European Bank for Reconstruction and Development (EBRD)

2012 Electronic Communications Sector Comparative Assessment

Morocco
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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 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”). 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 and Great Village International Consultants Inc. (the “Consultant”), with contributing assistance from Cullen International and other sector specialists.

The results from the Assessment are available in this report and on the EBRD web site (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
3 Great Village International Consulting Inc. (www.greatvillage.com – contact 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) 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
5 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.
Background and objectives

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 and 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, 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” 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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6 http://www.wto.org/english/tratop_e/serv_e/telecom_e/telecom_posturuguay_neg_e.htm
7 www.cullen-international.com/cullen/main.htm
Assessment methodology

been initiated including actions resulting from various bi-lateral/multi-lateral initiatives, namely the European Neighbourhood Policy8 (ENP) and Eastern Partnership9 (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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8 http://ec.europa.eu/world/enp/index_en.htm
9 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 services10. 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”11, 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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10 The full name of the agreement is Scheduled Commitments on basic telecommunications services annexed to the Fourth Protocol of the GATS (15 February 1997)
11 [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 BEREC12) 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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Components of EU 2003 and 2009 Regulatory Frameworks

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<tr>
<th>EU 2003 Regulatory Framework</th>
<th>EU 2009 Regulatory Framework</th>
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</thead>
<tbody>
<tr>
<td>Framework Directive 2002/21/EC</td>
<td>Amended by:</td>
</tr>
<tr>
<td>Authorisation Directive 2002/20/EC</td>
<td></td>
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<tr>
<td>Universal Service Directive 2002/22/EC</td>
<td>Amended by:</td>
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<tr>
<td>Competition Directive 2002/77/EC</td>
<td>Not amended</td>
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<tr>
<td>Radio Spectrum Decision 676/2002/EC</td>
<td>Not amended</td>
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<td>-</td>
<td>BEREC Regulation EC/1211/2009</td>
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</table>

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.

Legal benchmarks, weightings and components

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

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
Assessment methodology

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

<table>
<thead>
<tr>
<th>Weightings</th>
<th>Benchmarks</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>15%</td>
<td>Sector organisation and governance</td>
<td>The structure of the electronic communications sector, including ownership, regulation funding and procedures.</td>
</tr>
<tr>
<td>30%</td>
<td>Market entry for wired networks and services (including licensing)</td>
<td>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.</td>
</tr>
<tr>
<td>35%</td>
<td>Market entry for wireless networks and services (including licensing/authorisations)</td>
<td>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.</td>
</tr>
<tr>
<td>10%</td>
<td>Fees and taxation on electronic communications services</td>
<td>The types of payments required from operators/servive providers to the regulator or ministry in order to start and continue providing their services.</td>
</tr>
<tr>
<td>5%</td>
<td>Progress towards implementation of Information Society</td>
<td>The country's environment for conducting business and providing services electronically</td>
</tr>
<tr>
<td>100%</td>
<td>Total weighting</td>
<td>The regulatory benchmarks together contribute 70% of the overall legal/regulatory risk assessment</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Weighting</th>
<th>Score used</th>
<th>Key Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>30%</td>
<td>Legal assessment score</td>
<td>Legal framework</td>
</tr>
<tr>
<td>10%</td>
<td>Regulatory assessment score 1</td>
<td>Sector organisation and governance</td>
</tr>
<tr>
<td>20%</td>
<td>Regulatory assessment score 2</td>
<td>Market conditions for wired services</td>
</tr>
<tr>
<td>25%</td>
<td>Regulatory assessment score 3</td>
<td>Market conditions for wireless services</td>
</tr>
<tr>
<td>10%</td>
<td>Regulatory assessment score 4</td>
<td>Fees and taxation</td>
</tr>
<tr>
<td>5%</td>
<td>Regulatory assessment score 5</td>
<td>Information society progress</td>
</tr>
<tr>
<td>Total 100%</td>
<td>Combined legal/ regulatory risk</td>
<td>8 legal components and 5 regulatory components</td>
</tr>
</tbody>
</table>
Example of chart showing overall legal/ regulatory risk scores

**Overall legal/ regulatory risk**

- **Legal Framework**: 1.0
- **Information Society Progress**: 0.8
- **Fees and Taxation**: 0.6
- **Sector Organisation & Governance**: 0.4
- **Market Conditions for Wired Services**: 0.2
- **Market Conditions for Wireless Services**: 0.0

**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.

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.
- 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.

14 www.culleninternational.com/other-services/studies.htm?lng=en (see Enlargement countries telecommunications monitoring – 3, 2011-2013.)

15 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 website 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 C countries

Regional overview

The four countries assessed (Egypt, Jordan, Morocco and Tunisia) have a total population of nearly 130 million (2010), with Egypt the largest (81 million) and Jordan the smallest (6 million).

Penetration of telecommunications services is low by EU standards:

- Average fixed-line penetration is around 11/100 population in Egypt, Morocco and Tunisia, and only 7/100 population in Jordan (the EU average is 40/100 population).
- Mobile subscriber penetration is 105/100 population, with Egypt the lowest at 99 and Jordan the highest at 120 (the EU average is 127/100 population).
- Broadband services are still at an early stage, with the average levels of penetration of fixed and mobile broadband connections only one tenth of the average EU levels.

During the last eight years, all four countries have passed legislation that allows the full liberalisation of the sector, most recently in Tunisia in 2009. This means that there is a legal basis for new entrants in all markets, but in practice, the countries still have dominant fixed network incumbent operators, all of which have some remaining state interest\(^\text{16}\).

Mobile communications is the main competitive growth market, with three licensed mobile operators in each country, operating with a mixture of state and foreign ownership.

Broadband communications are still at an early stage, but show the greatest growth and promise. Voice revenues have already stagnated.

\(^{16}\) In Jordan, the Social Security Corporation, which is independent of State funds, owns 29 per cent of Jordan Telecom.
Overall market description

<table>
<thead>
<tr>
<th></th>
<th>Egypt</th>
<th>Jordan</th>
<th>Morocco</th>
<th>Tunisia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>81.1m</td>
<td>6.2m</td>
<td>31.9m</td>
<td>10.5m</td>
</tr>
<tr>
<td>Remaining state ownership in fixed operator</td>
<td>80%</td>
<td>29%</td>
<td>33%</td>
<td>65%</td>
</tr>
<tr>
<td>Date of sector liberalisation</td>
<td>2005</td>
<td>2004</td>
<td>2006</td>
<td>2009</td>
</tr>
<tr>
<td>Market share of fixed incumbent in the fixed market</td>
<td>Over 95%</td>
<td>Over 95%</td>
<td>99%</td>
<td>97%</td>
</tr>
<tr>
<td>Number of mobile operators</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Penetration of fixed-lines per 100 population</td>
<td>11.1</td>
<td>6.8</td>
<td>11.2</td>
<td>11.9</td>
</tr>
<tr>
<td>Penetration of mobile subscribers per 100 population</td>
<td>99</td>
<td>120</td>
<td>114</td>
<td>111</td>
</tr>
<tr>
<td>Penetration of fixed broadband per 100 population</td>
<td>2.1</td>
<td>4.7</td>
<td>1.8</td>
<td>5.1</td>
</tr>
<tr>
<td>Penetration of mobile broadband per 100 population</td>
<td>2.9</td>
<td>5.0</td>
<td>8.1</td>
<td>1.7</td>
</tr>
<tr>
<td>Overall legal/ regulatory risk index (100 =lowest risk)</td>
<td>46</td>
<td>70</td>
<td>69</td>
<td>55</td>
</tr>
</tbody>
</table>
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

The mobile sector is the most competitive in this region, with three licensed operators in each country. There is still some state ownership of companies, particularly in Tunisia where the state has part-ownership in all three mobile operators and in Egypt where the state owns 80% of the incumbent fixed and mobile company. 3G services have been launched in all four countries (Egypt being one of the first African countries to launch 3G in 2007). Mobile data services are showing very high growth, outselling fixed broadband, with over 4 million mobile data subscribers in 2011, compared with around 2.5 million fixed broadband connections. Overall penetration of broadband is highest in Jordan and Morocco at around 10/100 population and lowest in Egypt at 5/100.

The governments of all four countries are supporting “Information Society” policies, with various degrees of success. Morocco promotes an innovative “pay or play” scheme to encourage operators to invest in rural broadband networks. The scheme is aiming to bring service to 2 million population in rural areas where there has previously been no telecommunications coverage (see Morocco Case Study “Investing in rural areas”. Tunisia and Egypt have established techno-parks, with some success in encouraging inward investment by ICT sector companies. Jordan’s National Broadband Network aims to provide a country-wide fibre infrastructure, though this has stalled, with only one-third of the planned investment completed. The Jordanian government is currently understood to be examining options by inviting private investors to participate in the completion of the scheme.

Some regulatory reforms to the sector have already been introduced in all four countries, including movement towards simpler licensing procedures (although none of the countries has yet implemented the EU’s more liberalised market entry conditions).

The main liberalising steps so far across the region are:

- All four countries allow any technology to be used when a licence is granted (except for fixed services in Egypt).
- Access to public and private rights of way appears reasonable in Jordan, Morocco and Tunisia, but not yet in Egypt.
- Passive infrastructure access (for example access to ducting) is mandated in Jordan and Morocco, but is not clear in Egypt or Tunisia.
- New entrant operators can gain access to existing international gateways and negotiate their own international settlement deals for voice and data traffic (although in Egypt this needs a separate licence with high fees).
- Spectrum is generally granted on a first-come, first-served basis, or by open and transparent public auction without undue political interference.

None of the countries has yet allowed spectrum holders to trade their holdings without the involvement of the relevant spectrum agency. Only in Morocco has the incumbent fixed operator completed the rebalancing of its retail telephony tariffs. Elsewhere the artificially low tariff charged for a basic fixed-line represents a significant barrier to competitors entering the fixed telephony market.
Assessment results

### Conditions for market access

<table>
<thead>
<tr>
<th>Condition</th>
<th>Egypt</th>
<th>Jordan</th>
<th>Morocco</th>
<th>Tunisia</th>
</tr>
</thead>
<tbody>
<tr>
<td>General authorisation procedure</td>
<td>✘</td>
<td>✘</td>
<td>✘</td>
<td>✘</td>
</tr>
<tr>
<td>Technology neutrality for fixed licences</td>
<td>✘</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Technology neutrality for mobile licences</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Reasonable access to rights of way</td>
<td>✘</td>
<td>✔</td>
<td>✘</td>
<td>✔</td>
</tr>
<tr>
<td>Infrastructure sharing mandated</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Regulated interconnection charges</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Access to international gateways</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Spectrum granted on fair, transparent basis</td>
<td>✔</td>
<td>✔</td>
<td>✘</td>
<td>✘</td>
</tr>
<tr>
<td>Spectrum secondary trading allowed</td>
<td>✘</td>
<td>✘</td>
<td>✘</td>
<td>✘</td>
</tr>
<tr>
<td>Fixed-line retail tariff rebalancing completed?</td>
<td>✘</td>
<td>✘</td>
<td>✔</td>
<td>✘</td>
</tr>
</tbody>
</table>

Some progress has been made by the electronic communications market regulators in the region to introduce the normally expected competitive market safeguards:

- Number portability for mobile subscribers has been implemented in Egypt and Morocco and is planned in Jordan and Tunisia. Morocco has introduced fixed number portability.
- For the fixed broadband markets, all countries except Egypt have introduced the process for competitors to use the existing infrastructure via local loop unbundling and wholesale broadband access.
- Morocco and Tunisia have also encouraged competition in the voice markets by introducing carrier selection/pre-selection, with Jordan due to follow in 2012. Egypt only provides consumer choice via pre-paid calling cards.
- Reference interconnection offers are available in the region, except in Egypt.
- In mobile services, Egypt, Jordan and Morocco have mandated national roaming.
- None of the countries have yet introduced wholesale line rental for their voice markets.
Implementing competitive safeguards

<table>
<thead>
<tr>
<th></th>
<th>Egypt</th>
<th>Jordan</th>
<th>Morocco</th>
<th>Tunisia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed number portability</td>
<td>✘</td>
<td>✘</td>
<td>✔</td>
<td>✘</td>
</tr>
<tr>
<td>Mobile number portability</td>
<td>✔</td>
<td>✘</td>
<td>✔</td>
<td>✘</td>
</tr>
<tr>
<td>Reference Interconnection Offer (Fixed)</td>
<td>✘</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Reference Interconnection Offer (Mobile)</td>
<td>✘</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Local loop unbundling</td>
<td>✘</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Wholesale broadband access</td>
<td>✘</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Carrier selection/ pre-selection</td>
<td>✘</td>
<td>✘</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Wholesale line rental</td>
<td>✘</td>
<td>✘</td>
<td>✘</td>
<td>✘</td>
</tr>
<tr>
<td>National mobile roaming</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✘</td>
</tr>
<tr>
<td>Mobile Virtual Network Operators</td>
<td>✘</td>
<td>✔</td>
<td>✘</td>
<td>✘</td>
</tr>
</tbody>
</table>

All four countries have great aspirations for “Information Society” status, with optimistic government policy statements (particularly in Morocco and Tunisia). The main aims in all four countries are to attract foreign ICT companies and to equip schools and business with information and communications technology.

All four countries have implemented some of the necessary enablers to implementation of an information society, but none of them have the full set of expected enablers and safeguards. In Egypt there is no legal basis for personal data protection and neither Egypt nor Tunisia have internationally recognised safeguards against cybercrime.

Implementation of information society safeguards

<table>
<thead>
<tr>
<th></th>
<th>Egypt</th>
<th>Jordan</th>
<th>Morocco</th>
<th>Tunisia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic internet freedom of expression</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Ease of setting up internet business</td>
<td>✔</td>
<td>✘</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Legal basis for electronic documents and signatures</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Legal basis for data protection</td>
<td>✘</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Safeguards against cybercrime</td>
<td>✘</td>
<td>✔</td>
<td>✔</td>
<td>✘</td>
</tr>
</tbody>
</table>

Regional summary and outlook

With the recent changes to governments in North Africa, there is much optimism that the necessary reforms to encourage information technology and investment in electronic communications will follow. All four countries have stated commitments to investor-friendly policies, especially towards ICT companies.
Assessment results

In the recently published Change Readiness Index\(^{17}\), Tunisia (second), Jordan (fourth) and Morocco (sixth) all rank highly out of the 60 developing countries listed. The index measures a country’s capacity to manage change and includes such factors as entrepreneurship, information and communication technology innovation, investment climate and economic diversification. Egypt was ranked 41st.

All four countries are active in regional discussion on the development of more competitive markets for electronic communications, generally aiming to harmonise with the EU regulatory framework. All countries are active in “twinning” projects on electronic communications regulation with EU countries.

Although the legal basis for competition is in place in all four countries, new entrants are discouraged by the power of the incumbent operators and by the absence of some of the normally expected competitive safeguards, as used in the EU regulatory framework. The main demand and investment is in the mobile markets, where very high prices have been paid by investors for establishing networks and launching 3G services. On the other hand, fixed access network investment remains low and few competitive licences have been taken up. Alternative fixed network investment is limited to the main cities. Fixed broadband access growth currently focuses mainly on the urban areas. The various government initiatives to increase fixed broadband penetration outside the cities will only succeed with substantial private sector involvement and investment. More private sector investment will require better market entry conditions and improved competitive safeguards.

Further investment in the mobile sector will be driven by the high demand for mobile data services.

For both fixed and mobile markets, the sector regulators have to be more committed to the implementation and enforcement of the normally expected market entry conditions and competitive safeguards. All the regulators in the region appear positive towards the EU regulatory framework but as elsewhere, meaningful implementation is often held back by the inertia of state control and market dominance by the incumbent operators.

Some progress has been made in implementing basic competitive safeguards, for example, Morocco has both fixed and mobile number portability in place. The sector regulators need to step up their market analysis responsibilities and enforce the necessary remedies to remove the adverse conditions for new entrants resulting from the dominance of the incumbent operators.

The primary legislation governing the electronic communications sector is under review in all the Group C countries. Should the new parliaments accept these changes, and the regulatory agencies gain a strengthened capacity to enforce the resulting improvements to competitive market conditions, then the growth opportunities for fixed and mobile broadband services are very good.

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.

17 2012 Change Readiness Index kpmg.com/changereadiness
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 a significantly 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. Morocco has the most pent-up demand for broadband service, with nearly 50 per cent of its population being regular internet users but only around 10 per cent connected via broadband. Similarly, there is significant latent potential in the other three countries. All countries have a significant gap with the EU, where on average, broadband subscriptions and penetration are significantly higher and the overall demand is being satisfied by broadband.
MOROCCO

At a glance

<table>
<thead>
<tr>
<th>Market penetration</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>31.9m</td>
</tr>
<tr>
<td>Fixed penetration*</td>
<td>11.2</td>
</tr>
<tr>
<td>Mobile penetration*</td>
<td>114</td>
</tr>
<tr>
<td>Broadband penetration*</td>
<td>9.9</td>
</tr>
</tbody>
</table>

*Per 100 population

Key Institutions

<table>
<thead>
<tr>
<th>Policy and legislation</th>
<th>Ministry of Industry Trade and New Technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>National regulatory authority</td>
<td>Agence Nationale de Réglementation des Télécommunications</td>
</tr>
</tbody>
</table>

Market access

| General authorisation | ✔ |
| Technological neutrality | ✔ |
| Rights of way | ✔ |
| Infrastructure sharing | ✔ |
| Granting of spectrum | ✔ |

Competitive safeguards

| Number portability | ✔ |
| Interconnection offers | ✔ |
| Wholesale broadband offers | ✔ |
| Mobile national roaming and MVNO | ✔ * |

*National roaming only

Information society

| Percentage of individuals using the Internet* | 49.0 |
| Ease of setting up internet business | ✔ |
| Legal basis for electronic documents and signatures | ✔ |
| Safeguards against cybercrime | ✔ |

Market liberalisation

The telecommunication sector has been liberalised since 1997. After an unsuccessful attempt to attract new entrants to the fixed telephony market in 2002, the process was re-launched in 2006 and two new fixed licences were awarded. The three fixed players are now:
Morocco

- The incumbent operator, Maroc Télécom (53 per cent Vivendi Group, 34 per cent Moroccan State and 13 per cent listed on the Casablanca bourse).
- Méditel (Orange: 40 per cent - Caisse de Dépôt et de Gestion: 30 per cent - Finance Com: 30 per cent).
- Wana (ONA Group and Zain).

Previous restrictions on wholesale transit traffic were removed and competitive operators are now permitted to provide any kind of voice service (national/international voice calls) and data transmission services. Maroc Telecom maintains 65 per cent market share of basic fixed telephony subscribers. There are 3.56 million fixed-lines. This gives a penetration rate of 11/100 population, which is around the average for the four regional countries assessed. Mobile subscriptions stand at 36.5 million, which represents a penetration rate of 114/100 population.

Fixed broadband penetration has reached 1.8/100 population with 99 per cent provided by Maroc Telecom. The other 1 per cent is covered by two alternative licensed operators. This low level of fixed broadband penetration has resulted from most growth coming from mobile broadband subscriptions, which have risen to 2.3 million since the launch of 3G services in 2006 (a current penetration rate of 8.1/100 population).

The incumbent operator, Maroc Telecom, began operating a mobile network in 1994 and currently has a 47 per cent market share. The second GSM licence was granted in 1999 to Méditel, which has a 33 per cent market share. A third GSM licence was granted to Wana in 2009, which already has a 20 per cent market share. All three operators were awarded 3G licences in 2006, each of them paying around €30 million plus €6.5 million as a contribution to spectrum re-farming. This mobile licensing timetable resulted in the unusual situation where Wana received a 3G licence before receiving a GSM licence. Wana launched its 3G service in 2008, building on its existing fixed-line and internet services.

Chart 1: Market penetration of main services per 100 population in Morocco, compared with the Group C regional averages

Group C average is for Egypt, Jordan, Morocco and Tunisia.
Legal framework

The Moroccan legislative framework for the electronic communications sector has a number of best practice features, including the interconnection regime, infrastructure access, market analysis, universal service and role of telecommunications operators in national security and emergency situations.

Consolidated Law of 1996 on Post and Telecommunications is the primary law impacting the telecommunications sector. It is supplemented with numerous decrees and other laws that address important aspects of the legislative and regulatory framework, which must be read in conjunction with the law to best understand the legislative regime. In Morocco, the law sets the general provisions and principles applicable while decrees provide for the detailed implementation of the law.

Regulation of the sector has developed in practice more than the legislation in place would suggest, as the general authorities and functions provided to the sector regulator (Agence Nationale de Réglementation des Télécommunications - ANRT) in the 1996 law have been used as a foundation to support separate decrees. For example, although market analysis is not specified in the law, the provisions of secondary legislation adopt many best practice concepts, as used in the EU framework. Other than for interconnection markets, there appears to provide limited guidance on the conduct of market analysis, the designation of operators with significant market power and the imposition of market remedies. ANRT is understood to have prepared comprehensive amendments to Law 24/96, which are expected to align key aspects of the legal framework with best practice. These amendments reportedly focus primarily on market analysis, rights of way, infrastructure access, dispute settlement, tariffs, national roaming, consumer protection and penalties.

Morocco retains an individual licensing regime, unlike the EU style general authorisation and notification framework. ANRT’s authority to set tariffs differs depending on whether the service is wholesale or retail, interconnection related, subject to margin or price squeeze, instead of the general authority best practice to set tariffs for services of operators with significant market power. ANRT’s authority with respect to tariffs is derived from several different laws and decrees, including the telecommunications law, which authorises ANRT to “propose” the method of determining network tariffs and services, and the 2000 law on Free Prices and Competition, which applies to all sectors and affirms the principle of free pricing. The 2000 law also created the Competition Council (Conseil de la Concurrence), which has a consultative role in setting tariffs.

Levels of fines appear to be meaningful to large operators; however, ANRT lacks the power to impose graduated penalties. ANRT must apply to court (Tribunal de Rabat) in order to impose a fine; ANRT may not impose fines directly, except for non-disclosure of information. All ANRT decisions are appealable to the Tribunal de Rabat and ANRT decisions cannot be suspended during appeal.

To address consumer protection, the relevant legal instruments are the operators’ licence conditions, Decree 1026 on general conditions of operation of public telecommunications networks; Law 31/08 (revised February 2011) on consumer protection, a multi-sector law which also applies to the telecommunications sector, and Law 09/08 (revised February 2009) which addresses personal data protection. In combination, these address many best practice requirements for the sector.

ANRT is responsible for management and monitoring of spectrum, including for allocating spectrum linked to licenses and authorizations subject to payment of a fee. The Ministry decides fees for spectrum to be assigned, though ANRT and Ministry work jointly on this task. Although the law does not state which entity is responsible for spectrum policy, in practice spectrum policy is established by ANRT and approved by ANRT’s conseil d’administration. A competitive bidding process is used to award licenses for use of spectrum and ANRT may impose conditions in the spectrum license. Although no deadlines for responding to applications for spectrum are included in the law, ANRT practice is to make such decisions within 2 months.

ANRT is responsible for developing and managing the National Numbering Plan, which is published on its web site. After receiving a numbering request from an operator, ARNT assesses the request and if determined to be justified, ANRT assigns a block/range of numbers to the operator and informs the other national telecommunications operators. There is no specific requirement for adequate numbers and numbering ranges for all services. For broadband services such as VoIP, ANRT assigns non-geographic numbers.

For telecommunications equipment, Morocco retains a country-based equipment approval system instead of type approval regime prevalent in best practice. A relevant decree and specifications in operators’ licences contain guidance for compliance with national security and public emergency requirements.
Morocco

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

Morocco: Legal framework

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

Sector organisation and governance

The Ministry of Industry Trade and New Technologies (MITNT) is responsible for policy and legislative development for a range of sectors and the sector regulator (ANRT) is responsible for implementation of policy and law relating to electronic communications. ANRT also prepares amendments to the regulatory framework on its own initiative, or on behalf of the Ministry.

ANRT was established in 1998 as a public body with financial autonomy. It carries out the allocation of radio spectrum and authorisation of frequencies for telecommunications services. There is a separate regulatory agency for broadcasting, the “Haute Autorité de la communication Audiovisuelle (HACA)”.

ANRT retains the responsibility for competition issues linked to electronic communications, where it has ruled on about a dozen cases. Each time ANRT rules on a competition case, it informs the Competition Council. Decree 1025 further authorises ANRT to set prices for all interconnection services (origination, transit and termination) even if for services provided by operators that do not have significant market power.

ANRT is governed by a board, the Conseil d’Administration, which is chaired by the Prime Minister, and includes several Ministers or secretaries of State, five designated telecom experts and the Director of ANRT (with a consultative role). The board meets at least twice a year, to set ANRT general policy and discuss budget issues. The board has delegated regulatory tasks to specific committees. Interconnection disputes are dealt with by a management committee which includes representatives of the ANRT board and representatives from the sector. So far ANRT is understood to have dealt with around 20 interconnection issues. Its decisions can be challenged in court but no ANRT decisions appear to have yet been challenged.

All ANRT decisions are appealable to the Tribunal de Rabat. If an operator appeals, the ANRT decision is suspended during the appeal process. However, ANRT may request court approval for payment by the operator of a deposit equal to a maximum of the fine imposed, pending the outcome of the appeal. A draft amendment to Article 30 of the telecommunications law, if adopted, would allow ANRT to impose fines not exceeding 2 per cent (and up to 5 per cent for second fine) without application to the Tribunal de Rabat and provide that ANRT decisions are not suspended during appeal process.
ANRT is headed by a Director, who is appointed and dismissed by the King of Morocco. The directors are proposed by the Prime Minister and a new law is expected to be adopted with clear criteria and conditions for appointment and dismissal. The ANRT Director makes regulatory decisions on non-strategic issues based on recommendations of ANRT staff.

ANRT has published a “General Guidance Note” on the development of the telecommunications sector for the period 2010-2013. From this guidance note the main goals for this period are stated to be to:

- Support the development of network infrastructure, including for very high speed broadband, to facilitate the development of the Moroccan economy and to help reducing the digital divide.
- Enhance competition on prices to increase affordability of telecom services.
- Use regulation as a tool to develop competition in several segments of the market.

To reach these goals, the stated ANRT actions are:

- To implement new regulatory tools or clarify existing ones to strengthen competition, for example to provide more details regarding the obligation to share infrastructures and to unbundle the local loop.
- To enhance transparency, simplify number portability procedures and strengthen price controls on wholesale services.
- To allow for the development of new infrastructures for the internet, both for fixed and mobile networks. This implies the possibility to award new licences both for fixed (NGA) and mobile (4G) networks and also to improve licensing regime of other operators like VSAT operators.
- To set a national action plan for very high speed access, which identifies the needs in terms of infrastructures, business models and financing.
- To revise the existing regulatory framework and other regulations (like town planning, use of public domain).
- To put in place a graduated system of penalties (including financial penalties) that ANRT could use for enforcement of regulatory decisions.

Morocco has been a member of the WTO since 1995 and is therefore committed to market liberalisation. It also has a free trade agreement with the United States, and another free trade agreement is being finalised with the European Union. ANRT is a member of AREGNET (group of regulators of Group C countries) and of EMERG (group of regulators of the Mediterranean region, including regulators from South Europe and North Africa).

**Regulatory conditions for wired networks**

There is no general authorisation regime, and ANRT remains in control of the number of licences granted. Market entrants currently have to wait until ANRT issues a request for proposals. Licences for fixed services are technology neutral so, where operators possess such licences, they are free to use whatever technology they want to rollout their fixed network. For example, while Maroc Télécom has its access network mainly based on copper, Méditel and Wana’s networks are based on fixed wireless access.

To stimulate the fixed broadband market, local loop unbundling and wholesale broadband access obligations are imposed by ANRT on the incumbent operator Maroc Télécom. Monthly price for shared access to a copper loop is around €2 and for full access around €5. Despite this low price, local loop unbundling and wholesale broadband access are not a success so far. This could potentially be explained by the complexity of the procedures used by the incumbent, the relatively high penetration of 3G mobile services and the absence of market interest in IPTV (with satellite TV being the main service used by consumers in Morocco).

The prices of wholesale services for operators with significant market power are subject to an audit by ANRT to check cost-orientation. Although interconnection prices should be based on cost plus a return on capital, there is no clear requirement that prices of other wholesale services include a return on capital as a component of costs. Voice call termination services are regulated through a multiple-year price cap.

Carrier selection and carrier pre-selection are available but these have not impact the retail market. Fixed number portability was introduced in 2007.

There appears to be no consistent regime on rights of way to access the public domain. Operators have to contact both regional and local authorities to pursue public rights of way. Decision-making by these authorities can take about two months. There is an initiative to harmonise the procedure, reduce the
maximum timeframe for decision-making on rights of way and to introduce standard fees for the use of the public domain. For private property, agreements are made under contract law. Building managers cannot oppose the deployment of telecommunications infrastructure. Duct sharing has not yet been enforced but is expected to be clarified with the proposed amendments to the Telecommunications Law.

**Regulatory conditions for services requiring frequency spectrum**

All three mobile service providers have their mobile termination rates regulated through a multiple-year price cap. There are no virtual mobile operators so far, but a revision of the telecommunications law is intended to enable their introduction.

Mobile number portability was introduced in 2007.

Re-farming of spectrum took place for the 450-470 MHz, 1800 MHz, 2 GHz and 3.4-3.8 GHz bands. It will also take place in the 2.5-2.7 GHz for its future allocation to mobile broadband services. Re-farming of the 800 MHz spectrum band is understood to be under way.

Sharing of masts and antennas is enforced. The regulation covering national roaming in areas covered by universal service obligations (rural areas with low coverage) is already in place. It will be strengthened during the regulatory review under consideration.

Although the switchover from analogue to digital broadcasting is planned to take place by 2015, there is no firm plan in place.

**Payments required from operators**

Operators using spectrum pay yearly fees to ANRT. The initial one-off licence fees for spectrum go to the state budget. There are no numbering fees.

All operators that have received a licence must pay 1 per cent of their yearly turnover to the state for training and research in the field of telecommunications.

For universal service, Morocco opted for an innovative “Pay or Play” system whereby operators have to pay 2 per cent of their turnover into the universal service fund or invest into projects in rural areas for the similar amount (see case study: Investing into Rural Areas of Morocco below).

**Information society safeguards**

 Provision of internet-based services does not require any prior authorisation, just a declaration to ANRT.

The legal framework for electronic contracts and electronic signatures has been adopted in November 2007. Electronic signatures are therefore recognised and there is one provider that has received an official approval from ANRT to provide secured electronic certificates and related services; Poste Maroc (Barid Al Maghrib).

Morocco has adopted a law concerning the protection of personal data in 2009. This sets up a specific Commission, “la Commission nationale de contrôle de la protection des données à caractère personnel”, in charge of the control and enforcement of this law, including fines or imprisonment for infringement. This Commission was officially launched in 2010.

Domain name registration is liberalised and currently the “.ma” domain names are commercialised by 21 different registrars. By the year ended 2011 a total of 42,187 .ma domain names were issued, with new registrations running at around 1,000 per month.

Morocco has not adopted the Council of Europe convention on cybercrime but has signed the Arab convention against cybercrime in December 2010. At a national level, there is no specific law concerning this issue but there are some provisions in different laws on related issues. The legal framework is in the process to be strengthened.

**Summary and outlook**

The mobile market grew strongly in 2011, up by 14 per cent. Users that took out voice plus data packages are currently growing at around 10 per cent every three months. Fixed broadband lines grew less strongly and there are signs of market saturation, with users preferring mobile broadband.

Morocco has the highest percentage of internet users in the region and this number is still growing. It is estimated that 25 per cent of households have internet access, even though only 13 per cent of
households have a fixed connection, with only around 2 per cent having fixed broadband capability. Most access is carried out through wireless broadband.

Further investment in the fixed network will be critical to the government’s national development plans, and measures to achieve more effective competition are necessary to attracting such investment. The issue of new licences for fixed services will be necessary in order to develop networks that can offer higher speed broadband. No date has yet been established for the introduction of these new licences.

Key amendments to the primary law are understood to be under consideration, which should improve the regulatory framework, including for market analysis, better conditions for rights of way, more effective infrastructure sharing and mobile national roaming.

In 2012, the Moroccan government has decided to adopt a ten-year national plan to develop ultra-fast broadband connections. Specifically, the ultra-fast broadband plan will give the entire population access to telecommunication services by 2022. ANRT will implement the plan in two phases.

The first phase will involve the rollout of 4G mobile technologies from 2014 onwards and the opening up the Wi-Fi spectrum band to telecommunications operators with a view to providing access to high-speed broadband networks. In parallel, ANRT plans to launch pilot projects to bring fibre-optic cabling to housing estates and to connect new developments to modern high speed networks. This emphasis on boosting fibre-optic coverage will focus on extending the networks currently covering the main urban areas out to more remote parts of the country.

The second phase of the project will focus on two aspects. Firstly, transmission capacity will be boosted so to offer better capacity and quality between networks in different built-up areas and to serve mobile backhaul networks. Secondly, it will explore a variety of technological solutions to speed up the process of expanding access to this high-speed infrastructure.

In its announcement on the national plan, ANRT stated that implementation enablers will include legal and regulatory measures to encourage the sharing of infrastructures and pooling of investment. The regulatory body also plans to update the legal framework, including the 1996 Law on Post and Telecommunications, as well as decrees concerning the use of networks and relevant antitrust litigation.

As these plans unfold and the regulatory framework develops best practices to create more competitive conditions, the electronic communications market will show high potential.

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

Morocco: Overall legal/ regulatory risk

![Chart 3: Comparison of the overall legal/regulatory risk for telecommunications in Morocco with international practice and regional performance](chart3.png)
Morocco

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

Overall legal/regulatory risk = 69 (100 is the lowest)
4: CASE STUDY: MOROCCO

Investing in rural areas

The traditional approach to funding of telecommunications infrastructure in areas where network investments are not economically viable is to define a “universal service fund (USF)” mechanism, whereby a special fund is created to encourage telecommunications operators to invest. These funds can work in several ways. Contributions can come from national or regional budgets or from yearly contributions from existing telecoms operators. The government or regulatory agency can designate a universal service provider to receive the funds as compensation for existing loss-making services, or it can auction funds to bidders who are interested in making new investments.

In Morocco, an innovative “Pay or Play” mechanism has been used to incentivise existing and new investors. It leaves the decision to operators – either they can contribute financially to the universal service fund, or they invest directly in projects themselves. The overall strategy is defined by a Universal Service Management Committee, chaired by the Prime Minister. The other members of the Committee are the Director of ANRT (the Moroccan regulator) and representatives of the home affairs, finances, telecommunications, country planning and defence administrations. This committee defines the projects that are required to meet the rural infrastructure objectives.

If they decide to pay, telecommunications operators contribute 2 per cent of their net turnover, excluding revenues from interconnection services. The USF is reserved only for the universal service projects that are agreed by the Committee. If an operator elects to invest directly by itself in one of the defined projects, then the amount of money it invests will be deducted from their contribution to the universal service fund.

Operators can also decide to submit a project in connection with the universal service strategy to the Committee, which will then validate the project and define under what conditions it can be carried out. Operators can offer to participate in projects that have already been defined by the Committee. In this latter case, the operators in charge of the project will be selected through a public tender mechanism.

An example of a project defined by the Committee is PACTE (Programme d’accès généralisé aux télécommunications). The objective of the PACTE program is to bring telephony and internet access to 9,263 rural municipalities located in an area not yet covered by any telecommunications networks. Access can be provided through a fixed or a mobile network. To realise this project the Committee allocated around €125 million from the universal service fund to four operators over a four-year period (from 2008 until mid-2012). It is estimated that 2 million citizens will benefit from the programme, representing 17 per cent of the rural population, 7 per cent of the national population.

Other projects have been defined by the Committee, mainly to provide schools, teachers, and students with IT equipment and internet connectivity. These include:

- The “GENIE” and “GENIE-SUP” projects, providing multimedia equipment for around 9,000 schools and universities.
- The NAFID% project provides computer with mobile broadband to 150,000 teachers.

New plans for the universal service fund are being defined for the period 2012-2016.

- The “GENIE” and “GENIE-SUP” projects, providing multimedia equipment for around 9,000 schools and universities.
- The NAFID% project provides computer with mobile broadband to 150,000 teachers.

New plans for the universal service fund are being defined for the period 2012-2016.

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18 For further information see www.anrt.ma/missions/service-universel/presentation.
5: 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.
Conclusions from the assessment

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)
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)
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.
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 facilities 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.
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.
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.
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.
Conclusions from the 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 6 of this report.

**Group C countries**

*(Egypt, Jordan, Morocco and Tunisia)*

- **The legal frameworks** in Group C countries are currently under active modification, using the EU legal and regulatory framework to provide the general direction towards best practice. Notably, amongst all Group C countries, there is a need to better provide the key competitive and market entry benefits that a general authorisation framework provides (as understood from the EU framework). While this cannot happen immediately, there should be provision for the transition from individual licensing to a general authorisation framework in order to simplify market entry and reduce legal risk. Other areas where more legal clarity is generally required are market analysis, to ensure that the regulator has clear powers including enforcement of market remedies, consumer protection and universal service.

- **Sector organisation and governance.** There remains some form of state ownership in all Group C countries. Although all four countries have defined separate policy, ownership and regulatory functions, the strengthening of independence of the regulatory decision-making is needed generally to reduce overall legal/regulatory risk.

- **Market conditions for wired services** continue to improve in Group C countries although, notably, none have yet completed the transition to a general authorisation regime. Fixed number portability and fixed line retail tariff rebalancing has been implemented only in Morocco. Rights of way into public and private property should be strengthened generally, and the remaining competitive market safeguards need to be enforced, in particular infrastructure sharing and cost oriented wholesale charging based on modern cost models. Fixed-line retail tariff rebalancing has so far only been completed in Morocco.

- **Market conditions for wireless services.** Growth in mobile markets has been strong in Group C countries and market regulation is moving towards best practice. Mobile number portability has been implemented in Egypt and Morocco. The transition to a market-led spectrum management regime needs to be accelerated to meet the growth of broadband. Spectrum authorisations are already technologically neutral and national roaming is in place (except in Tunisia), although provision needs to be made for spectrum re-farming and trading and for virtual mobile operators to enter the markets. Plans for the switch off of analogue broadcasting need to be finalised in order to provide valuable spectrum for broadband expansion, especially in rural areas.

- **Fees and taxation.** Special taxes are imposed in Egypt and Jordan. The situation is particularly complex in Jordan, where the overall burden on mobile operators includes revenue sharing and special taxes. Morocco and Tunisia use development fund contributions from the sector to finance infrastructure expansion.

- **Information society progress.** Good progress has been made in Group C countries in implementing the required information society safeguards. Egypt and Tunisia still need to implement adequate
cybercrime protections and Jordan has not yet liberalised domain name registration. Adequate data protection provisions appear in place in the Group C countries, except in Egypt.

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\(^\text{19}\) 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\(^\text{20}\) 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.

\(^\text{19}\) http://serving.webgen.gsm.org/5926DA9A-2DD6-48E7-BAD4-50D4CD3AF30A/assets/taxreview0607.pdf
\(^\text{20}\) see www.cellular-news.com/story/14210.php
6: 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 C Countries
(Egypt, Jordan, Morocco and Tunisia)

The Group C countries vary significantly in their legislative frameworks, in part due to the particular legislative customs, practices and traditions in each country. The democratic movements in the region have provided the impetus to reassess existing legislation in each country in an effort to increase openness and accountability. Backed by cooperation agreements with the EU, this has resulted in a move to align electronic communications sector more closely with the EU regulatory framework.

The main amendments required to the legislative regimes in the Group C countries focus on improving the independence of the national regulatory authority, moving from individual licensing regime to general authorisation, and promoting better market analysis and spectrum management.

- Each of the four Group C countries has a separate national regulatory authority, with some provision for independence, however substantial further strengthening is needed to ensure the full structural, financial and operational independence of those regulators.
- All four countries apply an individual licensing framework, with key elements of the regulatory framework typically included in the licence conditions, rather than in general regulations. A move to the general authorisation and notification regime associated with best practice would reduce barriers to new entrants. This would require the introduction of a simple notification scheme and a transition of existing licences to general authorisations, supported by the overall legal and regulatory framework.
- The regulators in all four countries are authorised to conduct market analysis. However, revisions are required to align with best practice. Where necessary, the regulator’s powers need to be clarified and further guidance issued on processes to be used for the determination of significant market power and the specific remedies that may be applied to improve competition.
- While spectrum management frameworks in most of these countries meet many best practice requirements, strengthening of the legal provisions is required to guarantee that open, objective, transparent, non-discriminatory and proportionate procedures are used to grant rights of use for spectrum. Specific and short time deadlines should be used for deciding on applications for spectrum.

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

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

<table>
<thead>
<tr>
<th>Group C Countries</th>
<th>Regulator independence and structure</th>
<th>Authorisation regime</th>
<th>Interconnection and infrastructure access</th>
<th>Market analysis and enforcement</th>
<th>Spectrum management</th>
<th>Universal service</th>
<th>Consumer protection</th>
<th>Numbering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morocco</td>
<td>Ensure independence of executive appointments and dismissals. Eliminate requirement for Minister approval of regulator decrees. Regulatory decisions should be made by collegial body. Adopt the comprehensive amendments already drafted by regulator to better align Law 24/96 with best practice, particularly with respect to market analysis, rights of way, infrastructure access, national roaming, enhanced consumer protections, meaningful sanctions.</td>
<td>Transition from individual licensing to general authorisation framework</td>
<td>Provide more detailed market analysis framework and guidance in the law Require operators to provide reference offers for infrastructure access Authorise regulator to resolve disputes Provide procedures in law to obtain rights of way. Provide for national roaming</td>
<td>Provide clear power to regulator to set tariffs for all services in which operator found to have SMP. Tariffs must be transparent and non-discriminatory. Provide power to impose graduated penalties. Introduce graduated meaningful sanctions</td>
<td>Confirm that open, objective, transparent, non-discriminatory, proportionate procedures must be used to grant spectrum rights and set fees Shorten deadlines for spectrum assignments. Provide deadlines for spectrum assignments and term of allocation</td>
<td>Define specific minimum services included in universal service package</td>
<td>Require adequate numbers for all services</td>
<td></td>
</tr>
</tbody>
</table>
**Recommendation Table II: Summary of priority recommendations to improve regulatory implementation**

<table>
<thead>
<tr>
<th>Group C Countries</th>
<th>Sector organisation and governance</th>
<th>Market conditions for wired services</th>
<th>Market conditions for wireless services</th>
<th>Fees and taxation</th>
<th>Information society safeguards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morocco</td>
<td>Reduce state ownership</td>
<td>Introduce simple notification scheme and implement transition arrangements for existing licences improve access to rights of way</td>
<td>Allow MVNOs</td>
<td></td>
<td>Protect against cybercrime</td>
</tr>
</tbody>
</table>
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