way
- Removal of existing market entry barriers
- Implementation of the normally expected competitive safeguards (including number portability, infrastructure access and sharing)
- Removal of special tax burdens on operators.

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18 <http://serving.webgen.gsm.org/5926DA9A-2DD6-48E7-BAD4-50D4CD3AF30A/assets/taxreview0607.pdf>

19 see [www.cellular-news.com/story/14210.php](http://www.cellular-news.com/story/14210.php)



## 5: RECOMMENDATIONS

The following recommendations arise from the Assessment, in particular the conclusions related to the need to adopt legal and regulatory best practices. These recommendations therefore aim to indicate specific measures which, when introduced, can to reduce the overall legal/regulatory risk associated with investments in the electronic communications sector.

### Group B countries

**(Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia and Turkey)**

Albania, Croatia, FYR Macedonia and Turkey already align closely with legislative best practice for the electronic communications sector. Croatia has already fully adopted the EU 2009 regulatory framework for electronic communications and all other Group B countries are working towards its adoption.

Although Turkey has introduced a general authorisation scheme, it did not abolish some old concessions (authorisations and licences) held by existing operators until expiry (up to 2029), annulment or termination (though the Turkish regulator has committed to align them with EU requirements). Full transition to the new authorisation regime is required in order to create equal competitive conditions. In addition, Bosnia and Herzegovina still applies an individual licensing regime rather than the general authorisation framework.

Specific recommendations for amendment to the legal and regulatory frameworks in each country are given in the table at the end of this section.

A summary of the main recommendations arising from this Assessment is given in the tables below.

## Recommendations

## Recommendations for Turkey

Recommendation table I: Summary of priority recommendations to improve the legal framework

Group B Countries	Regulator independence and structure	Authorisation regime	Interconnection and infrastructure access	Market analysis and enforcement	Spectrum management	Universal service	Consumer protection	Numbering
Turkey	Enhance regulator independence, including budget mechanisms	Concession agreements issued before 2008 telecom law remain in force until expiry (due in 2029), annulment or termination (though regulator has committed to align with EU requirements)			Eliminate uncertainty regarding potential ministry role in initiating spectrum tenders. Specifically require open, objective, transparent, non-discriminatory procedures for granting spectrum rights and setting fees Shorten deadlines for spectrum assignments		Adopt the draft law on electronic commerce	Shorten deadlines for number assignments

Recommendation Table II: Summary of priority recommendations to improve regulatory implementation

Group B Countries	Sector organisation and governance	Market conditions for wired services	Market conditions for wireless services	Fees and taxation	Information society safeguards
Turkey	Reduce state ownership.	Implement all remaining competitive safeguards. Improve rights of way. Complete tariff rebalancing.	Allow MVNOs.	Introduce system of administrative fees. Remove special taxes. Introduce funding mechanism to support universal broadband.	Further liberalise internet service provision.

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