

Benchmark Report 2016

Report on Market Trends and Regulatory Activities of EMERG Members 2016

EMERG (17) 02

Study for
EURO-MEDITERRANEAN REGULATORS GROUP
(EMERG)

By:

Detecon International

WIK Consult GmbH

Cologne, March 2017

Content

I	
Tables	III
Figures	III
1 Introduction	1
1.1 Objectives	1
1.2 Process	1
2 Trends in the telecommunications markets in the EMERG counties	2
2.1 Status of the digital economy	3
2.2 Consumer outcomes	5
2.2.1 Mobile services	5
2.2.2 Fixed Network Services	9
2.3 Competition indicators	12
3 Institutional issues	16
3.1 NRA's independence	16
3.2 NRA's governance	17
3.3 NRA's competencies and powers	19
3.4 NRA's accountability and transparency	24
4 Regulatory development in the EMERG countries	28
4.1 Market access	28
4.1.1 Licenses	28
4.1.2 Access to scarce resources	29
4.2 Regulatory market analysis and imposition of obligations	32
5 Consumer issues	38
6 Universal service	42
7 Net Neutrality	44
8 Promotion of broadband services	45
9 Regulatory fiches	47
9.1 Bosnia & Herzegovina	48
9.2 Croatia	57

9.3 Cyprus	68
9.4 Egypt 76	
9.5 France	82
9.6 Israel 95	
9.7 Italy 101	
9.8 Jordan	112
9.9 Malta 122	
9.10 Morocco	132
9.11 Palestine	141
9.12 Portugal	148
9.13 Spain 163	
9.14 Switzerland	176
9.15 Tunisia	187
9.16 Turkey	193

Tables

Table 1: Governance regimes	18
Table 2: Fixed voice telephony remedies in EMERG countries	35
Table 3: Mobile voice telephony/SMS remedies in EMERG countries	36
Table 3: Fixed broadband market remedies in EMERG countries	37

Figures

Figure 1: GDP per capita in EMERG countries, 2015 (thousands of current US\$)	3
Figure 2: Network Readiness Index WEF, 2016	4
Figure 3: ICT Development Index ITU, 2016	5
Figure 4: Coverage over population of mobile networks, 2015 (% of population)	6
Figure 5: Mobile cellular penetration & GDP pc, 2015 (lines/ 100 inhabitants & thousands of \$)	7
Figure 6: Individuals using Internet and mobile in EMERG countries, 2015 (% of total individuals)	8
Figure 7: Proportion of mobile subscriptions by contract modality, 2015 (% of total subscriptions)	8
Figure 8: Mobile broadband coverage and fixed broadband penetration, 2015	9
Figure 9: Fixed telephony and fixed broadband penetration, 2015	10
Figure 10: Penetration and growth of fixed broadband in EMERG countries, 2015	11
Figure 11: Households with Internet access, 2015	12
Figure 12: Market share of leading firm in the main retail markets, 2015 (% of lines / total)	13
Figure 13: Distribution of broadband lines by supporting technology, 2015 (% of total lines)	14
Figure 14: Fixed telephony penetration and proportion of VoIP lines, 2015	15
Figure 15: NRA's independence	16
Figure 16: Competencies in telecommunication sector	20
Figure 17: NRA's competencies	21
Figure 18: Powers of enforcement	22
Figure 19: Advisory role	24
Figure 20: NRA's accountability	25

Figure 21: Number of employees in NRAs	26
Figure 22: Recruiting and budget	27
Figure 23: Sourcing of budgets	28
Figure 24: Provided licenses	29
Figure 25: Spectrum management and licenses	30
Figure 26: Spectrum trading and refarming	31
Figure 27: Spectrum assignment	32
Figure 28: Market analysis and SMP	33
Figure 29: Market reviews	34
Figure 30: LLU monthly charges (in € per line (excl. VAT))	37
Figure 31: End user protection	38
Figure 32: Complaints, tariffs, contracts	39
Figure 33: QoS legislation and penalties	40
Figure 34: Operators bound to QoS	41
Figure 35: Number portability	41
Figure 36: Services under USO	42
Figure 37: USO competencies	43
Figure 38: Net neutrality	45
Figure 39: Promotion of broadband services	46

1 Introduction

1.1 Objectives

Since 2009 the Euro-Mediterranean Regulators' Group (EMERG) has undertaken an annual benchmark of its member National Regulatory Authorities (NRAs). The results form the basis for the evaluation of the level of approximation of the southern Mediterranean countries with respect to the European Framework for the electronic communications sector and the formulation of the Group's Annual Work Plan.

The present 2016 Report is based on the 2014 structure. There are minor changes in the organization of the document. Some new content has been added, such as for example digitalization indices (Network Readiness Index, ITU Development Index) and topics like net neutrality. In addition the market analysis has been extended. Like previous reports information about key performance indicators and trends of the telecom sector is collected and an update of the regulatory activities of the EMERG members in 2015 and 2016 is provided.

Chapter 1 of the Report is an introduction. Chapter 2 describes main trends in the telecommunication markets (fixed and mobile) in the EMERG countries based on data provided by EMERG members and other sources such as ITU, the World Bank etc. Chapters 3 to 8 focus on regulatory developments (institutional issues, market entrance conditions, consumer issues etc.) in EMERG countries. Finally, chapter 9 includes Regulatory Fiches from all Member States.

1.2 Process

An extensive regulatory questionnaire on regulatory market developments together with a data sheet to be filled out with relevant market indicators was circulated to the National Regulatory Authorities (NRAs) in September 2016. The survey was based on the existing literature as well as on previous research on the topics conducted by the EMERG and the European Commission (EC).

In total 16 EMERG members answered to the data sheet relevant for chapter 2: Bosnia & Herzegovina, Croatia, Cyprus, France, Germany, Israel, Italy, Jordan, Lebanon, Malta, Morocco¹, Portugal, Spain, Switzerland, Tunisia and Turkey. As was the case in previous reports, some figures of chapter 2 have been elaborated with other sources of data, especially from ITU and World Bank. In contrast to previous reports the new Benchmark Report also includes benchmarks from the World Economic Forum (Network Readiness Index), the ITU (ICT Development Index) and the EC (Digital Agenda Scoreboard). In general, the data and information included in the Benchmark Report refer to 31st December, 2015.

¹ Due to delay, not yet completely integrated into chapter 2.

With respect to chapters 3 to 9 in total a number of 16 EMERG members answered to the regulatory questionnaire: Bosnia & Herzegovina, Croatia, Cyprus, Egypt, France, Israel, Italy, Jordan, Malta, Morocco, Palestine, Portugal, Spain², Switzerland, Tunisia and Turkey. The Lebanese regulatory authority was unable to answer the questionnaire due to specific national circumstances.

2 Trends in the telecommunications markets in the EMERG counties

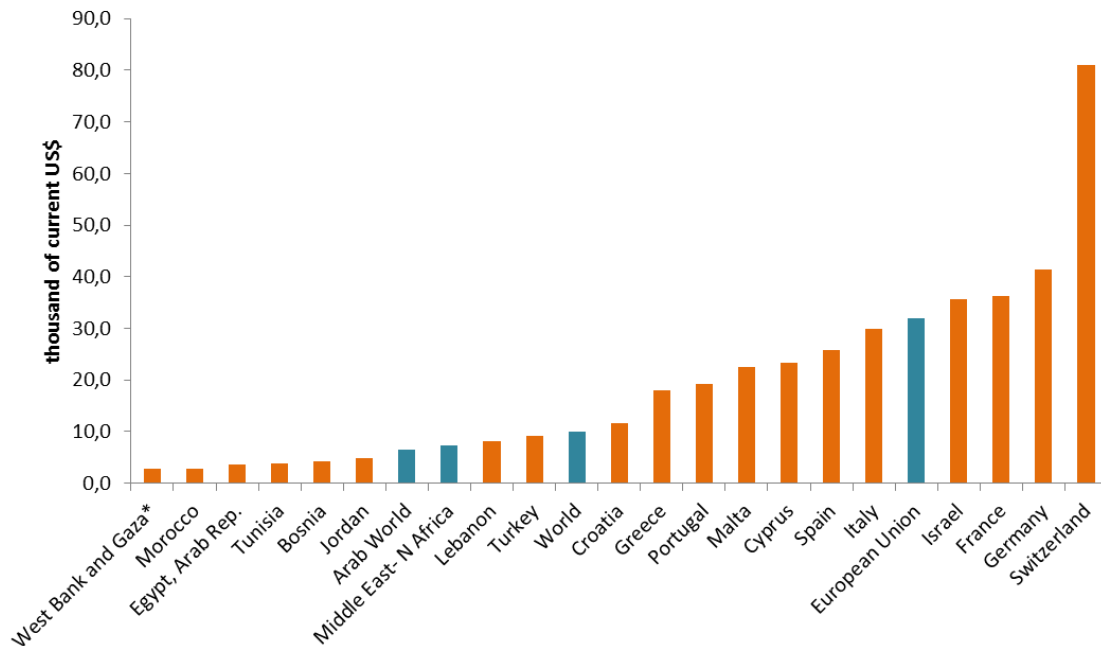
There is a number of common market trends in the set of countries included in EMERG. In relation to fixed networks' services, fixed telephony still shows generalized reductions in the stock of active lines, while broadband services in terms of lines continue to grow. Fixed telephony lines reached an average penetration of 29.4 lines/100 inhabitants. Fixed broadband lines showed an average penetration rate of 21, which in comparison with fixed lines penetration, shows that there is room for growth yet.

Services based on mobile networks continue to grow. Mobile telephony lines reached a penetration figure (measured as number of mobile lines per 100 inhabitants) of 117.1 on average across all EMERG countries. In several countries, in any case, a reduction in the mobile cellular penetration was recorded, as e.g. in Bosnia and Herzegovina, Croatia, Cyprus, Egypt, Germany, Italy, Morocco and Portugal. Mobile broadband is globally the most successful service in recent years and also in the EMERG countries. The region as a whole recorded an average coverage with 3G/4G networks of 95.3%, approaching the overall mobile network coverage (2G/3G/4G networks) of 99.6%. In many countries the gap between mobile broadband penetration and fixed broadband penetration widens considerably (see Figure 8).

Comparing performance indicators across the EMERG countries is a difficult exercise. The very wide differences in per capita income, living conditions and regulatory frameworks make comparisons an exercise which must be taken with caution. As will be shown during this report, the significant differences in GDP per capita across the countries considered do not translate directly in the same magnitude to coverage and penetration of certain telecommunications services.

² Due to delay, not yet completely integrated into the report.

Figure 1: GDP per capita in EMERG countries, 2015 (thousands of current US\$)



Source: World Bank.

In the following sections basic indicators of usage, penetration and coverage are presented for the set of countries for which data is available, -either obtained directly from the NRAs or from other sources-, notably ITU. The objective is to extract the main trends occurring in the market place.

2.1 Status of the digital economy

To introduce the telecommunication specific data obtained from each NRA this section gives a brief summary of the progress each country has made with respect to the development of its information and communication technology (ICT) sector and its propensity to exploit the opportunities offered by ICT. This overview is developed with the help of third party analyses – namely the Network Readiness Index³ issued by the World Economic Forum and the ICT Development Index⁴ issued by the ITU.

The Network Readiness Index (NRI) is aimed at measuring the drivers for the global ICT revolution and is widely regarded as the most comprehensive assessment of how ICT impacts the competitiveness and well-being of nations. The index is made up of four main categories (sub-indexes), 10 subcategories (pillars), and 53 individual indicators distributed across the different pillars. The four main areas the index describes are; the Environment for ICT

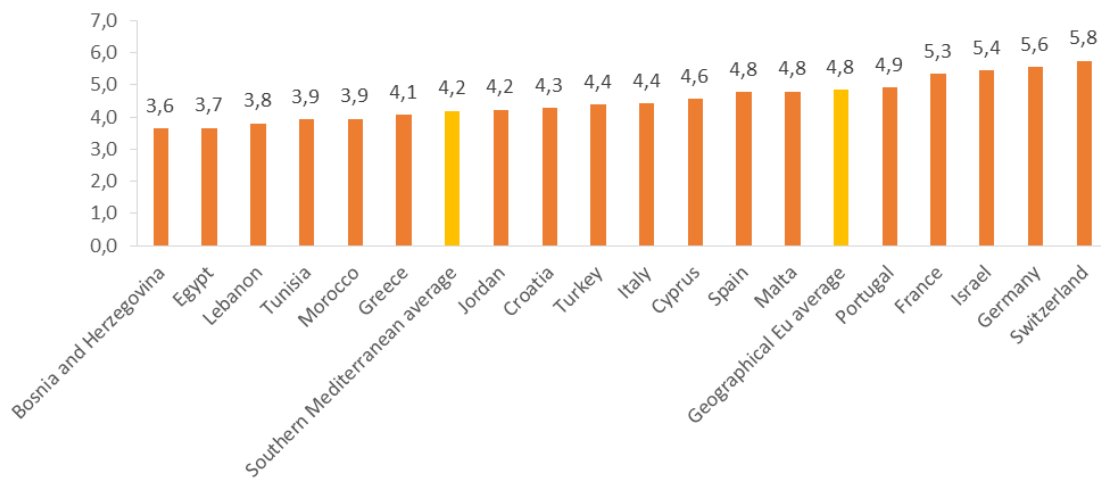
³ <http://reports.weforum.org/global-information-technology-report-2016/networked-readiness-index/>

⁴ <http://www.itu.int/net4/ITU-D/idi/2016/>

development, such as regulatory framework and market conditions; the extent to which a country has in place the infrastructure to support the uptake of ICTs; the level of ICT adoption by a society and broad economic and the broad economic and social impacts accruing from ICTs.

In the group of EMERG countries most European countries⁵ performed better than non-EU countries. Greece and Croatia are exceptions with values close to the southern Mediterranean⁶ average. Out of the southern Mediterranean countries Turkey and Israel achieved higher outcomes than the average of their country group. While Turkey is below the geographical Eu average, Israel is one of the top performers and significantly out-performs the geographical Eu average.

Figure 2: Network Readiness Index WEF, 2016



Source: <http://reports.weforum.org/global-information-technology-report-2016/networked-readiness-index/>.

The ICT Development Index (IDI) issued by the ITU has a different focus than the NRI. Instead of measuring variables fostering or enabling the ICT landscape the ITU focusses on more traditional telecommunication penetration rates. Overall eleven indicators are divided into three clusters: access, use and skills. The cluster access and use include infrastructure development and usage indicators like percentage of households with a computer or percentage of individuals using the internet. These indicators are enriched with information on schooling – mainly enrolment ratios – in the skills cluster.⁷

As a result of the different approaches, the IDI arrives at a different ranking of the EMERG members. Bosnia and Herzegovina ICT development is rated comparable to the southern Mediterranean average, the NRI ranked the country significantly below the average. Similarly

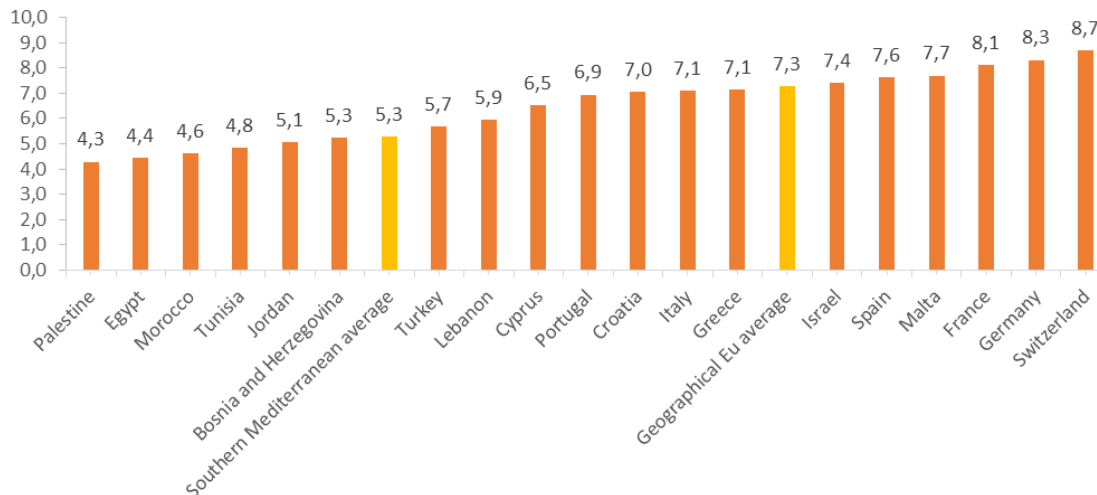
⁵ Including Bosnia & Herzegovina, Croatia, Cyprus, France, Greece, Germany, Italy, Malta, Portugal, Spain and Switzerland

⁶ Including Egypt, Israel, Jordan, Lebanon, Morocco, Tunisia and Turkey.

⁷ For the methodology see: <http://www.itu.int/en/ITU-D/Statistics/Pages/publications/mis2015/methodology.aspx>

Greece and Lebanon are ranked more positively when looking at penetration, consumption and enrolment rates. In general the IDI displays, similarly to the NRI, that there is a large discrepancy in terms of ICT development between the European countries in EMERG and the southern Mediterranean countries.

Figure 3: ICT Development Index ITU, 2016



Source: <http://www.itu.int/net4/ITU-D/idi/2016/>

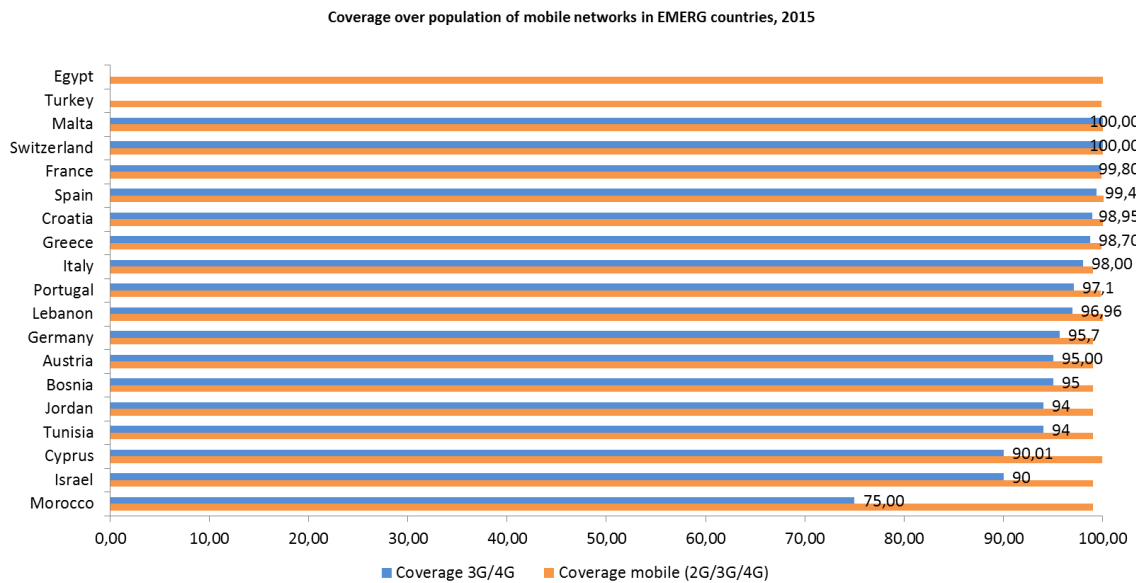
2.2 Consumer outcomes

2.2.1 Mobile services

One relevant development in telecommunications markets around the world is the strong extension of mobile networks in the last two decades. The deployment of mobile networks implies much lower costs than the ones implied for fixed networks and one evidence since the emergence of mobile telephony is the fact that in developing and emerging markets, coverage of mobile networks soon surpassed the coverage registered for fixed networks significantly. Nevertheless, at longer term, it should be noticed that the deployment of fixed fibre-based infrastructure is likely necessary in order to support the increase of mobile internet connection volume.

As it shall be depicted in this section, large differences in terms of penetration and use of final services do exist among more developed and less developed countries, but in terms of coverage of mobile networks these differences are negligible. In fact, if coverage is measured in terms of population covered by at least one mobile network- whatever the network standard used: 2G (GSM), 3G (UMTS), 4G (LTE), the coverage in all EMERG countries is practically the same reaching between 99 and 100%.

Figure 4: Coverage over population of mobile networks, 2015 (% of population)

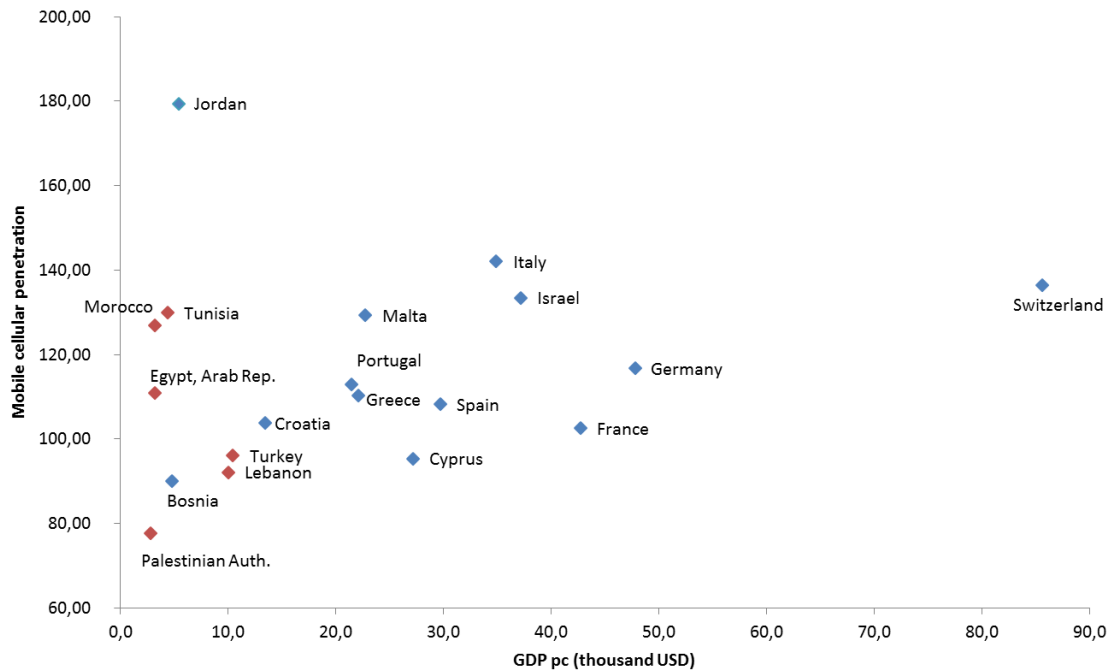


Source: EMERG

Higher differences are observed when looking at 3G/4G coverage in the EMERG countries. Morocco shows the lowest 3G/4G coverage with 75%, while over half of the countries (12) have coverages of 95% and more. On average the 3G/4G coverage has slightly decreased to 95.3% in EMERG countries, due to a reported reduction in coverage in Jordan, Israel and Portugal.

Mobile cellular subscriptions- which include voice and messaging services- kept rising during 2015 in most of EMERG countries (11 of 19). Penetration of mobile cellular in terms of subscriptions per 100 inhabitants lies above the 100 ratio in most countries. Countries with penetration rates below 100 in general have lower GDP pc, e.g. Bosnia and Herzegovina, Cyprus, Lebanon, Palestine and Turkey. In countries with ratios above 100 and higher GDP pc mobile penetration shows a decreasing trend. In Croatia, Germany, Italy and Portugal for example penetration ratios have decreased compared to 2014, even if for different reasons probably. In this respect, overall mobile penetration ratios in EMERG countries seem to converge slowly.

Figure 5: Mobile cellular penetration & GDP pc, 2015 (lines/ 100 inhabitants & thousands of \$)

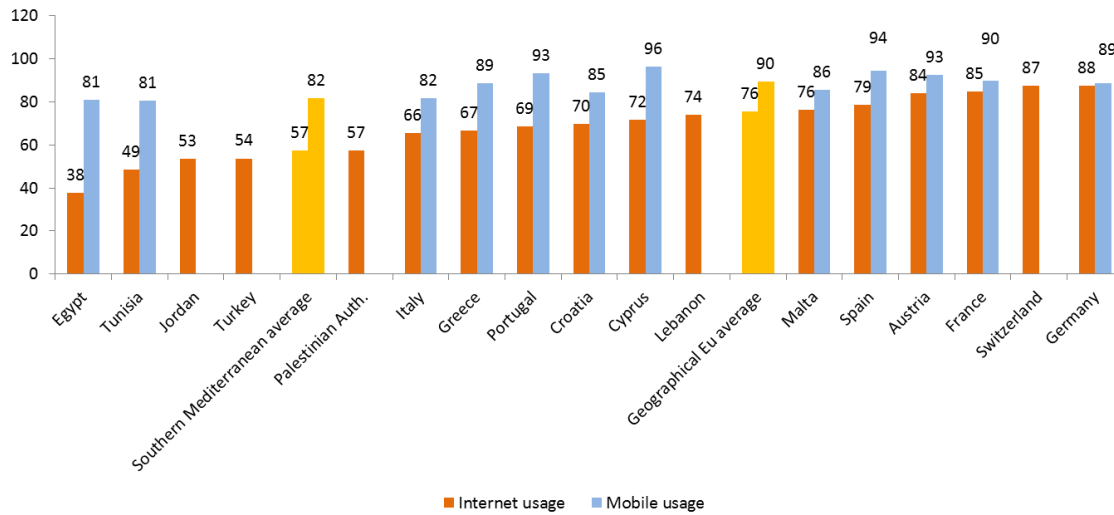


Source: EMERG and ITU.

Penetration of mobile cellular is much higher than penetration in fixed telephony in all countries, but especially in the southern Mediterranean countries.

Based on ITU data regarding Internet and mobile telephony usage across the countries by individuals, the distance in case of Internet usage between the most developed and less developed countries in the EMERG remains higher when compared to the differences in mobile usage. On average three out of four individuals uses the Internet in the European countries, while in southern Mediterranean countries only slightly more than half use the Internet.

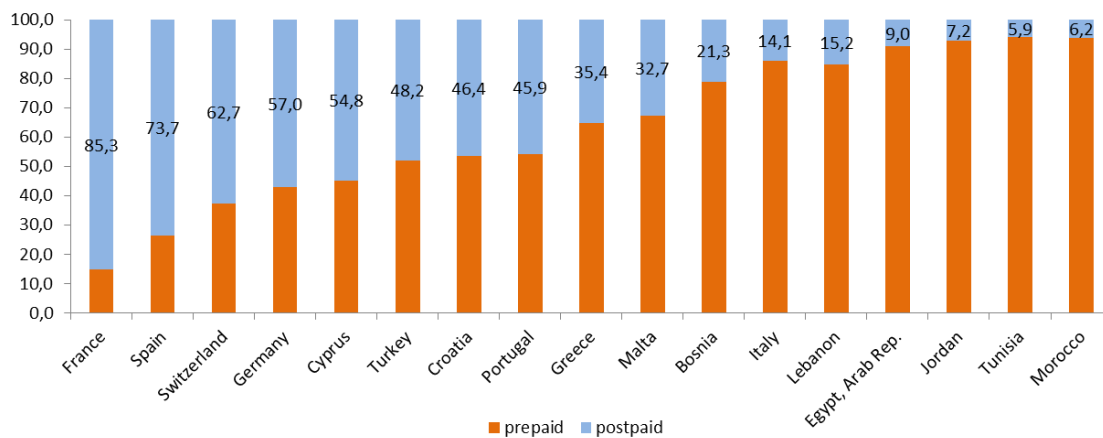
Figure 6: Individuals using Internet and mobile in EMERG countries, 2015 (% of total individuals)



Note: Data for mobile usage refer to previous years (2012 and 2013) in all countries except for Tunisia, Morocco, Egypt (2014) and Israel (2010).
Source: ITU (2016).

The prepayment modality is the most common way of contracting mobile services in all the southern Mediterranean countries. Lebanon (85%), Jordan (93%), Egypt (91%), Tunisia (94%) and Morocco (95%) showed the highest proportion of prepayment subscriptions. The Italian contract modalities pose a specific case in Europe, with 86% prepaid subscriptions the market is significantly above the European average. The average for all countries considered was 61.7% of subscriptions, though this figure varies a lot across countries.

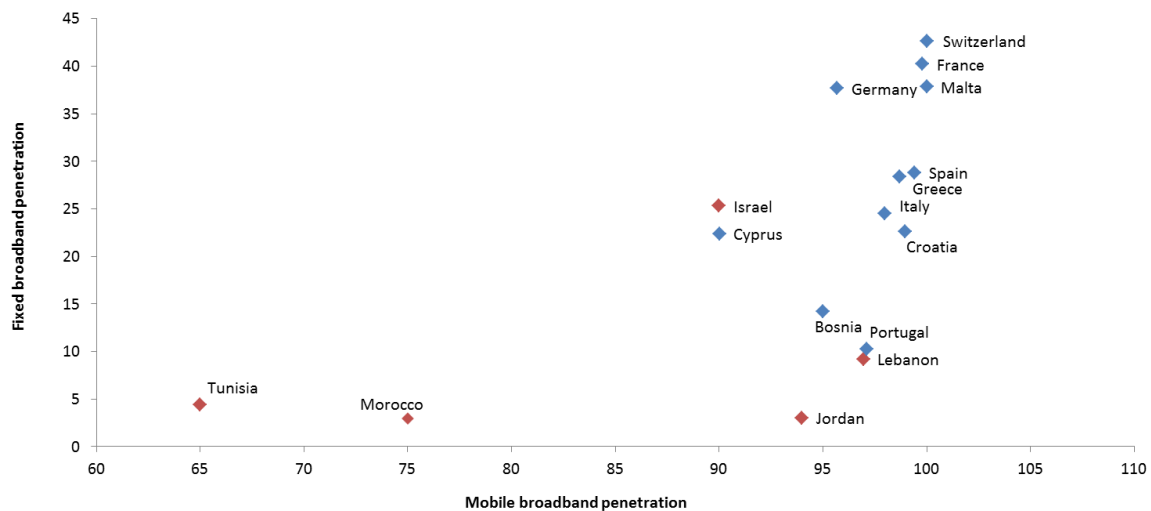
Figure 7: Proportion of mobile subscriptions by contract modality, 2015 (% of total subscriptions)



Source: EMERG.

As expected the rise of mobile broadband and the upgrading of mobile networks in many less developed EMERG countries has reduced differences in penetration between all EMERG countries. In terms of coverage almost all EMERG countries are in the corridor above 90%. At this point in time only Israel of the southern Mediterranean countries significantly exceeds the 10% fixed broadband penetration rate with 25.3%.

Figure 8: Mobile broadband coverage and fixed broadband penetration, 2015

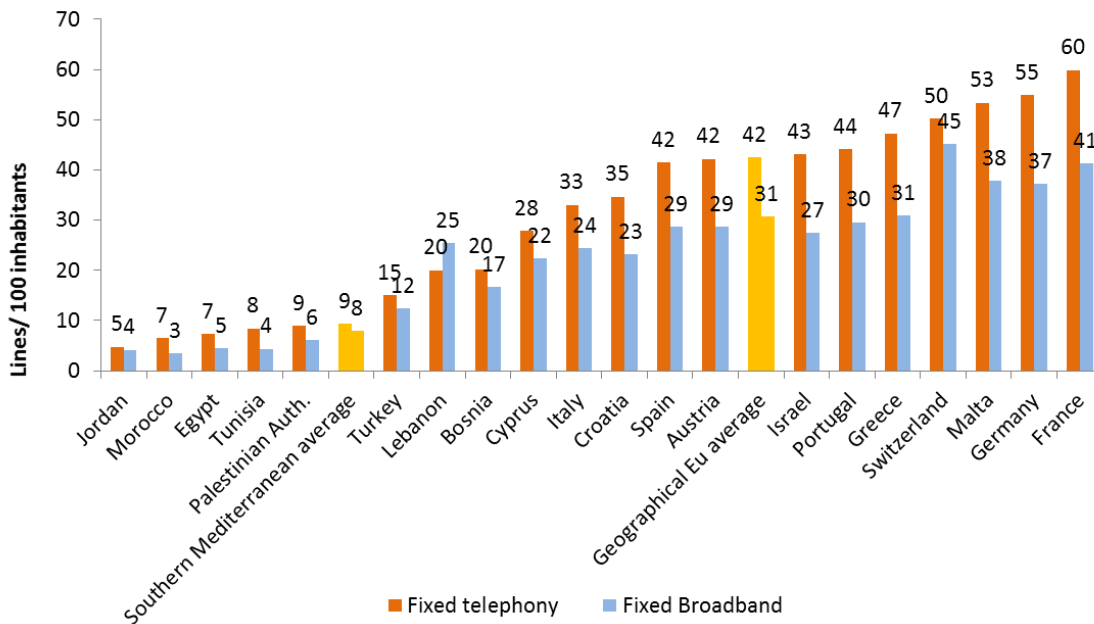


Source: EMERG and ITU.

2.2.2 Fixed Network Services

The penetration of fixed telephony in EMERG countries is still significantly higher than that of broadband services. Lebanon poses the only exception. In most countries (both European and southern Mediterranean) the majority of lines are still based on the legacy- copper wire-incumbent's network (with xDSL and VDSL). Some countries benefit from the presence of a cable network while fibre rollout is still low in most countries (see also Figure 13).

Figure 9: Fixed telephony and fixed broadband penetration, 2015



Note: According to figures from the ITU, fixed telephony and broadband penetration rates are provided on the basis of the population (per 100 inhabitants) because no relevant household data is collected. This also means that a direct comparison between European and southern Mediterranean countries is difficult and depends on the number of people living in a household.

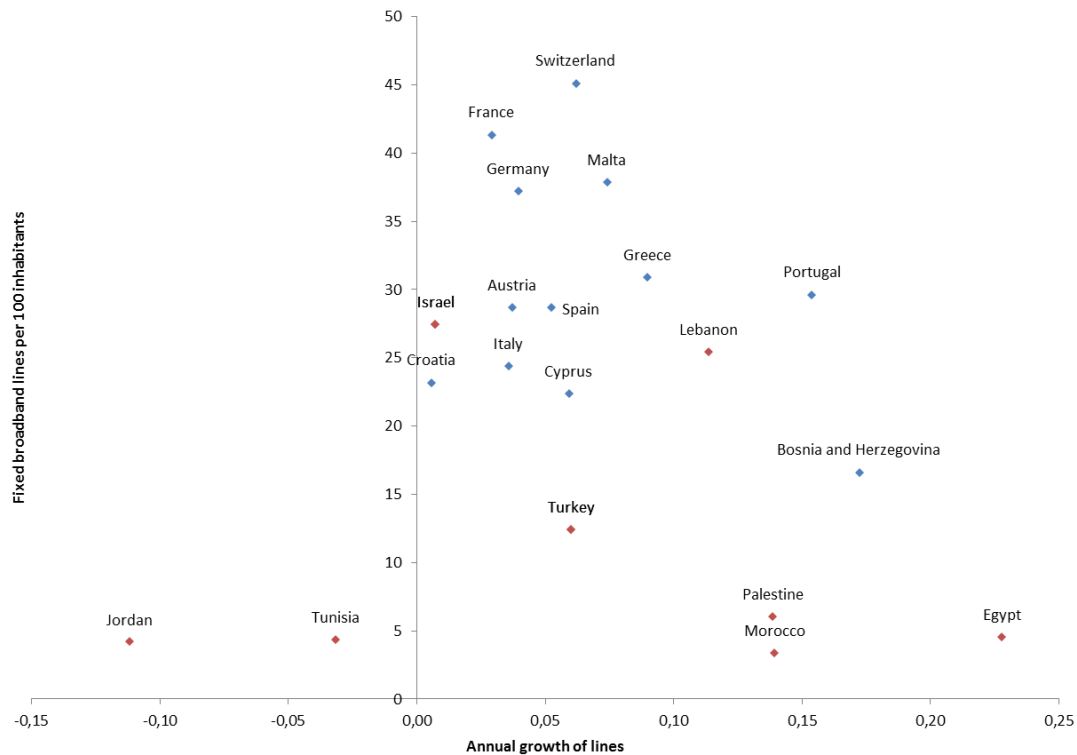
Source: ITU.

The evolution of broadband uptake has been different depending on the development of the country, among other factors. From the time series data it becomes clear that rapid increasing growth rates in most of the European countries took place in the initial period 2001-2006. The rest of the countries needed two to three years more. One relevant finding is that even if most of the European countries stand now in a mature stage of penetration, where growth rates are positive but decreasing, still very healthy rates of increase in the stock of broadband connections is taken place year after year. The supply of high capacity connections all across the EMERG set of countries, the bundling of broadband together with other services and the lowering of prices in many cases, is helping in extending the penetration of broadband significantly.

Bosnia and Herzegovina, Palestine, Egypt, Morocco and Portugal form a group of countries that report dynamic line growth rates above 13%. The majority of southern Mediterranean countries reported fixed broadband penetration rates below 10% in 2015. Turkey, Lebanon and Israel are exceptions to that rule with the latter two showing penetration rates close to the geographical Eu average. However, as already noted above, the comparison of fixed penetration rates in terms of individuals can be misleading as figures depend much on the average number of people living in a household. If one assumes that the number of inhabitants per household in southern Mediterranean countries is higher than in European countries, the

values in the figure do not reflect the actual differences between these two group of countries. To this extent, this analysis must be interpreted with caution.

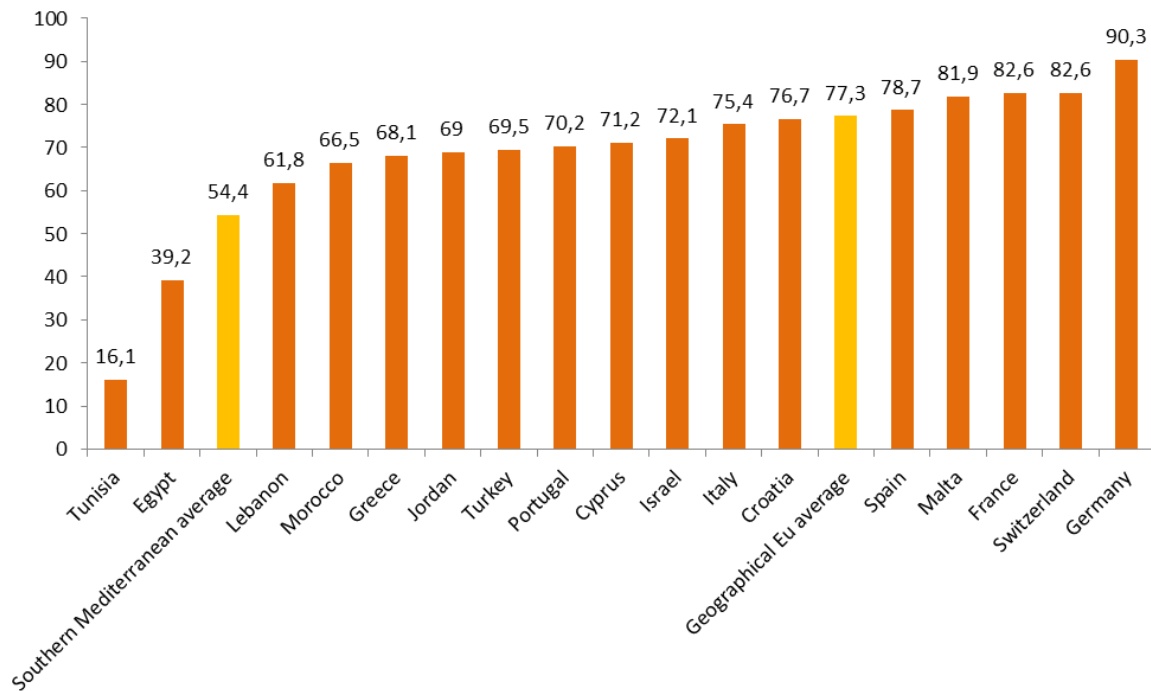
Figure 10: Penetration and growth of fixed broadband in EMERG countries, 2015



Note: With regard to the fixed broadband penetration rates see previous comment in Figure 9.
Source: ITU.

Based on ITU figures an interesting comparison can be made across all the EMERG countries in terms of real penetration of internet in households. Jordan and Turkey, most notably, achieved in 2015 real penetration figures in terms of internet access not very different from those registered in European countries. Nonetheless the average household penetration in southern Mediterranean countries is only 54.4% compared to 77.3% in geographical Eu countries.

Figure 11: Households with Internet access, 2015



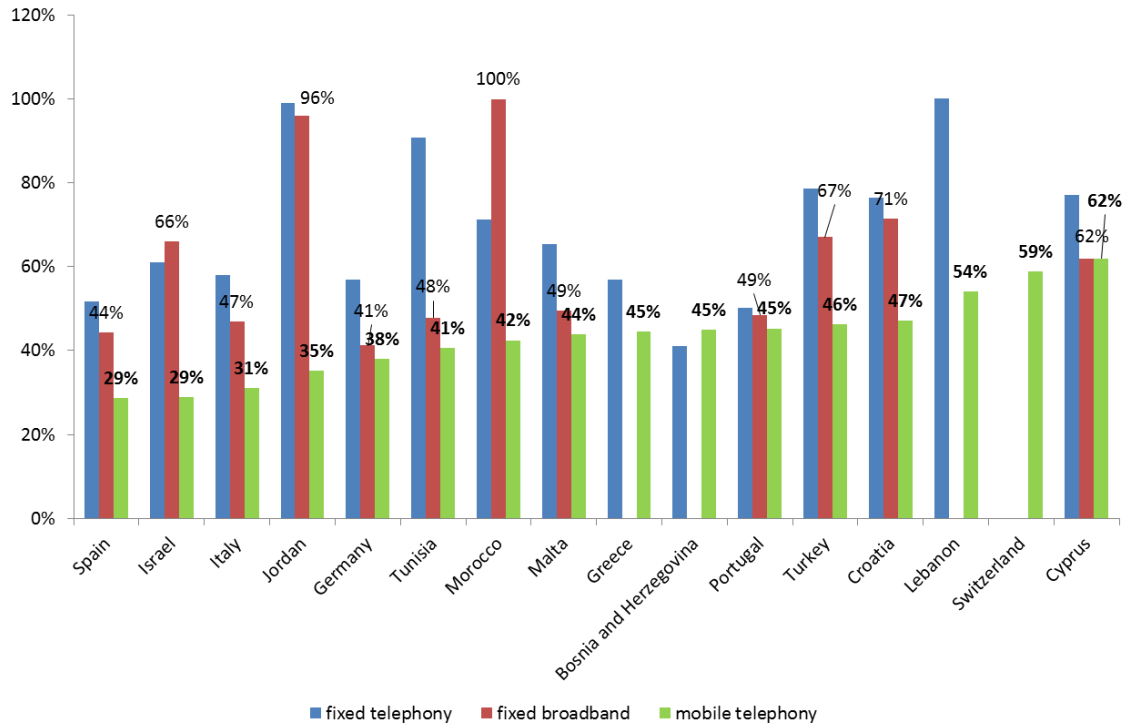
Source: ITU.

2.3 Competition indicators

The leading firm in fixed telephony is in all cases the historic incumbent, which in several cases still holds practically the whole of the retail market, as in Jordan and Lebanon. Across all the countries included the average market share of the incumbent was 71% of all telephony lines, a drop of almost 2% compared to 2014. One clear trend in practically all markets considered is the declining weight of the incumbent operator. Only in the last year 2014- 2015, the market share of the leading firm declined in all countries, with a major reduction in Turkey (-3.7 pp). The declining market share has to be considered as well in the context of a declining market in size, i.e., in the majority of EMERG countries the stock of fixed telephony lines declined again during the period, except in Lebanon, and Portugal which registered growth above the 2% threshold-, and France, Palestine and Spain which practically maintained the telephony lines stock at previous levels. The rest of the countries registered absolute declines.

It is noteworthy as well the fact that market shares of the biggest operator in broadband is significantly lower than the share registered in the traditional fixed telephony service. The only exception is Israel, where the incumbent has larger market shares in fixed broadband than in fixed telephony. While the average market share in the fixed telephony segment is at 68%, fixed broadband providers have an average market share of 58% across all EMERG countries.

Figure 12: Market share of leading firm in the main retail markets, 2015 (% of lines / total)

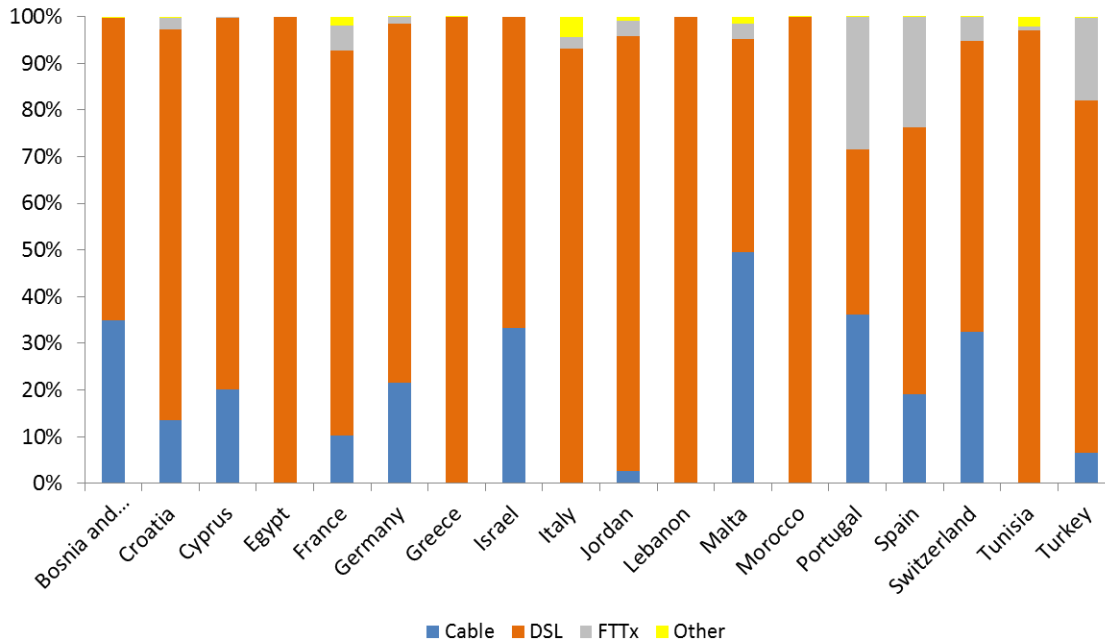


Source: EMERG

In a good number of countries alternative fixed network infrastructures are a reality. All European countries plus Turkey, Jordan and Tunisia have a deployed FTTx or a cable infrastructure in place, but many countries have scarce alternative to the incumbent's network. For the region as a whole 14.1% of broadband lines were supported by a cable network, 7.2% by a FTTx deployment, and still 78% were xDSL based. Hence, the relevance still of the legacy incumbent-fixed network for the provision of broadband services is clear. All the European countries and some South Mediterranean ones as well have introduced unbundling of the local loop and other wholesale regulation in order to facilitate the entry of alternative operators, though as can be seen from the market shares of the leading firm, still there is a long way to go in the process of achieving more competition and benefits for the consumers derived from more players in the market.

The development of alternative fixed infrastructures varies widely across countries. Whereas in Bosnia and Herzegovina, Malta, Portugal and Spain had alternative networks, either cable-HFC or FTTx based, providing more than 30% of broadband connections, some other countries- Morocco, Greece and Tunisia- still have a mere 2% of lines in the hands of alternative network providers.

Figure 13: Distribution of broadband lines by supporting technology, 2015 (% of total lines)

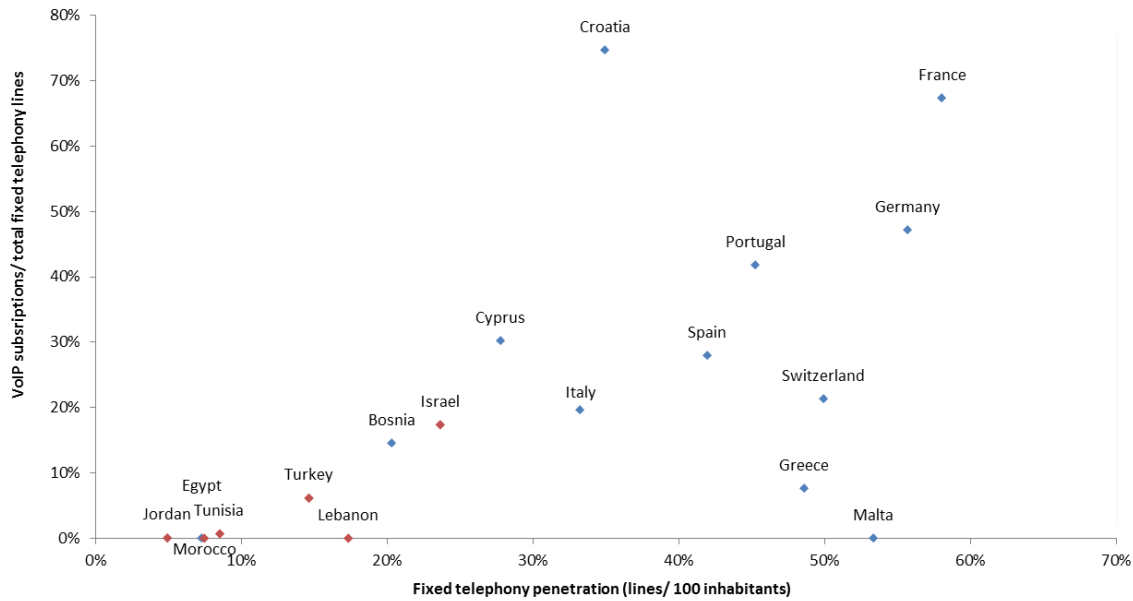


Source: EMERG

Alternative providers may construct their own independent physical network, as the cable or some FTTx operators have done, or else they may use any wholesale regulated service on the incumbents' legacy network to make entry into the market possible. In those countries where no significant deployment of an alternative physical network has been achieved it is crucial to regulate the network of the incumbent and to monitor the functioning of these wholesale services so that entry occurs and a level playing field for competition to take place is created. The regulation of the incumbent's network, based either in direct access- with the unbundling of the local loop-, or the indirect access- with a definition of a bitstream service-, has created big welfare gains in the European countries that implemented it.

Voice services are being predominantly provided based on the traditional legacy –copper wired based- network in most of the countries. However, in some countries due to unbundling of wholesale services at the local loop and, in some cases, due to the deployment of alternative fibre based infrastructures, Voice over IP, VoIP, services have a significant presence, as in France and Croatia where 67% and 75% of fixed active fixed telephony lines are based on VoIP. For the moment countries in the southern Mediterranean have reported significantly lower VoIP subscriptions rates. But as NGA networks are being deployed, a growth in this type of voice service is expected all across the set of countries.

Figure 14: Fixed telephony penetration and proportion of VoIP lines, 2015



Note: VoIP is defined according to ITU indicator ITU-112IP and includes VoIP subscriptions through fixed wireless, DSL, cable, fibre optic and other fixed-broadband Internet platforms that provide fixed telephony using IP. It excludes software-based VoIP applications (e.g. VoIP with Skype using computer-to-computer or computer-to-telephone). Data on telephone lines of Cyprus and Egypt, Greece and Morocco refer to 2014.

Source: EMERG.

3 Institutional issues

The first section examines the general institutional framework and legal environment in which the National Regulatory Authorities (NRAs) and market players operate.

The European Legal and Regulatory Framework approved in 2009 for electronic communications -and in particular the Framework Directive- introduced specific provisions relating to the sectorial NRAs independence and accountability. These provisions shape the institutional layout of the European NRAs.

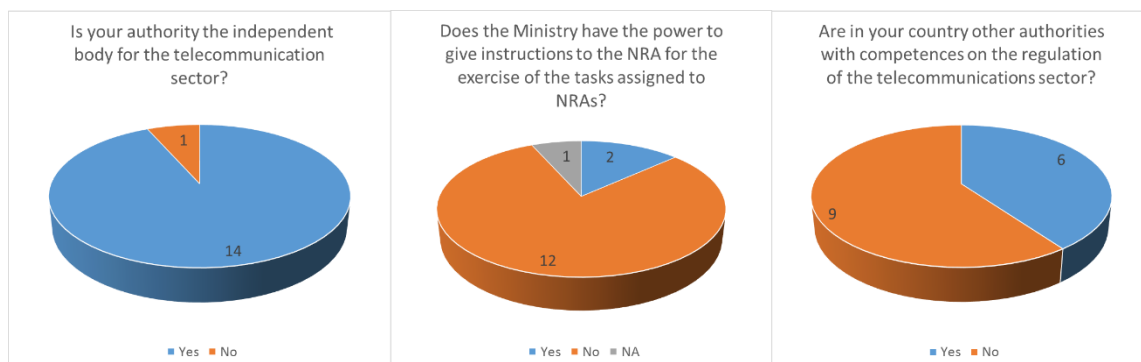
3.1 NRA's independence

The NRAs are supposed to act independently of both political bodies and market players.

In the EU Regulatory Framework, apart from the general obligation for all NRAs to be independent from the market operators, Recital 13 and Article 3.3a of the Framework Directive 2009/140/EC introduce the principle of NRAs independence from any political pressure in their activities related to ex-ante regulation and dispute resolution. The objective of this obligation is mainly to avoid the risk of conflicts of interest between the regulation of the sector and operational or financial interest and to ensure the impartiality and transparency of the decisions of the NRAs.

The mentioned recital refers to independence as the right of the NRAs to be protected not only “against external intervention” but also against any “political pressure liable to jeopardize its independent assessment of matters coming before it”. It also refers to the fact that “express provision should be made in national law” and “rules should be laid down at the outset” in order to protect such NRAs independence.

Figure 15: NRA's independence



In most of the EMERG countries, there are independent regulatory authorities for the regulation of the telecommunication sector (see Figure 15). Exceptions are Israel and Palestine. In Israel the Ministry of Communications assumes the role of regulatory body, and Palestine the Ministry of Telecommunications also acts as regulator.

Regarding the independence from political bodies, in a majority of the EMERG countries the Government explicitly has not any power to give instructions to the independent NRAs in the exercise of the tasks assigned to them. In Malta the Minister may, in relation to matters which appear to him to affect the public interest, give directions 'of a general character' on the policy to be followed by the NRA. In the case of Switzerland there are however some provisions which establish the possibility for the Government/Ministry to give directions in certain issues related to the sector.

3.2 NRA's governance

The Framework Directive defines the national regulatory authority as “*the body or bodies charged by a Member-State with any of the regulatory tasks assigned in this Directive by Specific Directives*”. As a result, whoever performs a task that should be assigned to an NRA has to comply with all relevant institutional requirements.

As explained in the section above, Article 3.3a of the EU Framework Directive formalizes the principle of political independence of the NRAs responsible of ex ante market regulation and dispute resolution in the performance of the tasks assigned and lays down several provisions in order to ensure this principle. For instance, the Directive states that NRAs' heads or Board members shall not be dismissed unless they do not meet any longer the requirements predetermined by national law for the performance of their tasks; also, any decisions in this respect shall be reasoned and made public.

Governance systems that have been set up to regulate the telecommunication sector by the countries examined vary considerably across the countries examined. It is important to note that a one-size-fits-all concept cannot be devised.

Appointment procedures of the Heads

The Head of the National Regulatory Authority is usually appointed by (i) the Prime Minister or President (France, Italy, Israel), (ii) by the Minister in charge of the telecommunication sector (Egypt, Malta) or (iii) by a council of ministers (Jordan, Morocco, Portugal, Switzerland).

In some of the countries examined (i.e. Spain, Italy), the Heads are elected after having consulted the Parliament or the relevant Parliamentary committees (France). In the case of Spain and France, the Parliament has a veto right, whereas in none of the South Mediterranean countries the Parliament plays a role in the election of the Head.

In the vast majority of the EU countries the appointment procedure is transparent and set in law. Moreover, in most of them sector-specific requirements are established (expertise, knowledge, reputation, etc.). This is the case, for example, of Turkey, Cyprus, Jordan and Portugal.

Table 1: Governance regimes

NRA	Length of Head's mandate	Is the mandate renewable	Is removal possible	Are the grounds for dismissal defined
Bosnia and Herzegovina – CRA	4 years	once	yes	yes
Croatia – HAKOM	5 years	not at all	yes	yes
Cyprus – OCECPR	6years	once	yes	yes
Egypt - NTRA				no
France – ARCEP	6 years	not at all	no	no
Germany – BNETZA				
Greece - EETT				
Israel – MOC				no
Italy - AGCOM	7 years	not at all	no	yes
Jordan – TRC	4 years	once	yes	yes
Lebanon - TRA				
Malta – MCA	3 years	multiple times	yes	yes
Morocco – ANRT	not defined			no
Palestine - MTIT				no
Portugal - ANACOM	5 years	not at all	yes	yes
Spain – CNMC				
Switzerland - BAKOM	4 years	multiple times	yes	yes
Tunisia – INTT	5 years	once		no
Turkey – BTK	5 years	once	yes	yes

Source: EMERG.

The average term of the mandate of Heads and Board members varies between 5 and 6 years, whereas in Italy it is 7 years and in Malta just 3 years. In the majority of countries, the renewal of the mandates of the Head and the Board members is possible once. This is the case of Bosnia and Herzegovina, Cyprus, Jordan, Tunisia and Turkey. In Malta and Switzerland the Head of the NRA can even be reappointed multiple times. In Croatia, France, Italy and Portugal the Head and the Board Members cannot be reappointed. There is no distinction between European and South Mediterranean countries in this regard.

Grounds for dismissal

Removal of the Heads of the Board members is possible in the vast majority of the EMERG countries. Italy and France are an exception. In the French case, it is explicitly indicated that removal is not possible, and in case of resignation, a replacing member is appointed for the remaining period of office of his antecessor. For Italy, the President of the Authority cannot be dismissed.

Article 3.3a of the EU Framework Directive clearly states that grounds for dismissal shall be defined in advance by the national law. This condition is naturally fulfilled by all the European EMERG countries. In every European country provisions are in place determining the circumstances for the dismissal of the Head or Board members. However, these provisions are heterogeneous and vary from country to country.

On the contrary, in most of the South Mediterranean countries, the grounds for dismissal are not explicitly defined in advance in law. This is the situation in Egypt, Israel, Morocco and Tunisia. Turkey and Jordan have defended the grounds for dismissal in national law.

3.3 NRA's competencies and powers

The EU electronic communications directives provide for a wide range of powers, responsibilities and tasks to be vested in NRAs in order to ensure effective competition between market players. The NRAs play a central role in effectively implementing the regulatory framework since many relevant powers and tasks are directly assigned to them.

The large majority of EMERG members confirmed that independent NRAs are responsible of the whole range of tasks applicable to the regulation of the telecommunication sector. This is the case in the following countries: Bosnia and Herzegovina, Croatia, Egypt, France, Israel, Jordan, Morocco, Palestine, Portugal.

However, there is a minority of countries (Malta, Switzerland, Cyprus, Italy, Tunisia and Turkey) where the responsibilities of the regulation of the sector are split between different bodies or agencies or between the independent authority and the Ministry. In Cyprus, the independent regulator is mainly in charge of ex-ante market regulation and dispute resolution, other powers related to telecommunications regulation being part of the Ministry area of responsibility (e.g.

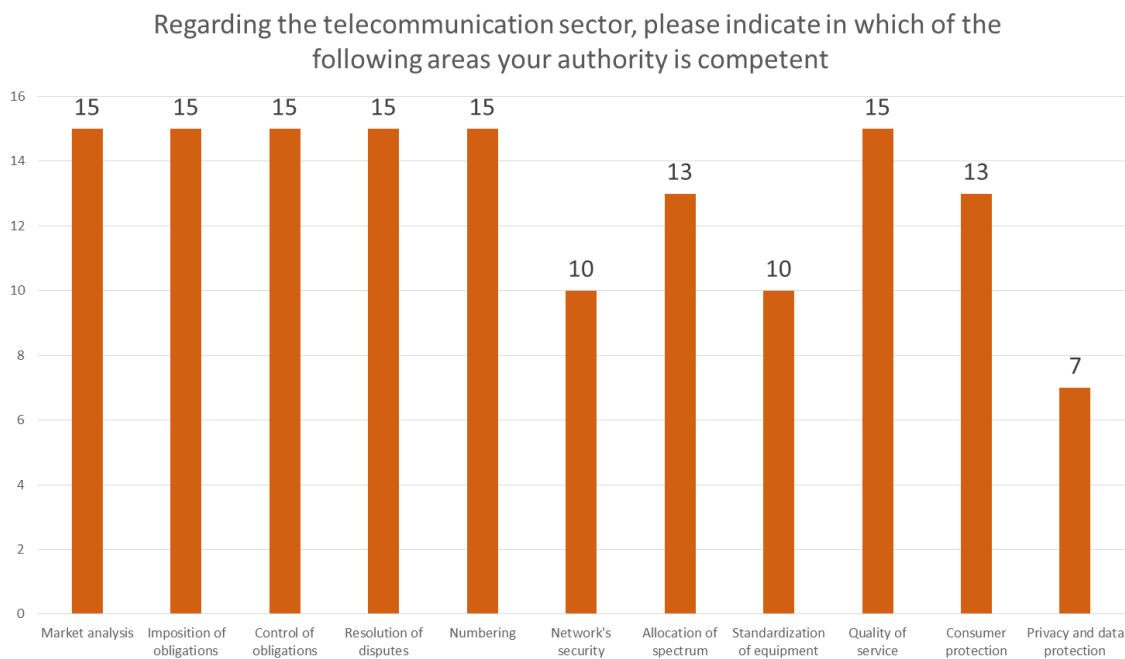
consumer protection and spectrum). In Turkey ICTA is competent for the regulation of the whole telecommunication sector with the exception of the rights of way, attributed to the Ministry of Transportation, Communication and Maritime.

Competences for the regulation of the telecommunication sector

Article 3.3 of the EU Framework Directive lays down that ex-ante market regulation and dispute resolution between undertakings shall fall under the remit of the independent NRA's competences.

It can be concluded that this requirement is fulfilled by all the EMERG countries participating in the survey when designing the institutional setup of the regulatory bodies. In particular, all the NRAs positively affirmed that they are competent for the regulation of the market analysis, for the imposition and control of obligations, the resolution of disputes, numbering and Quality of Service. 13 out of 15 NRAs also confirmed that they have attributed competences on the allocation of spectrum and consumer protection.

Figure 16: Competencies in telecommunication sector



Source: EMERG.

Converging NRAs in the EMERG countries

There is a worldwide trend to converge different independent authorities from different sector into one-single NRA with broad powers for the regulation of various economic sectors.

In the EMERG countries, the majority of the NRAs exercise some converging competences, in particular in relation with the postal sector (11 of 15 responding NRAs).

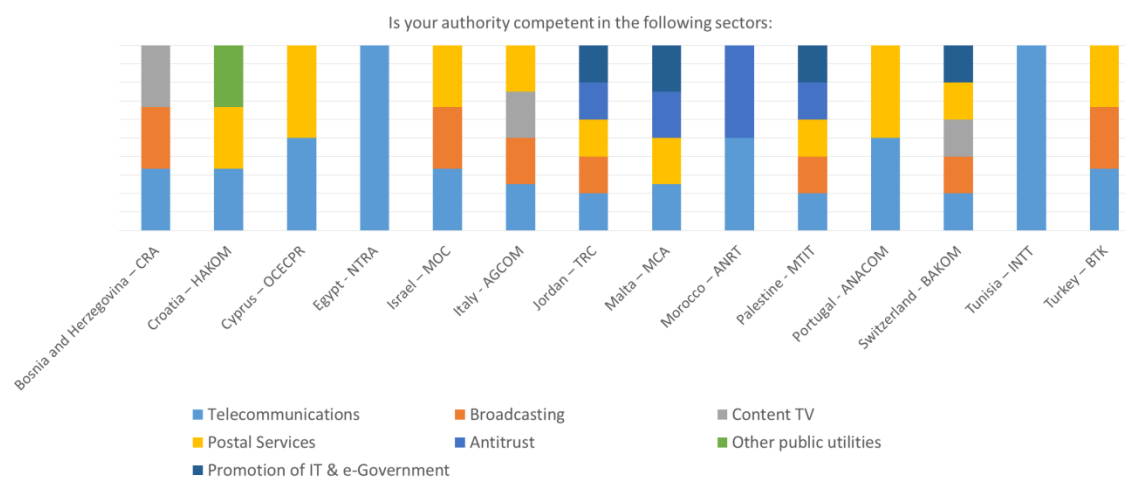
As for the audio-visual sector, a total of 7 NRAs have partial competences concerning broadcasting. This is the case of Bosnia and Herzegovina, Israel, Switzerland, Jordan, Palestine, Turkey and Italy. However, it should be noted that the scope of competences in the media sector is not homogeneous. For instance, only Switzerland and Italy are competent with respect to audio-visual content, whereas Palestine is responsible only for the assignment of spectrum and Turkey for the TV transmission.

Only few countries have vested the independent NRA with competences on antitrust. This is the case of Malta, Palestine, Jordan and Morocco, with some particularities. In the case of Morocco, ANRT acts as antitrust authority only for the telecommunication markets.

With respect to the converging NRAs in the field of IT promotion and e-Government, they are only present in 4 countries, namely Jordan, Switzerland, Palestine, Malta.

Croatia remains as the only multi-utility converging authority in the sample of EMERG countries.

Figure 17: NRA's competencies



Source: EMERG.

Request of information

All the EMERG regulators confirmed that they have powers to request information to the sector agents in the performance of their tasks.

Powers of enforcement

The European Framework on electronic communications provides for a comprehensive set of tools to ensure the enforcement of the decisions taken by the NRA. It mainly consists of remedies (sanctioning procedures and fines), judiciary review measures, and consultation procedures in order to ensure transparency and predictability of the legal framework.

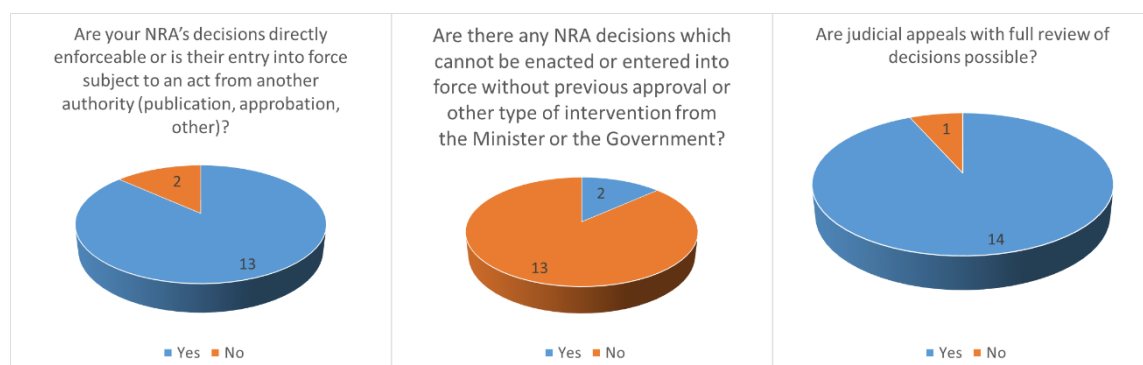
With respect to the survey, the vast majority of the EMERG countries provided a positive answer concerning the direct enforceability of their decisions, i.e. that the entry into force of their decisions is not subject to an act from another Authority. Only 2 countries provided a negative answer, Turkey and Egypt. Turkey, France and Israel made some clarifications.

As for France, decisions pursuant to Article 5 of the EU Access Directive and to Article 4 of the EU Authorization Directive require the prior homologation of the Ministry of Telecommunications, without this entailing a discretionary veto power. These decisions have to be published at the “Journal Officiel de la République”.

In Israel, all decisions by the MOC that involve direct tariff control need to be confirmed by the Minister of Finance.

In Turkey, the Authority’s decisions are enforceable directly without subject to an act from another authority, according to the article 19 of the Public Financial Management and Control Law dated 10/12/2003 numbered 5018, on the regulatory and supervisory bodies’ budgets including ICTA. However, according to the Electronic Communications Law, the Board shall publicize proper decisions by appropriate means foremost under internet environment. Regulatory Board Decisions as by-law, after being consummated by the Board, shall be forwarded to the relevant Ministry and the Prime Ministry so as to be published in the Official Journal.

Figure 18: Powers of enforcement



Source: EMERG.

Imposition of fines

With the exception of Palestine, all the EMERG regulators have powers to impose fines or monetary sanctions. In some cases (Palestine, Jordan and Egypt), the legal framework of the country does not specify whether the NRA has the power to impose penalties at all.

In Jordan, the enforcement powers are stipulated in Article 40 of the law, where TRC has the Authority to cancel either partial or fully the license in the circumstances of not applying the TRC's decisions. The terms and conditions of the license also gives TRC further enforcement powers as licensees are obliged to comply themselves to the legislations including TRC's instruction as stipulated within the License's granted to them. Further, TRC's fine's decisions are considered administrative and collected on the base of granting the TRC powers to such fines where the state procedures are applied to collect the fines.

In the case of France, recently changes to the legal provisioning concerning the imposition of sanctions have occurred. The order No. 2014-329 draws conclusions on the decision of 5 July 2013, wherein the Constitutional Council considered the legal provisions concerning ARCEP's power to impose sanctions in the electronic communications sector to be unconstitutional. It introduces a new sanctions procedure in the postal and electronic communications sectors, based on the CNIL (French data protection authority) model whose constitutionality has been validated by the "Conseil d'Etat", France's highest administrative court. The new provisions in the French Postal and electronic communications code introduce a separation of the proceedings and the adjudication functions by assigning them to different members of the ARCEP Executive Board. A body composed of four Board members, including the Chairman of ARCEP, will adopt decisions on formal notices, investigations, dispute settlements and inquiries, and a second body composed of the Board's three other members will adopt decisions concerning sanctions.

Still in almost no southern Mediterranean country a secondary legislation has been set out identifying the steps to be followed in a sanctioning proceeding, the practical steps taken to grant transparency and participation in the proceeding by operators and citizens, or the possibility to access the documents. As a result, the sanctioning procedure adopted by the NRAs is often very unclear and it might fail to generate a feeling of trust among the NRA and the operators or the citizen.

Judicial review

Although all southern Mediterranean countries, besides Morocco, declared that fully review of the NRA's decisions is possible, the approaches taken by the southern Mediterranean countries often differ from the European best practice.

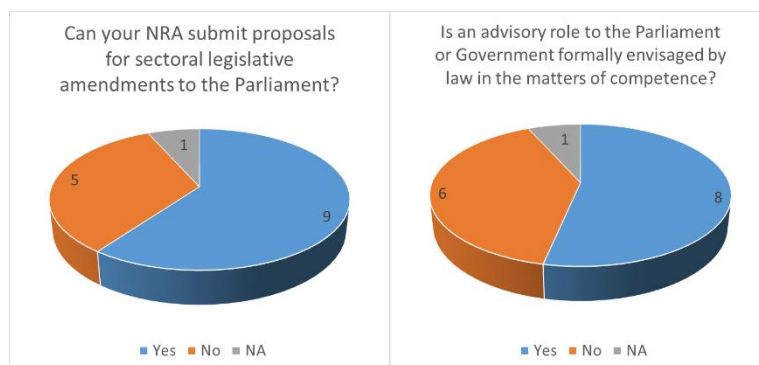
Advisory role

As for the ability of submitting proposals for sector-specific legislative amendments to the Parliament, 9 NRAs confirmed that they have this power. In particular Bosnia and Herzegovina, Israel, France, Morocco, Switzerland, Palestine, Malta, Cyprus and Italy, whereas 5 regulators

confirmed that they cannot formally make proposals, i.e., Portugal, Jordan, Tunisia, Turkey and Croatia. In some cases, the proposals are channelled to the competent Ministry (Palestine, Croatia and Morocco) or need to be approved by the competent Ministry (Malta).

On the other hand, the NRAs advisory role in their matters of competence is formally envisaged by law in the majority of the responding EMERG members. This is the case of Israel, Portugal, France, Palestine, Malta, Tunisia, Cyprus, Italy. However, in other 6 members this role is not envisaged, including in 3 southern Mediterranean countries (Jordan, Morocco, Turkey, Switzerland, Bosnia and Herzegovina and Croatia).

Figure 19: Advisory role



Source: EMERG.

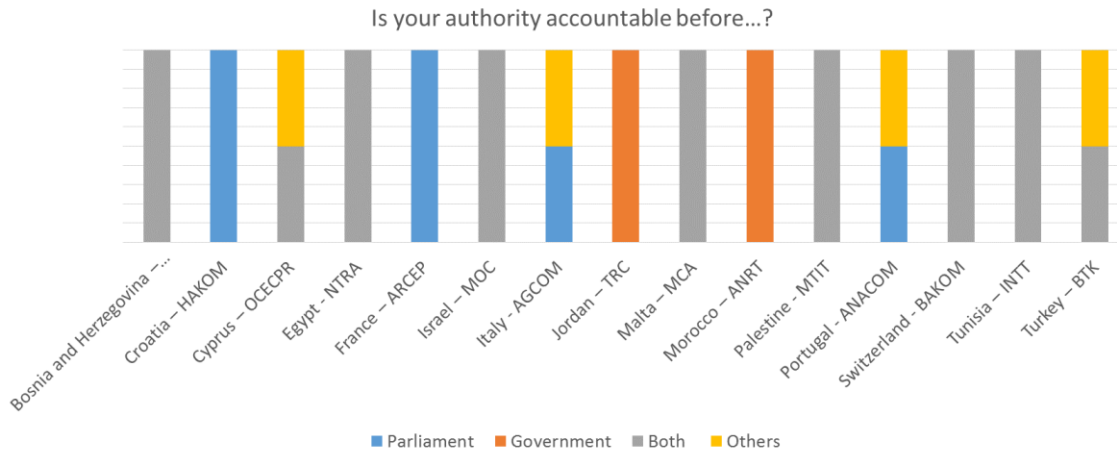
3.4 NRA's accountability and transparency

The large majority of the EMERG members report both to the Parliament and to the Government (9), four countries only report to the Parliament⁸ and 2 only to the Government (see Figure 20). In Portugal and Turkey NRAs are subject to jurisdictions of courts. In both cases the NRAs are subjected to financial accountability and are audited by courts.

It is noteworthy that under the European regulatory framework in electronic communications, pursuant to Article 7 and Article 7a of the Directive 2002/21/EC, as amended by Directive 2009/140/EC. In some case (i.e., as for the identification of relevant markets and the SMP assessment) the European Commission can also issue a "veto" on NRAs decision.

⁸ In this case, an Activity Report is issued every year to the Parliament listing all the activities of the NRA, but there is no direct accountability foreseen in the law.

Figure 20: NRA's accountability



As to consultation processes before issuing decisions, the European Framework (Recital 15 and Article 6 of the Framework Directive) provides for an obligation on NRAs to consult all interested parties on proposed decisions, allowing them a reasonable timeframe. NRAs should take any relevant comment into account before adopting the decision.

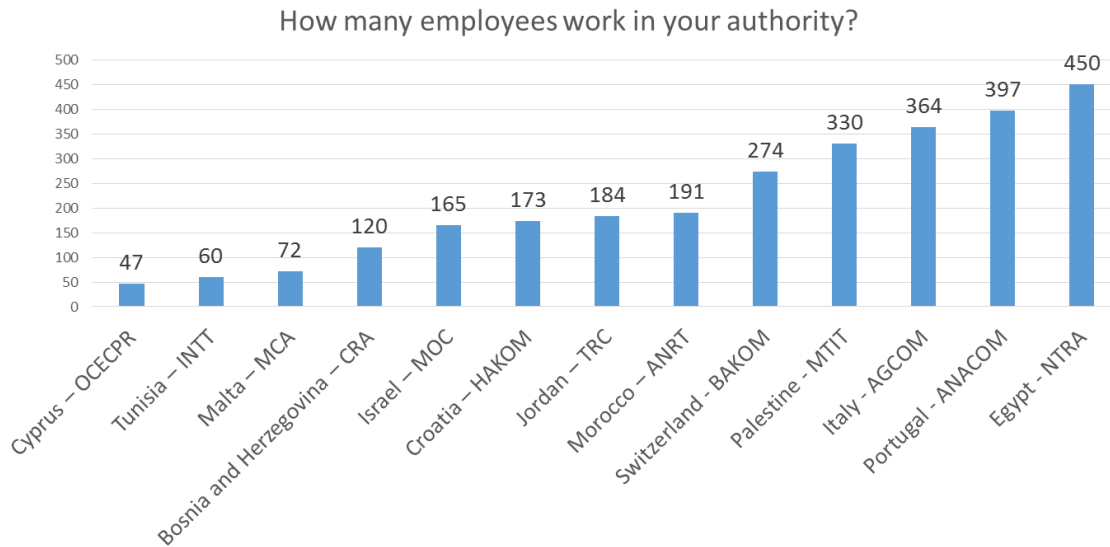
For the large majority of regulators carrying out consultation procedures before adopting relevant decisions is a mandatory procedure, with the exception of Switzerland, Palestine, Morocco, Tunisia and Egypt where there is not a legal obligation specified in the law. With respect to the publication of decisions, all the regulators publish their decisions, usually on their website.

Staffing and budget

The Framework Directive refers to the need of ensuring financial and human resource available to NRAs as a further tool to ensure political independence. Articles 3.3 and 3.3.a lay down that NRAs shall be endowed with all the necessary resources. Recital 13 of the Framework Directive makes explicit that the NRA should have their own budgets allowing them, in particular, to recruit a sufficient number of qualified staff.

Figure 21 shows an overview of the staff employed by EMERG members. It cannot be easily outlined any conclusion due to lack of homogeneity among regulators in terms of competences attributed to them. With the exception of Israel, Jordan and Palestine all NRAs can autonomously recruit their staff.

Figure 21: Number of employees in NRAs

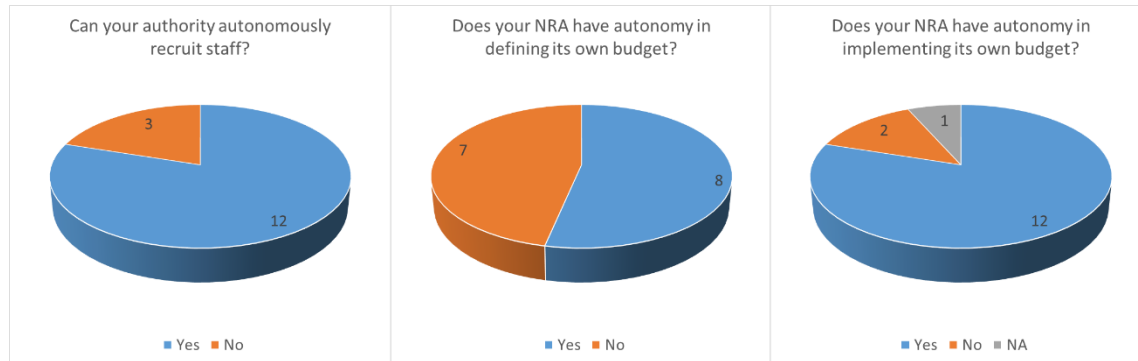


Source: EMERG.

Concerning the definition of the NRA's budget, 8 members declared that they have autonomy to design and prepare their own budget: Croatia, Egypt, Italy, Malta, Morocco, Portugal, Tunisia and Turkey (see Figure 22). However, it is generally assumed that certain Government guidelines are assumed by the NRAs when preparing the draft, related to issues such as general budgetary restrictions, travel expenses, remuneration policy for staffing and so forth.

With the exception of Switzerland and Bosnia Herzegovina, the rest of EMERG members reported that they could autonomously implement the allocated budget. In the case of Portugal, ANACOM has full control over its budgeted expenditure, subject only to an independent audit. However, since 2011, in the context of the Portuguese Financial and Economic Assistance Programme, ANACOM was required to apply the reduction in staff remuneration approved by the Parliament (State Budget Law) that determined a salary cut for public employees and the staff of public institutions subject to a special scheme; meanwhile all career progression and other salary updates have been frozen since 2011.

Figure 22: Recruiting and budget



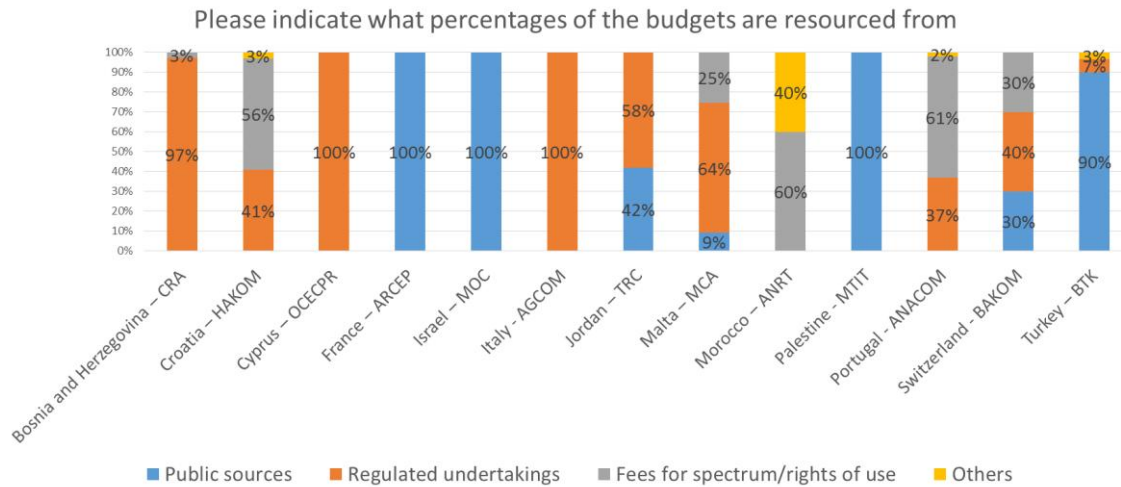
Source: EMERG.

The budgets of EMERG members vary significantly, reflecting the differences in responsibilities and the complexity of internal structures and roles. Budgets increased from 2015 to 2016 in 5 of 8 EMERG countries that reported figures on their exact budgets. With the exception of Malta, all NRA's with increasing budgets are from non-European countries.

Most NRAs rely on several sources to finance their activities, mostly from public funding, collection fees and charges from regulated entities, spectrum fees and others sources which vary from country to country (bank interest in Portugal, Croatia and Turkey, fines and training contributions of operators in Morocco). For the sources of their incomes, the EMERG countries fall into the following groups:

- Countries where almost all revenues come from public sources: France (100%), Israel (100%), Palestine (100%) and Turkey (90%).
- Countries where a significant part of the revenues comes directly from regulated undertakings: Cyprus (100%), Italy (100%), Bosnia and Herzegovina (97%), Jordan (58%) and Malta (64%).
- Countries where a significant part of the revenues comes from the spectrum management: Morocco (60%), Portugal (61%) and Croatia (56%).

Figure 23: Sourcing of budgets



Source: EMERG.

4 Regulatory development in the EMERG countries

4.1 Market access

4.1.1 Licenses

According to the European legal framework for the electronic communications, in line with a system of general authorizations, no explicit decision or administrative act by the NRA is required. Any procedural requirements are limited to notification (registration) only. After notification a provider of electronic communication network or services can start commercial activities in the telecommunications market(s) of its choice. From that moment on, it has the right to negotiate interconnection agreements and access to facilities with players that have significant market power (SMP).

Holders of a general authorization have to pay a yearly administrative fee ('charges') to the NRA. These fees have to be cost based i.e. should only cover the actual administrative costs for the activities conducted by the NRA.

Regarding providers of electronic communications networks and services, which do need scarce resources, the situation is different. These providers need to be granted with individual usage rights. The procedure for assignment of radio frequencies should in any event be objective, transparent, non-discriminatory and proportionate. This procedure could either be a comparative tender ("beauty contest") or a competitive tender ('auction). NRAs may levy usage

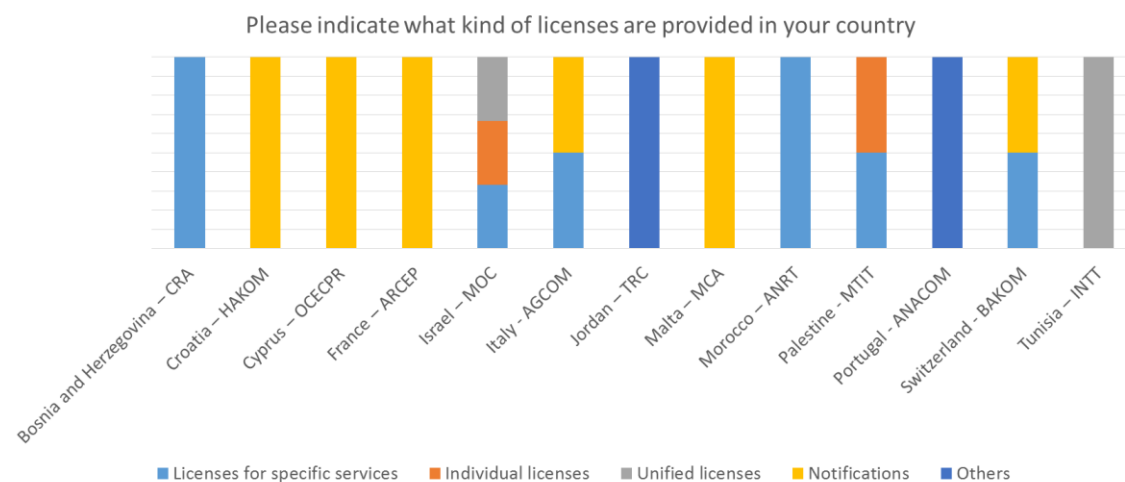
fees for the use of radio frequencies and numbers as an instrument to ensure that these resources are used efficiently.

While in most of the European countries (Croatia, Cyprus, France, Italy, Malta, Portugal and Switzerland) a notification is required in order to officially enter into the market, in southern Mediterranean countries this does not occur.

Bosnia and Herzegovina, Israel, Morocco, Switzerland, Palestine and Italy provide licenses for specific services whereas Israel and Palestine provide individual licenses for multi-services and Israel and Tunisia provide unified licenses (global).

In Jordan, there is a simplified licensing regime given that any potential entrant to the telecom market can choose from amongst two types of licenses, namely individual or class license. Differences between these two types rely mainly on the use of scarce resources, as in the case of individual license. However both licenses are general licenses and not specific to any particular telecom services. Finally, spectrum use has its own licensing management process.

Figure 24: Provided licenses



Source: EMERG.

4.1.2 Access to scarce resources

Rights of way

The European legal framework, namely the Authorization and Access Directives (respectively 2002/20/EC and 2002/19/EC), establishes non-discriminatory procedures that aim to grant public rights of way to undertakings providing electronic communications networks or services to the public. In fact, permits issued to undertakings providing electronic communications networks and services allowing them to gain access to public or private property are essential factors for the establishment of electronic communications networks or new network elements.

Unnecessary complexity and delay in the procedures for granting rights of way may therefore represent important obstacles to the development of competition.

Consequently, the acquisition of rights of way by authorized undertakings should be simple. National regulatory authorities should be able to coordinate the acquisition of rights of way, making relevant information accessible on their websites.

Further, in certain cases, Member States may impose the sharing of facilities or property on an undertaking operating an electronic communications network. This type of decision is used when there is limited access to resources due to the need to protect the environment, health or public safety or when it is not possible to reproduce the infrastructures. These sharing and coordination arrangements may include rules for apportioning the costs of facility or property sharing adjusted for risk where appropriate.

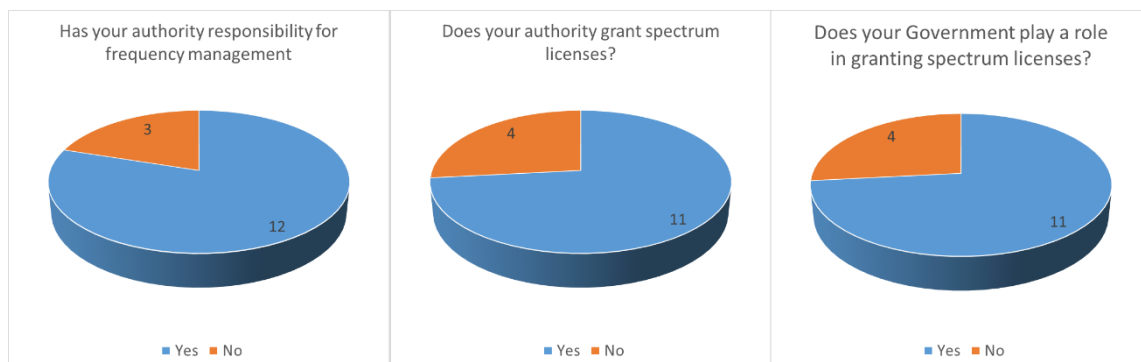
When asked if the NRA is empowered to grant rights of way, 6 members (Croatia, Cyprus, Egypt, Israel, Palestine and Tunisia) answered indicating that their authorities are empowered to grant rights of way. On the contrary, 9 of them (Bosnia and Herzegovina, France, Italy, Jordan, Malta, Morocco, Portugal, Switzerland and Turkey) answered negatively to this question.

Radio Spectrum

NRAs play a key role in planning, allocating and ensuring that spectrum is used efficiently. Some NRAs have been heavily involved in the reallocation of spectrum from analogue broadcasting to mobile communications, and from military use to civilian use. Some of this work requires close cooperation with other countries. In other cases, this involvement relies on the role of the ministries.

In a large majority of countries the NRAs are responsible for frequency management (see Figure 25). In Cyprus, Tunisia the regulators have no competencies in the field. Italy's AGCOM is in charge only of the frequency planning and the draft of the National frequency plan which is the basis for the frequency management and assignment, a tasks of the Ministry of Economic Development.

Figure 25: Spectrum management and licenses

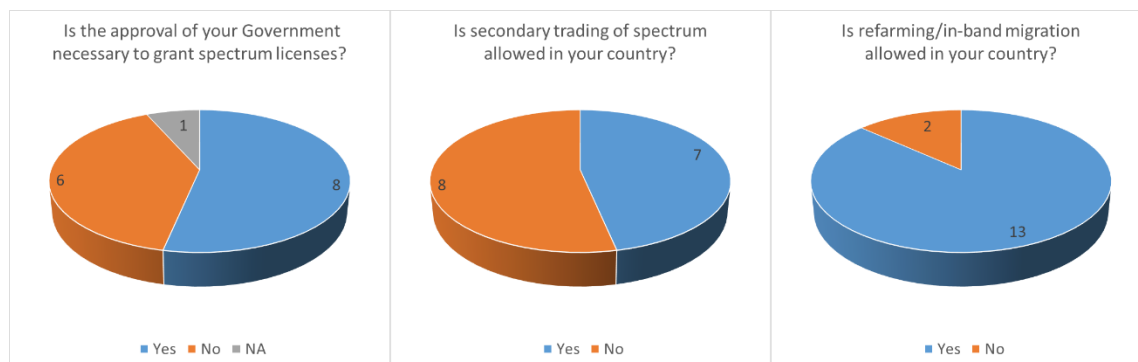


Source: EMERG.

Four NRA's (Bosnia and Herzegovina, Croatia, Egypt and Switzerland) have full responsibility of frequency management and grant spectrum licenses while there is no involvement of the government. In most countries (Cyprus, France, Italy, Morocco, Palestine, Portugal, Tunisia and Turkey) the approval of the government is necessary to grant spectrum licenses (see Figure 26).

7 out of 15 NRAs (Croatia, Cyprus, France, Italy, Malta, Portugal and Turkey) confirm that in their countries secondary trading of spectrum is allowed (in the case of Turkey, it is in a limited way). In Bosnia and Herzegovina, Egypt, Israel, Jordan, Morocco, Palestine, Switzerland and Tunisia, this kind of trading is not allowed. Refarming/in-band migration is allowed in all members, except in the cases of Israel and Egypt (see Figure 26).

Figure 26: Spectrum trading and refarming



Source: EMERG.

Digital dividend

A digital dividend decision was taken in the cases following members: Portugal (Digital Dividend I, 790-862 MHz), Germany (790-862 MHz was auctioned off for mobile services), France, Jordan (mainly for LTE services), Turkey, Lebanon, Palestine, Malta, Tunisia, Croatia, Spain and Italy. Finally, in Bosnia and Herzegovina there is no such decision.

As for the EU countries, the 800 MHz was allocated in all countries, with the exception of Malta, where the process leading to the granting of spectrum in this band is currently underway. In all the cases, the band was assigned to provide electronic communication services, in particular, mobile broadband services and wireless broadband (LTE). With respect to the 700 MHz bands, in France 30 MHz duplex in the 700 MHz band have been awarded in December 2015 to the four main MNOs.

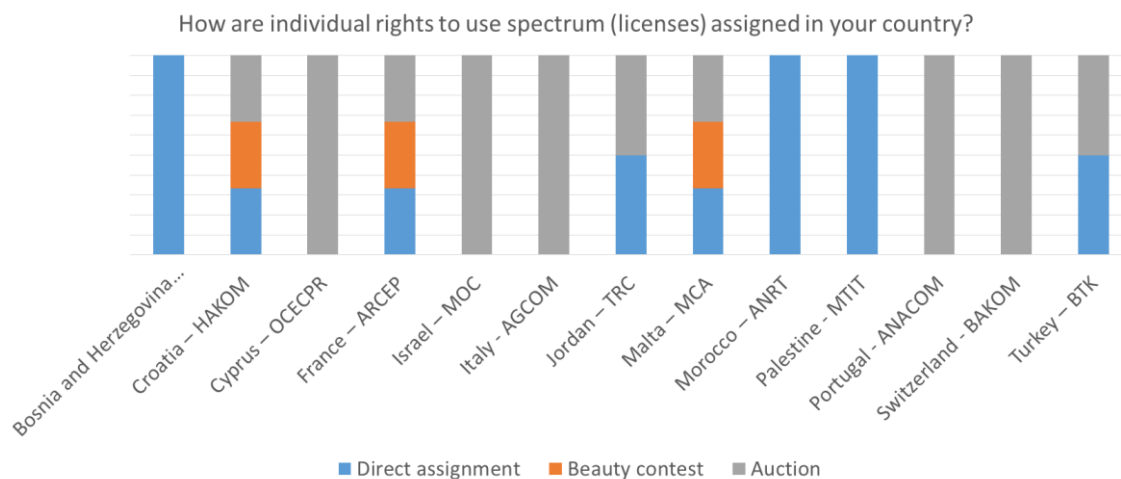
In the cases of Lebanon and Palestine a decision has been made with regards to the use of the digital dividend band, but no action has been taken so far. Meanwhile, the authorities are

studying the possibility of allocating part of UHF band for international mobile telecommunications (IMT).

In Turkey, the 800 MHz frequency band has been assigned to mobile operators in a technology neutral manner. Terrestrial TV services are still provided in the 700 MHz band but it has been decided to use 700 MHz frequency band for mobile broadband services.

The most common practice of spectrum assignment among the EMERG members is auctioning. All European countries responding to the survey use auctioning to assign spectrum. Only Bosnia and Herzegovina, Morocco and Palestine renounce on auctioning and directly assign spectrum.

Figure 27: Spectrum assignment



Source: EMERG.

4.2 Regulatory market analysis and imposition of obligations

EU Member States have harmonized market analysis practices by virtue of the European legislation entered into force since 2002. In this regard the Framework Directive assigns to the national authorities the tasks on the market analysis procedure consisting of three main steps:

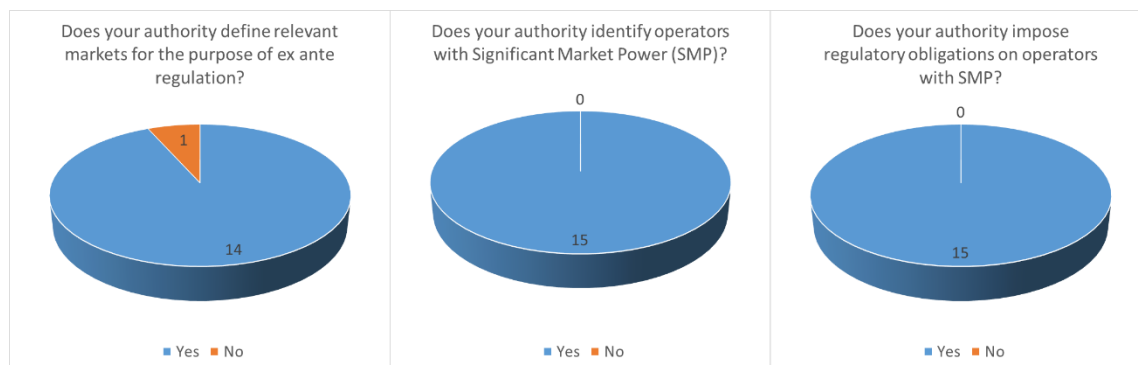
1. Definition of the relevant market, through the identification of the product/service market and the geographic market, that requires the examination of competitive constraints on the behaviour of the service providers and then the analysis of the demand-side substitution and supply-side substitution;
2. Assessment of significant market power which implies the evaluation of the position of economic strength allowing a firm the power to behave to an appreciable extent independently of its competitors, customers and consumers;

3. The imposition of regulatory obligations such as transparency, non-discrimination, accounting separation, access, price control and cost accounting, etc.

The responses on the framework for market analysis point out that the application of the methodologies used under the competition law has become a consolidated, common approach to regulate electronic communication markets within EU member States as well as in non-EU countries belonging to the EMERG.

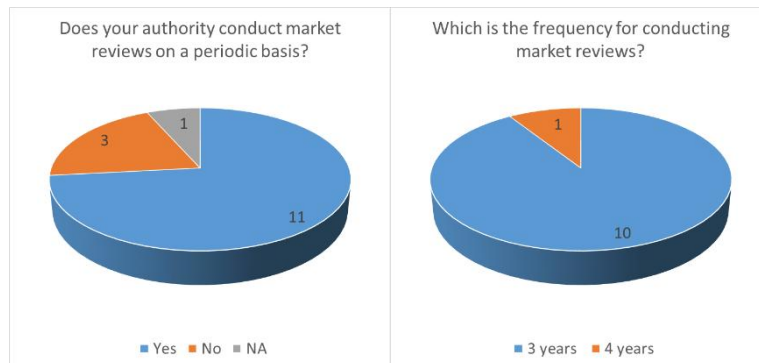
As regards the non-EU countries, a very similar approach arises from the responses to the questionnaire. Indeed, in countries like Jordan, Morocco, Tunisia and Turkey national regulators carry out a complete market analysis procedure, based on competition law principles, proceeding from the relevant market definition to the imposition of obligations on SMP undertakings. The only exception is Switzerland, where market reviews are only conducted upon request of market players. All NRAs identify operators with Significant Market Power (SMP) and impose regulatory obligations on operators with SMP (see Figure 28).

Figure 28: Market analysis and SMP



In addition, it should be noted a slightly distinction concerning the periodical review and the frequency of re-examination of market conditions within this group of countries. Some of them (e.g. Jordan, Lebanon, and Morocco) conduct market analysis on a regular and stated period while Israel, Palestine and Switzerland are more flexible in carrying out the analysis when market developments suggest reconsidering the competitive situation or upon request from a market player. The usual frequency for conducting market review is three years in EMERG countries.

Figure 29: Market reviews



Source: EMERG.

Remedies

The EU Regulatory Framework for electronic networks sets out how the NRAs should define the relevant national electronic communications markets and analyses whether there are any operators with SMP on those markets. In the event of finding that there are undertakings with SMP in the relevant markets, NRAs must impose appropriate regulatory remedies to ensure that effective competition is restored. Under the EU Framework remedies are foreseen in for example the Access Directive and the Universal Service Directive.

The Access Directive lays down a range of obligations to be imposed on undertakings with significant market power, namely transparency, non-discrimination, accounting separation, access, and price control including cost orientation.

Universal Service Directive obligations include regulatory controls on retail services; regulatory controls on the minimum set of leased lines and carrier selection and carrier pre-selection.

The following tables show the implemented obligations separately for the fixed voice telephony markets, the mobile voice telephony/SMS markets and the fixed broadband markets.

Fixed voice telephony markets

In case of the fixed voice telephony markets most countries have access & origination and termination remedies in place. Exception in case of access & origination is Malta. 8/16 countries (Bosnia & Herzegovina, Israel, Italy, Jordan, Morocco, Palestine, Switzerland and Tunisia) also have transit remedies in place. Finally there are also 8/16 countries imposing retail remedies (Croatia, Egypt, Jordan, Morocco, Palestine, Spain, Switzerland and Tunisia).

Table 2: Fixed voice telephony remedies in EMERG countries

Fixed voice telephony market	Access & origination	Termination	Transit	Retail
Bosnia and Herzegovina – CRA	(1),(2),(3),(6)	(1),(2),(3),(6)	(1),(2),(3),(6)	
Croatia – HAKOM	(1),(2),(3),(4),(5),(6),(7)	(1),(2),(3),(4),(5),(6),(7)		(10)(margin squeeze-test)
Cyprus – OCECPR	(1),(3),(4),(5),(6),(7)	(1),(3),(4),(5),(6),(7)		
Egypt – NTRA	(1),(2),(3),(5)	(1),(3)		(5),(6),(10)
France – ARCEP	(1),(2),(3),(4),(5),(6),(7)	(1),(2),(3),(4),(5),(6),(7)		
Israel – MOC	(2*),(3),(4),(5),(7)	(1),(3),(4),(6)	(3),(4)	
Italy – AGCOM	(1),(2),(3),(5),(6),(7)	(1),(2),(3),(5),(6),(7)	(1),(2),(3),(5),(6),(7)	
Jordan – TRC	(1),(2),(3),(4),(5),(6),(7)	(1),(2),(3),(4),(5),(6),(7)	(1),(2),(3),(4),(5),(6),(7)	(3),(5),(6),(7),(9)
Malta – MCA		(1),(2),(3),(4),(5),(6),(7)		
Morocco – ANRT	(1)	(1),(2),(3),(4),(5),(6),(7)	(1),(2),(3),(4),(5),(6),(7)	(3),(4),(8),(10)
Palestine – MTIT	(1),(3),(4),(6)	(1),(3),(4),(6)	(1),(3),(4),(6)	(10)
Portugal – ANACOM	(1),(2),(3),(4),(5),(6),(7)	(1),(2),(3),(4),(5),(6),(7)		
Spain – CNMC	(1),(2),(3),(4),(5),(6),(7)	(1),(2),(3),(4),(5),(6),(7)		(10)
Switzerland – BAKOM	(1),(2),(3),(4),(6),(7)	(1),(2),(3),(4),(6),(7)	(1),(2),(3),(4),(6),(7)	(9) (USP only)
Tunisia – INTT	(1),(2),(3),(6),(7)	(1),(2),(3),(6),(7)	(1),(2),(3),(6),(7)	(3),(6),(7)
Turkey – BTK	(1),(2),(3),(4),(5),(6),(7)	(1),(2),(3),(4),(5),(6),(7)		
Germany – BNETZA	na	na	na	
Greece – EETT	na	na	na	
Lebanon – TRA	na	na	na	

Note: (1) Obligation of interconnection, (2) Implementation of wholesale offers, (3) Transparency -RO, (4) Non-discrimination, (5) Accounting separation, (6) Price control, (7) Cost accounting, (8) Tariff rebalancing, (9) Retail price cap control, (10) other regulation of retail tariffs

*Israel: implementation of wholesale offer pending

Source: EMERG.

Mobile voice telephony/SMS markets

In case of the mobile voice telephony/SMS markets all countries have termination remedies in place. 12/16 countries impose access & origination remedies (Bosnia & Herzegovina, Cyprus, Egypt, France, Israel, Jordan, Morocco, Palestine, Portugal, Spain, Tunisia and Turkey). Finally 4/16 countries also impose retail remedies (Egypt, Italy, Morocco and Tunisia).

Table 3: Mobile voice telephony/SMS remedies in EMERG countries

Mobile voice telephony/ SMS market	Access & origination	Termination	Retail
Bosnia and Herzegovina – CRA	(1),(2),(3),(5),(6)	(1),(2),(4),(5),(6),(8)	
Croatia – HAKOM		(1),(2),(4),(5),(6),(7),(8)	
Cyprus – OCECPR	(1),(4),(5),(6),(7),(8),(9)	(1),(5),(6),(7),(8),(9)	
Egypt – NTRA	(1),(3*), (5)	(1),(5)	(5)
France – ARCEP	(4)	(1),(2),(5),(6),(7),(8),(9)	
Israel – MOC	(3),(5),(6)	(1),(5),(6)	
Italy – AGCOM		(5),(7),(8),(9)	(5)
Jordan – TRC	(1),(2),(4),(5),(6),(8),(9)	(1),(2),(4),(5),(6),(7),(8),(9)	
Malta – MCA		(1),(2),(3),(5),(6),(7),(8),(9)	
Morocco – ANRT	(1),(4),(5),(6),(7),(9)	(1),(2),(4),(5),(6),(7),(8),(9)	(5),(6),(11)
Palestine – MTIT	(4),(6)	(1),(4),(6),(8)	
Portugal – ANACOM	(1),(3**), (4)	(1),(3),(4),(5),(6),(8)	
Spain – CNMC	(1),(3)	(1),(3),(5),(6),(7),(8),(9)	
Switzerland – BAKOM		(1),(2),(5),(6),(8),(9) ***	
Tunisia – INTT	(1),(2),(4),(5),(8),(9)	(1),(2),(4),(5),(8),(9)	(5),(8),(9),(10),(11)
Turkey – BTK	(1),(2),(3),(4),(5),(6),(7),(8),(9)	(1),(2),(4),(5),(6),(7),(8),(9)	
Germany – BNETZA	na	na	
Greece – EETT	na	na	
Lebanon – TRA	na	na	

Note: (1) Obligation of interconnection, (2) Implementation of wholesale offers, (3) Access to MVNOs, (4) Collocation facilities, (5) Transparency - RO, (6) Non-discrimination, (7) Accounting separation, (8), Price control, (9) Cost accounting, (10) Retail price cap control, (11), other regulation of retail tariffs

*Egypt: MVNO access is in process
**Portugal: only imposed to operators that acquired 800MHz and 900MHz in the Multiband auction.
***Switzerland: all termination remedies only on request.

Source: EMERG.

Fixed broadband markets

With regards to the fixed broadband markets, where there is SMP, all NRAs except for Tunisia have imposed remedies to considerably varying degrees. Countries may roughly be categorized into five groups (see Table 4):

- Countries with remedies for duct access, local loop unbundling (LLU) and bitstream access in place: 7/16 countries, most of them European (Cyprus, France, Italy, Portugal, Spain, Israel, Croatia and Turkey) have imposed wholesale access for LLU and bitstream as well as duct access.
- Countries with remedies for LLU and bitstream access: 3/16 countries (Jordan, Morocco and Egypt) have imposed LLU and bitstream access, but no duct access.
- Countries with remedies for LLU but not for bitstream access: 3/16 countries (Switzerland, Malta and Bosnia & Herzegovina) have imposed LLU but no bitstream access. Of these countries only Switzerland also offers duct access.
- Countries with remedies for bitstream only: Palestine only offers bitstream access.

- Countries without any remedies for fixed broadband markets: Tunisia has no remedies in place.

Table 4: Fixed broadband market remedies in EMERG countries

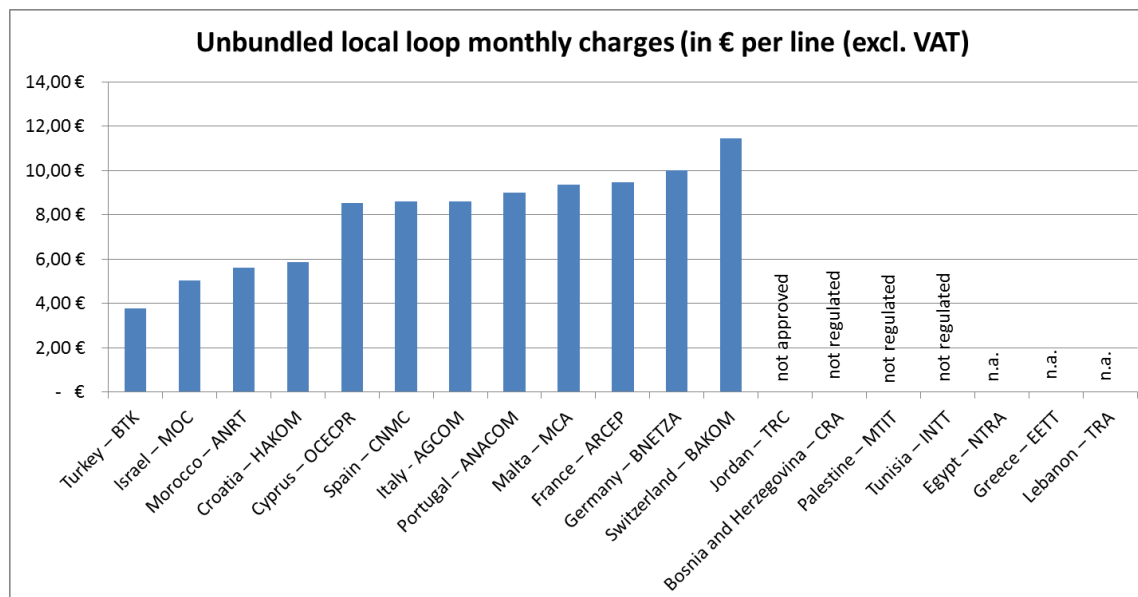
Fixed broadband market	Duct access	Local loop unbundling	Bitstream access
Cyprus – OCECPR	(1),(2),(3),(4),(5),(6)	(1),(2),(3),(4),(5),(6)	(1),(2),(3),(4),(5),(6)
France – ARCEP	(1),(2),(3),(4),(5),(6)	(1),(2),(3),(4),(5),(6)	(1),(2),(3),(4),(5),(6)
Italy - AGCOM	(1),(2),(3),(4),(5),(6)	(1),(2),(3),(4),(5),(6)	(1),(2),(3),(4),(5),(6)
Portugal – ANACOM	(1),(2),(3),(4),(5),(6)	(1),(2),(3),(4),(5),(6)	(1),(2),(3),(4),(5),(6)
Spain – CNMC	(1),(2),(3),(4),(5),(6)	(1),(2),(3),(4),(5),(6)	(1),(2),(3),(4),(5),(6)
Israel – MOC	(1),(2),(3),(4),(5)	(1),(2),(3),(4),(5)	(1),(2),(3),(4),(5)
Croatia – HAKOM	(1)	(1),(2),(3),(4),(5),(6)	(1),(2),(3),(4),(5),(6)
Turkey – BTK	(1)	(1),(2),(3),(4),(5),(6)	(1),(2),(3),(4),(5),(6)
Jordan – TRC		(1),(2),(3),(4),(5),(6)	(1),(2),(3),(4),(5),(6)
Morocco – ANRT		(1),(2),(3),(4),(5),(6)	(1),(2),(3),(4),(5),(6)
Egypt – NTRA		(1),(2)	(1),(2)
Switzerland – BAKOM	(1),(2),(3),(5),(6)	(1),(2),(3),(5),(6)	
Malta – MCA		(1),(2),(3),(4),(5),(6)	
Bosnia and Herzegovina – CRA		(2),(3)	
Palestine – MTIT			(1),(2),(3),(5)
Tunisia – INTT			
Germany – BNETZA	<i>na</i>	<i>na</i>	<i>na</i>
Greece – EETT	<i>na</i>	<i>na</i>	<i>na</i>
Lebanon – TRA	<i>na</i>	<i>na</i>	<i>na</i>

Note: (1) Implementation of wholesale offer, (2) Transparency-RO, (3) Non-discrimination, (4) Accounting separation, (5) Price control, (6) Cost accounting

Source: EMERG.

Regarding monthly charges for LLU access the following figure illustrates the different levels. In general, the southern Mediterranean countries that do impose an LLU obligation have lower charges (Turkey, Israel, Morocco) than Eu countries.

Figure 30: LLU monthly charges (in € per line (excl. VAT))



Source: EMERG.

5 Consumer issues

The protection of consumers and of the right for having access to affordable services is at the heart of the responsibilities of regulators. Chapter 4 of the EU Directive on Universal Service and Users' Rights (2009) contains several provisions aimed to secure the interests and rights of end-users beyond their access to the services falling under the scope of universal service.

These provisions are of various types: on the one hand, they evolve around the principle of providing end-users with information on the applicable prices and tariffs, standard terms and conditions and the quality of the publicly available communications services.

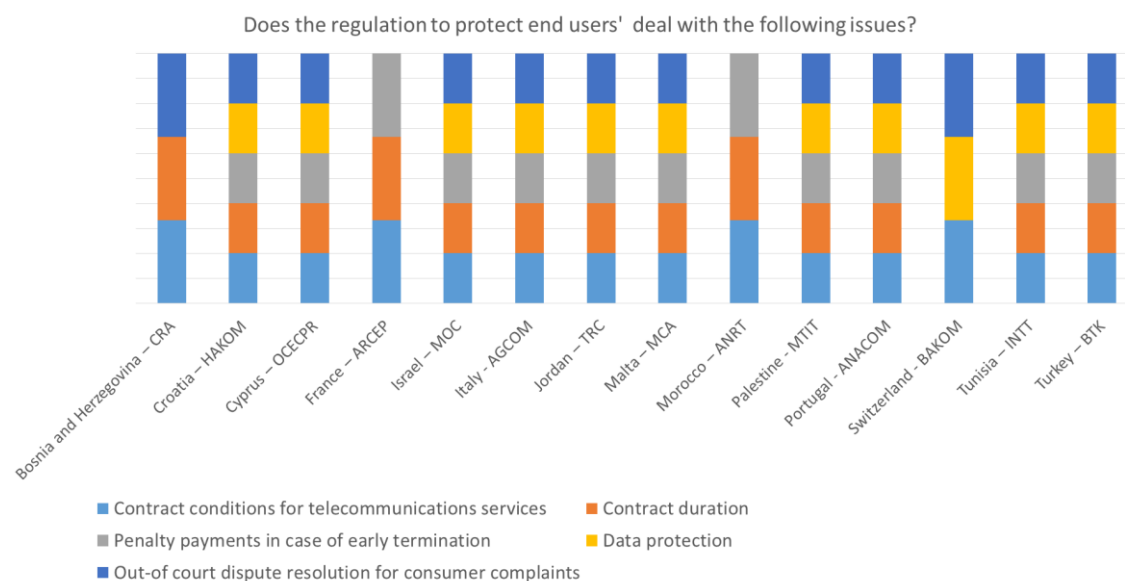
On the other hand, it sets the conditions applicable to contracts for users. Finally, it establishes the obligation for EU Member States to ensure transparent, non-discriminatory, simple and inexpensive out-of-court procedures available for dealing with unresolved disputes.

EMERG members have included a concise questionnaire tackling issues related to the legislative framework regarding consumer protection as well as specific questions to understand better the specificities in each country related to the empowerment of NRA's in that regard, the publication of tariffs and the minimum contract period.

All EMERG members that responded to the questionnaire have adopted specific legislation to protect telecommunications' end users' rights, with the exception of Tunisia.

Out of those countries that have adopted specific legislation, all deal with contract conditions for telecommunication services. With the exception of Switzerland the contract duration for end-users is regulated in all countries.

Figure 31: End user protection



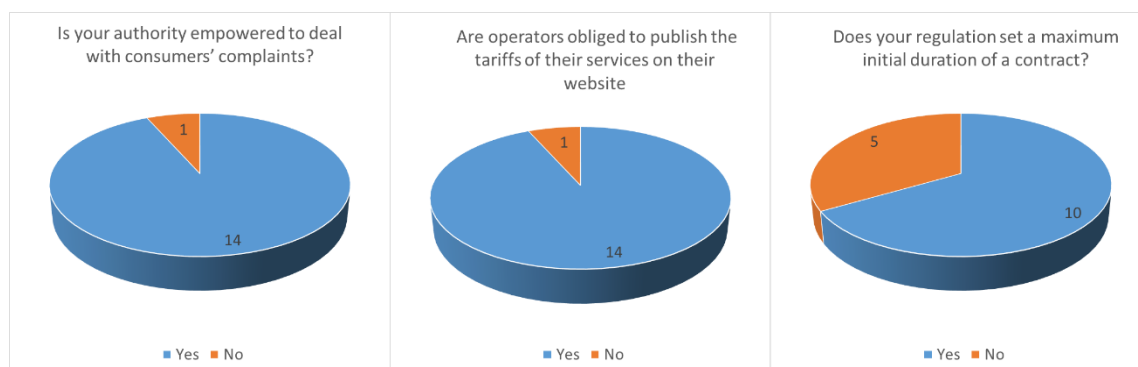
Source: EMERG.

All NRAs, except for France, are empowered to handle consumers' complaints (see Figure 32). Morocco specified that ANRT is empowered to receive complaints from other consumer associations, although they intervene only within their competent authorities.

In all EMERG countries, except in Switzerland operators are obliged to publish the tariffs of all services on their websites. In Israel only the incumbent SMP operator has such an obligation.

In Switzerland, Morocco, Egypt, Palestine and Turkey, NRAs do not set a maximum initial duration of contract. In the case of Croatia, the maximum period is not set by the NRA (see Figure 32).

Figure 32: Complaints, tariffs, contracts



Source: EMERG.

In Bosnia and Herzegovina, Portugal, Malta, Israel, Cyprus and Italy, NRAs publish periodically information on tariffs of telecommunications services on their website in order to allow end users to compare offers in a transparent manner. In some cases, such as for ANACOM for example, the NRA is only responsible of the platform used as a comparison tool; service providers are responsible for information provisioning. In Italy private service providers have developed a tool that allows consumers to compare prices and offers of the telecommunication providers.

In Switzerland, Palestine, Turkey, Morocco and Egypt NRAs do not set a maximum initial duration of contract. Out of the remaining ten NRAs only Croatia allows for contract durations longer than 24 months.

Quality of Service

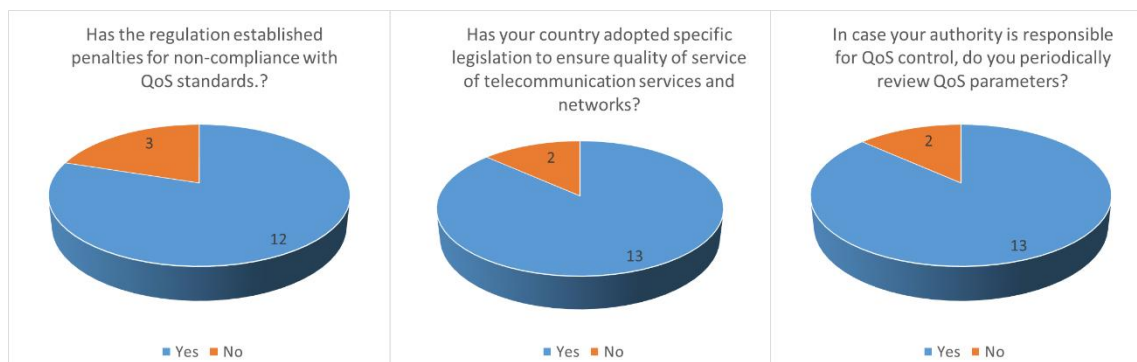
Article 22 of the EU Directive on Universal Service and User's Rights empowers NRAs to set the minimum requirements in terms of quality of service in order to prevent the deterioration of the service and the obstruction or slowing down of traffic on the networks. The Directive also

establishes the information on the quality of service that undertakings should make publicly accessible in order to ensure that end-users, including disabled end-users have access to comprehensive, comparable, reliable and user-friendly information.

All EMERG countries, except France and Palestine, have adopted a specific legislation to ensure quality of service in telecommunication services and networks. In France a certain degree of quality of service is required in operators' authorizations (fixed operators) and licences (mobile operators). ARCEP notes, that it is also in the terms of the USP operator obligation.

In all EMERG countries, except for Bosnia and Herzegovina, Palestine and Croatia, the regulation related to Quality of Service (QoS) defines penalties in case of non-compliance with the standards. In the case of France, although there is no specific legislation, this is part of operators' obligations and ARCEP publishes periodical benchmarks presenting a wide range of indicators to check that operators respect their obligations and give back information to consumers. For Switzerland, penalties are defined in the legislation, however it is only in theory and it is not applied

Figure 33: QoS legislation and penalties

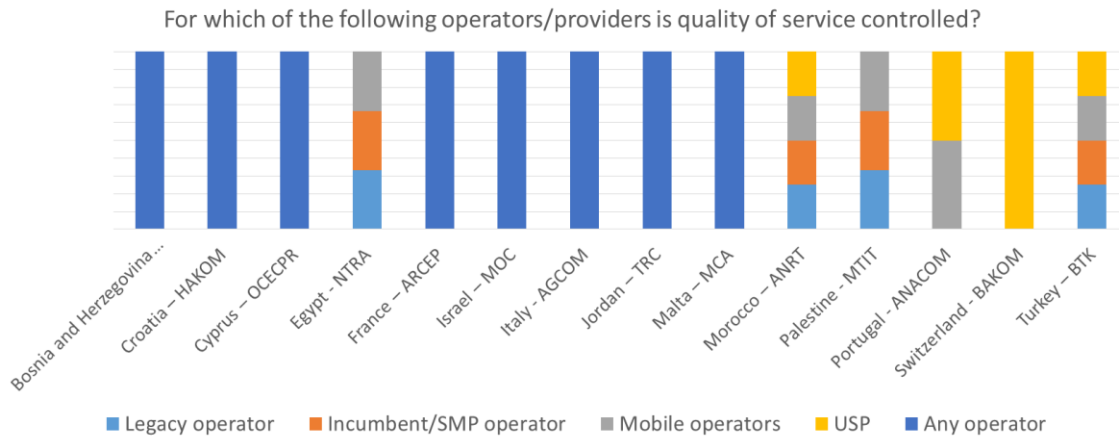


Source: EMERG.

In Morocco, two approaches are used to monitor quality of service: (1) an analysis dashboard KPIs (Key Performance Indicators) or those submitted upon ANRT's request during significant or unusual events; (2) campaigns field measurements for evaluating the quality of service as perceived by users. Thus, the ANRT conducts regularly on the basis of significant samples, measurement campaigns and survey indicators QoS.

In most EMERG countries all operators are bound to QoS standards (Figure 34). In Switzerland, there is a specific legislation for services and network connections in relation to Universal Service Obligations. These rules apply only on universal service providers.

Figure 34: Operators bound to QoS



Source: EMERG.

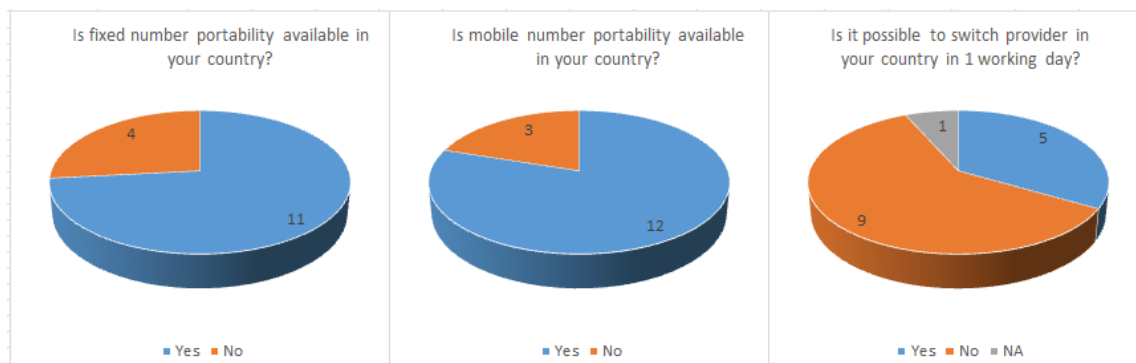
Number portability

Countries which still did not introduce number portability in fixed and mobile services are Jordan, Palestine and Tunisia. However, Palestine and Tunisia are planning to introduce number portability.

Apart from these exceptions, a large majority of EMERG countries have imposed number portability for both mobile and fixed services: Bosnia and Herzegovina, Croatia, Cyprus, France, Israel, Italy, Malta, Morocco, Portugal, Switzerland and Turkey (see Figure 35).

The process of switching provider in 1 working day is available in 5 out of 15 EMERG countries: Israel, Portugal, Cyprus, Italy, Malta and Turkey. In the other cases the process of switching varies from 3 to 6 days.

Figure 35: Number portability



Source: EMERG.

Roaming

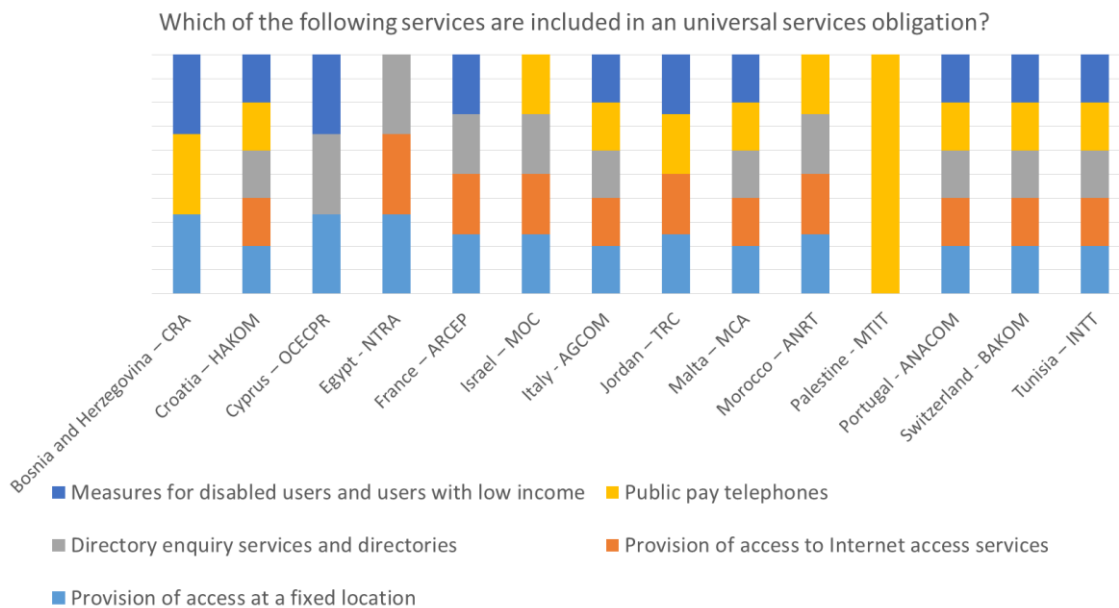
8 out of 15 countries responded positively when asked whether international roaming was regulated in their countries. European countries are regulated via Regulation (EU) No 531/2012 on roaming on public mobile communication networks within the Union and EEA. In Bosnia and Herzegovina a multinational agreement with Montenegro, Serbia and Macedonia based on the EU model could be reached on 29 September 2014.

6 Universal service

Increasing reach of people to different types of communication tools, has been imposed on certain service providers by the universal service obligation. For example through expansion of coverage areas of telecom networks the availability of basic services of electronic communication services is secured.

Figure 36 shows which types of telecommunication services are offered by the universal obligations in EMERG countries.

Figure 36: Services under USO

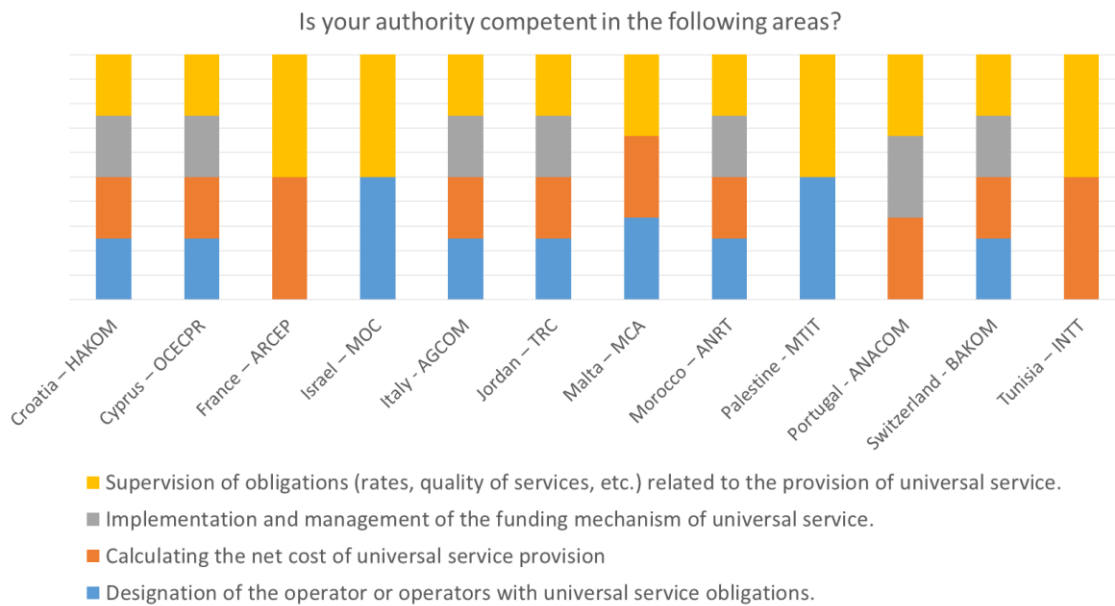


Source: EMERG.

8 out of 15 EMERG countries that participated in the survey reported that the universal country was financed by a fund: Bosnia and Herzegovina, Cyprus, Egypt, France, Italy, Morocco, Portugal and Tunisia.

With regard to the individual competence areas of the NRAs in the context of the USO, all NRAs supervise the obligations related to the USO. In 9 countries, NRAs designate which operator(s) have to comply with the USO: Croatia, Cyprus, Israel, Italy, Jordan, Malta, Morocco, Palestine and Switzerland. 7 NRAs also have the task to implement and manage the funding mechanism of the USO (see Figure 37).

Figure 37: USO competencies



Source: EMERG.

The NRAs added additional specifications related to universal service provision in EMERG countries:

- Croatia's HAKOM designated two providers in 2015 for a 4-year period to provide a variety of services including: access to public telephone network and publicly available telephone services at a fixed location allowing end-users to make and receive local, national and international telephone calls, facsimile communications and data communications at data rates that are sufficient to permit functional Internet access and a special tariff systems adjusted to the groups of end-users with special social needs.
- Israel, two operators were designated as universal service providers. The Incumbent Bezeq and HOT telecom, a multi-service cable operator are required to offer all services, including broadband internet connectivity, throughout the country.
- In Jordan until it is determined in accordance with the USO instructions that effective competition has been established to the fixed line incumbent's (Jordan Telecom JT then) provision of a Public Switched Voice Service, JT shall continue to be the USP in all geographic areas and that JT shall continue to bear the entire cost of the USO under

the terms of its licenses and these USO Instructions. The obligation includes basic public telephone service that have to be provided in all municipalities with a population of more than 300 permanent inhabitants.

- In Morocco an interdepartmental committee called the "Committee of management of the Universal Service Telecommunications (CGSUT)" is primarily responsible for the definition and validation of the Universal Service programs. The funding is provided by the Universal Service Fund (FSUT) created for this purpose by the Finance Act 2005 . The FSUT is powered by contributions from telecommunications operators up to 2% of their turnover. The fund may also receive other contributions in the form of donations and bequests allocated in the development programs of Universal Telecommunications Service.
- A special approach was chosen in Switzerland, where end-consumers can choose between three types of connections (analogue, digital and broadband). These connections must allow calls, receiving and sending faxes and accessing the internet. The connection includes at least one telephone number and one directory entry. A broadband connection must provide an internet connection at a minimum speed of 2000/200 kbit/s. The Federal Communications Commission (ComCom) designated Swisscom as the universal service Provider from 1 January 2008 till end of 2017.

7 Net Neutrality

As of 30 April 2016 the European rules on the open internet (net neutrality) apply. The rules follow the adoption of EU Regulation 2015/2120 on 25 November 2015 that lays down measures concerning open internet access and amend Directive 2002/22/EC on user's rights relating to electronic communication network and services as well as the Regulation (EU) No 531/2012 on roaming within the Union.

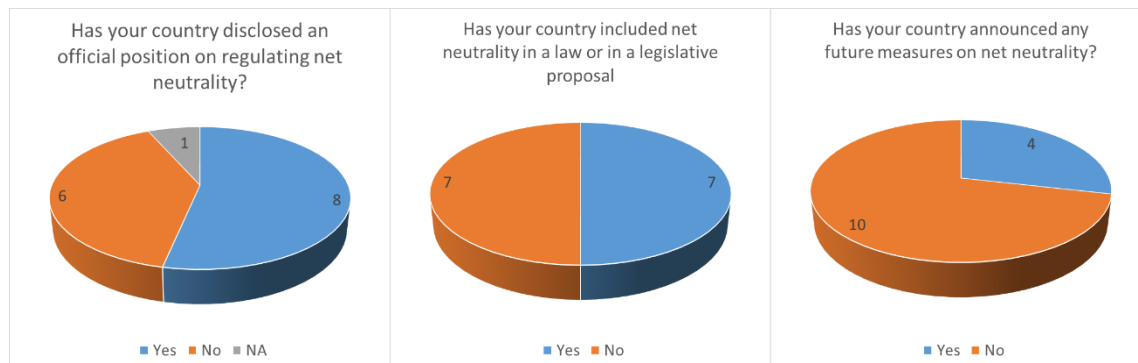
The regulation creates the individual and enforceable right for end-users to access and distribute internet content and services of their choice. Common EU rules on net neutrality ensure that the same provisions apply across Europe.

Consequently all European members of EMERG have disclosed an official position on regulating net neutrality. Next to the European countries also Israel, Tunisia and Switzerland have taken an official stand in the matter (see Figure 38). In Israel the Telecommunication law prohibits operators to block or restrict services, applications or telecommunication equipment, while in Switzerland there is an ongoing legislative process foreseeing regulation focussing on rules of transparency and obligation for providers to inform end users. Tunisia is currently in the process of initiating a public consultation phase, while negotiating the subject with the different stakeholders at national and regional level.

France, Israel, Italy, Malta, Palestine, Switzerland and Tunisia have included net neutrality in a law or legislative proposal. National law in the European countries follows the adoption of European regulation on open internet access and of the BEREC guidelines. On the other hand in Tunisia the principle of neutrality is enshrined at the level of the license agreements. The article on the neutrality requires that the holder guarantees that its service is neutral regarding the information content transmitted over its network. Thus, under current regulations, he is obliged to take all necessary measures to guarantee the neutrality of its staff concerning the content of messages transmitted over its network. For this purpose, he provides the services without discrimination, whatever the nature of the transmitted messages and takes the appropriate measures to ensure entirety.

Croatia, Cyprus, France and Switzerland have announced future measures on net neutrality. Croatian NRA (HAKOM) has committed to identifying contractual, commercial and technical practices introduced by ISPs at national level and assess their compliance with the provisions of Article 3 of the Regulation 2015/2120 through the use of detection tools and methods. OCECPR from Cyprus is currently running a consultation process in order to create secondary national legislation about net neutrality, to implement EU 2015/2120. ARCEP will engage in proactive dialogues with the operators after introducing net neutrality into national law.

Figure 38: Net neutrality



Source: EMERG.

8 Promotion of broadband services

The EU Digital Agenda has targeted year 2020 to ensure widespread deployment and availability of ultra-fast broadband throughout the European Union.⁹ To achieve this, the Commission has channelled some of its public funds, via different instruments, to invest in broadband infrastructure. Next to that, Member States are encouraged to set own initiatives to promote the deployment of ultra-fast broadband services.

⁹ The European Commission Digital Agenda for Europe (2010) sets targets for universal availability of 30Mbit/s broadband and for 50% of households to be taking up 100Mbit/s by 2020.
<http://eur-lex.europa.eu/legalcontent/EN/TXT/PDF/?uri=CELEX:52010DC0245&from=EN>

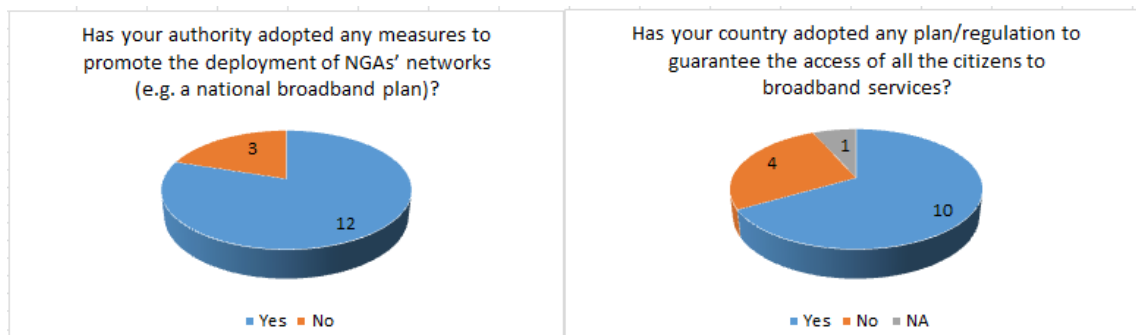
However, after half the time of the Agenda to achieve the set out objectives, we are seeing different progresses across the EU. While some countries are still constructing the means by which they can achieve them, others have actually achieved a remarkable progress in this regard, other European countries lag behind (see chapter 2).

With regard to EMERG Members, all except for Bosnia and Herzegovina, Israel and Palestine, have imposed measures to promote the deployment of NGA networks (see Figure 39).

10 EMERG countries (Croatia, France, Italy, Jordan, Malta, Morocco, Portugal, Switzerland, Tunisia and Turkey) have also adopted concrete plans to guarantee the access of all the citizens to broadband services.

- In Europe, Croatia and Portugal have National Broadband plans in place. France, Italy, Malta focus their efforts on wholesale access obligation for next generation networks
- Jordan, in its Government policy year 2012 has set out an obligation on the regulator (TRC) to consider deployment of high speed internet (i.e. Broadband services), since it is a national goal: to increase the penetration of broadband access, being fast, reliable and affordable for all users, and availability to be through wired and wireless technologies, particularly mobile access.
- Morocco has also adopted a national broadband plan in 2012, setting general targets to deploy 4G mobile networks, Wifi and fibre optical networks in newly constructed areas.

Figure 39: Promotion of broadband services



Source: EMERG.

9 Regulatory fiches

- 9.1 **Bosnia & Herzegovina**
- 9.2 **Croatia**
- 9.3 **Cyprus**
- 9.4 **Egypt**
- 9.5 **France**
- 9.6 **Israel**
- 9.7 **Italy**
- 9.8 **Jordan**
- 9.9 **Malta**
- 9.10 **Morocco**
- 9.11 **Palestine**
- 9.12 **Portugal**
- 9.13 **Spain**
- 9.14 **Switzerland**
- 9.15 **Tunisia**
- 9.16 **Turkey**

9.1 Bosnia & Herzegovina

Indicator	2014	2015	Ø 2014	Ø 2015
Coverage mobile (2G/3G/4G)	99,00	99,00	99,52	99,64
Coverage 3G/4G	95,00	95,00	95,59	93,41
Mobile cellular penetration	91,28	90,15	113,73	115,50
Internet Usage	na	65,07	64,64	67,45
Fixed broadband subscriptions/100 inhabitants	14,18	16,62	21,06	22,36
Portion of HH with Internet access at home	na	na	63,52	68,94

Institutional layout

The Communications Regulatory Agency (CRA) was established on March 2nd, 2001 combining the competences of the Independent Media Commission and the Telecommunications Regulatory Agency, which had previously operated separately. The Agency operates on the state level, and its mandate is defined by the Law on Communications of Bosnia and Herzegovina (the Official Gazette of Bosnia and Herzegovina, no.31/03), which was originally imposed by the Decision of the High Representative in October 2002, and the Parliamentary Assembly of Bosnia and Herzegovina adopted it in September of the year 2003.

The Agency is a regulator with combined competencies, developed on the model of similar processes in other European countries, and reflects the convergence of technologies in telecommunications and broadcasting in a way that can respond to market needs.

Director General is appointed by Council of Ministers, based on the proposal of CRA Council. The term is 4 years and can be renewed once. Grounds for dismissal can be:

- Illness rendering the Director General of CRA incapable of performing his/her duties
- Conviction of a crime punishable by imprisonment
- A conflict of interest by the Director General, or a member of the Council of CRA, as defined in the CRA Code of Ethics
- Resignation
- Failure of the Director General to perform his/her duties pursuant to above mentioned Law, internal RAK rules or contract of employment
- Violation of the RAK Code of Ethics

The Agency is managed by a Director General who is nominated by the Council of the Agency and approved by the Council of Ministers. Director General is responsible for all regulatory functions of the Agency. In addition, the Director General is responsible for all administrative functions of the Agency including, but not limited to the implementation of this Law and other relevant laws, all staffing issues, and the establishment of internal procedural rules.

The Agency has a Council that guides the Agency with regard to strategic issues of law implementation and confers with and receive reports from the Director General. The Council of the Agency adopts codes of practice and rules for broadcasting and telecommunications. Additionally, the Council of the Agency serves as an appellate body for decisions of the Director General.

The Agency has 120 employees and a budget of 6.785.000 BAM in 2016.

NRAs competences and powers

The RAK is competent in the following sectors:

- Telecommunications
- Broadcasting TV transmission
- Content TV

Within the Telecommunications sector the authority is competent in:

- Market analysis
- Imposition of obligations
- Control of obligations
- Resolution of disputes
- Numbering
- Networks' security
- Allocation of spectrum
- Quality of service
- Consumer protection

According to the Rule 54/2011 on Electronic Communications Market Analysis, CRA may impose the following regulatory obligations for the operators with significant market power:

- a) The obligation of transparency;
- b) The obligation of ensuring equal treatment – non-discrimination;
- c) The obligation of accounting separation;
- d) The obligation of access to, and use of, specific network elements;
- e) The obligation of price control and cost accounting;
- f) The regulation of the retail services;
- g) The obligation of providing a minimum set of leased lines;

h) The obligation of providing carrier selection and carrier pre-selection.

CRA may impose fines directly. Maximum amount of the fine is €76,695 (BAM 150,000). In case of repeated violations, amount of fine to €153,390 (BAM 300,000).

Council of Ministers, based on a proposal of CRA:

- defines scope of universal service and financing mechanism and designates telecommunication operators responsible for provision of USO services (Article 12 of the Law on Communications);
- adopts the schedule of infractions and resulting penalties that may be imposed by CRA (Article 46 of the Law on Communications).

Neither the Council of Ministers, nor individual Ministers nor any other person shall in anyway interfere in the decision-making of CRA in individual cases (Article 36, Section 2 of the Law on Communications)

As policy maker, the Council of Ministers issues obligatory policy guidelines (sectoral policy). The sectoral policy defines the regulatory priorities and the action plan for CRA, although it does not influence individual CRA decisions.

NRA's accountability and transparency

The Council of Ministers and the Agency according to the respective competencies as set out in the Law of Communications shall take all reasonable measures that are aimed at achieving the following objectives:

- a) The promotion of fair competition in order that users derive maximum benefit in terms of choice, price and quality;
- b) That there is no distortion or restriction of competition in the communications sector according to the Council of Ministers' sector policies;
- c) That efficient investment in infrastructure is encouraged and innovation promoted;
- d) That copyright and other intellectual property as well as personal data and privacy is protected;
- e) That efficient use and effective management of radio frequencies and numbering resources are ensured in accordance with the radio regulations and other recommendations of the International Telecommunication Union and with other international agreements entered into by Bosnia and Herzegovina.

CRA signed the Memoranda of understanding with Competition Council of Bosnia and Herzegovina in march 2016.

Market entrance conditions in electronic communications

Authorization regime

Licences for specific services are provided.

Rights of way, radio spectrum and frequency management

No rights of way are granted by the CRA.

The CRA is responsible for the frequency management and has the duty to grant spectrum licences. The government is not involved.

Refarming is allowed.

Regarding the Digital dividend (700/800MHz) no regulation has yet been determined. A set of rulebooks on technical conditions of the band usage is expected to be published after the adoption of the telecommunication sector strategy. It will be based on ECCDEC(09)03 Decision for 800MHz (790-862 MHz) and ECCDEC(15)01 Decision for the 700MHz (694-790 MHz).

Currently, 700MHz is used for TV systems and 800MHz is free.

Numbering management

The NRA is competent in the following areas:

- Development of the National Numbering Plan.
- Assignment of rights to use numbers.

Regulatory framework for market analysis

Relevant markets

CRA defines relevant markets for the purpose of ex-ante-regulation and applies competition law principles when defining them. SMP operators are identified.

Reviews on relevant markets stated in Rule 54/2011 on Electronic Communications Market Analysis is on periodical base – every 3 years. As for relevant markets for which are needed Three Criteria Test, they are reviewed upon decision of Council of CRA.

Remedies

FIXED VOICE TELEPHONY MARKETS				
	WHOLESALE			RETAIL
	Access & origination	Termination	Transit	Retail
Obligation of interconnection	X	X	X	
Implementation of wholesale offers	X	X	X	
Transparency (reference offer)	X	X	X	
Non-discrimination				
Accounting separation				
Price control	X	X	X	
Cost accounting				
Tariff rebalancing				
Retail price cap control				
Other regulation of retail tariffs				

MOBILE VOICE TELEPHONY / SMS MARKETS			
	WHOLESALE		RETAIL
	Access origination	& Termination	Retail
Obligation of interconnection	X	X	
Implementation of wholesale offers	X	X	
Access to Mobile Virtual Operators (MVNOs)	X		
Collocation facilities		X	
Transparency (reference offer)	X	X	
Non-discrimination	X	X	
Accounting separation			
Price control		X	
Cost accounting			
Retail price cap control			
Other regulation of retail tariffs			

FIXED BROADBAND MARKETS				
	WHOLESALE			RETAIL
	Duct access	Unbundling of local loops	Bitstream access	Retail
Implementation of wholesale offers				
Transparency (reference offer)		X		
Non-discrimination		X		
Accounting separation				
Price control				
Cost accounting				
Retail price cap control				
Other regulation of retail tariffs				

Consumer issues

Consumer protection

The CRA deals with the following issues with regards to consumer protection:

- Contract conditions for telecommunication services.
- Contract duration.
- Penalty payments in case of early termination.
- Data protection.
- Out-of-court dispute resolution procedure for handling complaints by consumers.

The CRA is empowered to deal with consumers' complaints and periodically publishes information on tariffs on its website allowing to compare offers.

Maximum initial contract durations no longer than 24 months are imposed.

Quality of service (QoS) and switching

Legislation regarding QoS is imposed by the CRA:

- Instruction on the methodology of testing the quality of telecommunications services in fixed telecommunications networks.
- Decision on measurement of quality of GSM service in relation to Article 8 of License for provision of GSM services.

QoS is controlled for any operator. However, in case of non-compliance no penalties are established.

Switching in case of fixed and mobile numbers is possible, but not within one day.

International Roaming

Roaming is regulated regionally between Bosnia & Herzegovina, Republic of Serbia, FYROM and the Republic of Montenegro.

The following services are regulated:

- Wholesale voice calls
- Wholesale SMS
- Wholesale data
- Retail voice calls
- Retail SMS
- Retail data

Universal Service

A universal service obligation (USO) is imposed for the following services:

- Provision of access at a fixed location
- Public pay telephones
- Measures for disabled users and users with low incomes

The US is not financed by a fund.

Net Neutrality

No net neutrality considerations.

Promotion of broadband

No concrete broadband plans at the moment.

9.2 Croatia

Indicator	2014	2015	Ø 2014	Ø 2015
Coverage mobile (2G/3G/4G)	100,00	100,00	99,52	99,64
Coverage 3G/4G	98,95	98,95	95,59	93,41
Mobile cellular penetration	104,43	103,77	113,73	115,50
Internet Usage	68,57	69,80	64,64	67,45
Fixed broadband subscriptions/100 inhabitants	23,04	23,18	21,06	22,36
Portion of HH with Internet access at home	68,40	76,70	63,52	68,94

Institutional layout

HAKOM is the independent National Regulatory Authority with competences on competition and regulation of electronic communication, postal and railway sectors, referring to Electronic Communications Act.

The Chairman of the Agency's Council is appointed and dismissed by the Croatian

Parliament upon proposal of the Government of the Republic of Croatia. In the procedure for the proposal of the Chairman of the Agency's Council the Government of the Republic of Croatia publishes a public invitation to propose candidates for members of the Agency's Council. To be appointed as Chairman of the Agency's Council a person must be Croatian citizen domiciled in the Republic of Croatia with completed graduate studies or specialized graduate studies in electronic communications, postal services, law, economics or railway services, adequate work experience and active knowledge of at least one foreign language (English, French or German). At least one member of the Agency's Council must have a completed a graduate course or a specialized graduate course in the field of electronic communications, postal services or railway services, law and economics. The Chairman of the Agency's Council must have at least five years of work experience in the electronic communications sector or postal services sector.

Chairman's term is for five years as does it so for the five members of the Board. Additionally, the appointment of the Chairman of the Agency's Council can be renewed and there is no limitation of this right in terms of mandates.

The Croatian Parliament shall dismiss the Chairman of the Agency's Council before the expiry of his term of office, upon proposal of the Government of the Republic of Croatia, in the following cases:

- upon his/her request;
- if it is established that, when he/she was proposed to become a member of the Agency's Council,
- he/she gave false information or failed to give information about circumstances important for his/her appointment;
- if his/her work or behaviour questions his/her reputation or reputation of the Agency, or
- his/her independence or independence of the Agency inability to properly carry out his/her duty for more than six months in the row;
- permanent loss of ability to perform his/her duty;
- final conviction of a criminal offence;
- non-fulfilment of objectives and tasks defined in the Agency's annual work program
- occurrence of circumstances regarding conflict of interest

HAKOM has 173 employees and its budget (autonomously defined and implemented) for 2016 was 77.900.000 HRK coming from the following resources:

- Regulated undertakings (e.g. administrative charges) 41%
- Fees for spectrum and/or rights or use 56%
- Others (interests, refunds): 3%

NRAs competences and powers

It has competence in Telecommunications, Post and Railway sectors. Regarding the telecommunication sector this authority is competent in:

- Market analysis
- Imposition of obligations
- Control of obligations
- Resolution of disputes
- Numbering
- Networks' security
- Allocation of spectrum
- Quality of service
- Consumers' protection
- Privacy and data protection (shared competence with Data Protection Agency)

When it comes to HAKOM powers, the Ministry cannot give instructions to the NRA for the exercise of the tasks assigned to this authority. Not only has NRA the power to request information from operators but also can it impose both behavioural and structural remedies to achieve effective competition. Regulatory measures that can be imposed are as follows:

- Transparency in relation to interconnection and/or access.

- Non-discrimination in relation to interconnection and/or access.
- Accounting separation of certain activities related to interconnection and/or network access.
- Obligations to meet reasonable requirements for access to and use of specific network elements and the associated infrastructure and associated facilities.
- Obligations relating to cost recovery and price controls, including obligations for cost orientation of prices and obligations concerning cost accounting systems, for the provision of specific types of interconnection and/or access.
- Regulatory control on retail services.
- Accounting separation and financial reports.
- Access and interconnection.
- Functional separation of vertically integrated operators.
- Voluntary separation of vertically integrated operators.

Functional separation of vertically integrated operators can be imposed, on an exceptional basis, if all other regulatory measures did not achieve sustainable competition and if there are crucial and permanent difficulties in competition.

NRA can impose fines and penalties and judicial appeals with full review of decisions are possible. Additionally, HAKOM decisions are directly enforceable.

The provisions of the General Administrative Procedure Act are applied in administrative proceedings under the competence of the Agency to issues not regulated by this Act. The Agency's Council adopts decisions by a majority vote of all members of the Agency's Council. Decisions and other administrative acts of the Agency are final in the administrative procedure and may not be appealed, but administrative proceedings may be initiated before the High Administrative Court of the Republic of Croatia. Exceptionally, administrative proceedings against the Agency's Council decisions in disputes between end users and operators may be initiated before the Administrative Court of the Republic of Croatia, in accordance with the provisions regarding territorial jurisdiction.

A decision or another administrative act of the Agency is enforced after service to the party unless another deadline for enforcement has been determined by a decision or another administrative act. In case of failure to act upon the decision or another administrative act of the Agency an electronic communications inspector may issue a misdemeanour order or propose the filing of a motion to initiate misdemeanour proceedings.

NRA's accountability and transparency

It is mandatory for the NRA to make public consultations before adopting regulatory decisions as does is it for decisions to be published. NRA is accountable before Parliament. Regulatory functions regarding electronic communications, postal services (since 2008.) and railway services (since 2014.) are under the competence of Croatian Regulatory Authority for Network Industries (HAKOM).

The application of provisions of Electronic Communications Act does not influence the scope and competence of the competition protection authority established in accordance with a special law, as well as consumer rights, which are regulated by a special law.

Furthermore, the provisions of this Act do not apply to contents produced, conveyed or published by means of providing electronic communications networks and services. In the implementation of the provisions of this Act the Agency shall, in particular, cooperate with the following bodies:

- the competition protection authority in such a manner that it requests the opinion of this authority or proposes the institution of proceedings before this authority in all cases of prevention, restriction or distortion of competition, in accordance with a special law regulating competition protection
- the consumer protection authority, in accordance with a special law regulating consumer protection;
- the authority competent for electronic media, in accordance with this Act and a special law regulating electronic media;
- the authority competent for data protection, in accordance with this Act and a special law regulating data protection
- the authority competent for harmonizing prevention and protection from computer endangerment to information system security, in accordance with special law regulating information security and ENISA guidelines
- the national security authority in accordance with special law regulating that area.

Market entrance conditions in electronic communications

Authorization regime

Any natural person or legal entity shall be entitled to install, use and make available an electronic communications network and provide electronic communications services in the territory of the Republic of Croatia without obtaining a special authorization (general authorization) under the conditions laid down in Electronic Communications Act (Official Gazette, No. 73/2008, 90/2011, 133/2012, 80/2013 and 71/2014) and in the Ordinance on the manner and conditions for provision of electronic communications networks and services (Official Gazette, No. 154/2011, 149/2013 and 82/2014). There are no legal restrictions deriving from the Act that apply specifically to foreign entrants (EU). Foreign companies must obtain a VAT ID number from Tax Administration of the Republic of Croatia. HAKOM would prefer for that notification to be made via e-Operator web application.

According to Article 24. of "Ordinance on the payment of the fees for carrying out of tasks of the Croatian Post and Electronic Communications Agency" (Official Gazette, No. 160/2013), expressed as the percentage of the total annual gross revenue earned by operators in the provision of electronic communications networks and services on the market in the previous

calendar year amounts to 0.20 % of total annual gross revenue. The operator shall submit the report on the total annual gross revenue for the previous calendar year to the Agency by the end of March of the current year. Only those operators that earned more than HRK 1 million in annual gross revenue in the past calendar year are obliged to pay the fee.

Operators of public communications networks and publicly available electronic communications services must ensure, at their own expense, and organise the function of secret surveillance of electronic communications networks and services, as well as electronic communications lines to the operational and technical body competent for the

surveillance of electronic communications in accordance with a special law regulating the field of national security.

The obligations of operators of public communications networks and publicly available electronic communications services towards the competent body and towards bodies authorised to apply measures of secret surveillance of communications networks and services, in accordance with special laws in the field of national security and criminal procedure, shall be laid down in these laws and in a special legislation regulating the obligations of operators in the field of national security.

Rights of way, radio spectrum and frequency management

HAKOM is empowered to grant rights of way and the approval of Government is not necessary to grant licenses. Additionally, NRA is the authority for frequency management, and both secondary trading and refarming migration of spectrum is allowed in Croatia. Croatia has taken a decision on the digital dividend. In 2010 the switchover to digital terrestrial television was finished. In 2012 and 2013 2x30 MHz was assigned to mobile operators and is now in commercial operation. For bands that are allocated for public mobile service there is a possibility of public call, tender or auction. HAKOM makes the decision in specific case. Public call is intended for bands that are foreseen as sufficient to cover market interest. If additional interest is shown, tender or auction must be conducted.

Numbering management

NRA is responsible for:

- Development of the National Numbering Plan.
- Assignment of rights to use numbers, addresses and names.

Regulatory framework for market analysis

Relevant markets

Croatia identifies relevant markets and it does not apply competition law principles. It also identifies operators with Significant Market Power (SMP). Consequently, it imposes regulatory obligations on operators with SMP after periodically market review rounds. HAKOM is obliged

by Electronic Communications ACT to conduct market analysis every 3 years, which is also in accordance with Framework Directive.

Remedies

FIXED VOICE TELEPHONY MARKETS				
	WHOLESALE			RETAIL
	Access & origination	Termination	Transit	Retail
Obligation of interconnection	x	x		
Implementation of wholesale offers	x	x		
Transparency (reference offer)	x	x		
Non-discrimination	x	x		
Accounting separation	x	x		
Price control	x	x		
Cost accounting	x	x		
Tariff rebalancing				
Retail price cap control				
Other regulation of retail tariffs				MST

MOBILE VOICE TELEPHONY / SMS MARKETS			
	WHOLESALE		RETAIL
	Access origination	& Termination	Retail
Obligation of interconnection		x	
Implementation of wholesale offers		x	
Access to Mobile Virtual Operators (MVNOs)			
Collocation facilities		x	
Transparency (reference offer)		x	
Non-discrimination		x	
Accounting separation		x	
Price control		x	
Cost accounting			
Retail price cap control			
Other regulation of retail tariffs			

FIXED BROADBAND MARKETS				
	WHOLESALE			RETAIL
	Duct access	Unbundling of local loops	Bitstream access	Retail
Implementation of wholesale offers	x	x	x	
Transparency (reference offer)		x	x	
Non-discrimination		x	x	
Accounting separation		x	x	
Price control		x	x	
Cost accounting		x	x	
Retail price cap control				
Other regulation of retail tariffs				

Consumer issues

Consumer protection

As for Croatia, specific legislation for consumer protection for Electronic communication services has been applied. In that sense, it deals with:

- Contract conditions for telecommunication services.
- Contract duration.
- Penalty payments in case of withdrawal.
- Procedure for handling complaints by consumers.
- Data protection.

Additionally, HAKOM is empowered to handle consumers' complaints and regulation sets a maximum initial duration of contract, but this might be longer than 24 months. Croatian set of legislation regulating consumer protection and electronic communications is fully in line with the

EU. HAKOM is in process of providing comparison tool to end users regarding tariffs of telecommunication services.

Quality of service (QoS) and switching

In Croatia, quality of service on telecommunication services and networks are defined in the Ordinance on the Manner and Conditions for Provision of Electronic Communications Networks and Services (Official Gazette, 154/2011, 149/2013 and 82/2014). According to the Ordinance on the Manner and Conditions for Provision of Electronic Communications Networks and Services (Official Gazzete, 154/2011, 149/2013 and 82/2014), Operators whose income exceeds 2% of total revenue on the relevant market of electronic communications services or who are requested to do so by the Agency, must, at the their own cost at least every six (6) months, or, exceptionally, earlier, upon the Agency's request, measure the quality of services.

Regarding switching, HAKOM is responsible for fixed and mobile portability. Number Portability in Croatia is regulated by law - Article 76, paragraph 6 of the Electronic Communications Act (Official Gazette No. 73/08, 90/11, 133/12, 80/13 and 71/14.), and on Ordinance on number portability (Official Gazette no. 100/12). All operators offering number portability have to join Central Administrative Database of Ported Numbers (CADPN). CADPN's location is in HAKOM (NRA) premises and HAKOM is responsible for installation, developing, testing, maintaining and managing the CADPN.

International roaming

In Croatia, international Roaming is regulated by EU-Guidelines (EEA area, by Roaming Regulation (531/2012)) in the following areas:

- Wholesale voice calls
- Wholesale SMS
- Wholesale data
- Retail voice calls
- Retail SMS
- Retail data

Universal Service

NRA is responsible for:

- Provision of access at a fixed location.
- Provision of access to functional Internet services.
- Public pay telephones.
- Directory enquiry services and directories.
- Measures for disabled users and those of low incomes.

Universal Service in Croatia is not fund by an agreement on financing achieved between operators. MCCA is competent in the following areas: Designation of the operator or operators with universal service obligations.

Net neutrality

One of the ways in which Croatian NRA (HAKOM) might identify contractual, commercial and technical practices introduced by ISPs at national level and assess their compliance with the provisions of Article 3 of the Regulation 2015/2120 is through the use of detection tools and methods, in particular three kinds: automatic assessment tools based on the toolkit developed as part of the NN QoS regulatory assessment work item (such as network diagnostic tests), end-user reporting platforms and periodic questionnaires.

HAKOM will provide report on and analyse existing global techniques and tools to control network traffic management and produce guidance on criteria NRAs should take into account when developing its own mechanism.

Further, HAKOM will analyse national commercial practices such as zero-rating and provide implementation guidance for ISPs.

Through work of BEREC, in order to support the implementation of the net neutrality provisions of the Regulation 2015/2120, HAKOM will cooperate in development a quality of service regulatory assessment toolkit for NRAs willing to develop their own QoS measurement tool (in application of art. 4 and 5 of the Regulation).

Promotion of broadband

Croatian Government adopted Act on measures to reduce the cost of deploying high-speed electronic communications networks (NN 121/216), while HAKOM in 2016. adopted Ordinance on manner and conditions of access and shared use of electronic communications infrastructure and other associated facilities OG 36/16.

National Strategy and Programme:

Strategy for the Development of Broadband Access in Republic of Croatia in the period 2016.-2020.

2.) National Framework programme for the Development of Broadband Infrastructure in Areas lacking Sufficient Commercial Interest for Investments Rules for sharing physical infrastructure:

Ordinance on manner and conditions for access to and shared use of electronic communications infrastructure and other associated facilities (OG 136/11, 44/12 and 75/13)

Ordinance of Optical Fiber Distribution Network (OG 57/14)

Ordinance of technical requirements for cable ducts (OG NN 114/10, NN 29/13)

This ordinance aims to facilitate and incentivize the roll-out of high-speed electronic communications networks by promoting the joint use of existing physical infrastructure and by enabling a more efficient deployment of new physical infrastructure. Ordinances also setting up detailed measures regarding transparency concerning physical infrastructure as well as measures concerning planned civil works.

In-house equipment:

Ordinance on technical requirements for electronic communication network in office and residential buildings (OG 155/09). This Ordinance shall be applied when planning, designing, construction, reconstruction, upgrades, maintenance and use of electronic communications networks office buildings, residential buildings and commercial and residential buildings, with associated electronic communications infrastructure and associated facilities and ducts for access lines in such buildings.

Through USO obligation, minimum internet speed is defined at 1 Mbps as of 1st of January 2015.

9.3 Cyprus

Indicator	2014	2015	Ø 2014	Ø 2015
Coverage mobile (2G/3G/4G)	99,98	99,98	99,52	99,64
Coverage 3G/4G	90,01	90,01	95,59	93,41
Mobile cellular penetration	96,34	95,40	113,73	115,50
Internet Usage	69,33	71,72	64,64	67,45
Fixed broadband subscriptions/100 inhabitants	21,13	22,38	21,06	22,36
Portion of HH with Internet access at home	68,60	71,20	63,52	68,94

Institutional layout

OCECPR is the independent National Regulatory Authority with competences on

Telecommunications, Broadcasting –TV Transmission-, Postal sector, and Cybersecurity,. The NRA is NOT competent in the fields of Spectrum Management and Data Protection. The Ministry has no power to give instructions to the NRA for the exercise of the tasks assigned to the NRA.

OCECPR Commissioner is appointed for six years and the term can be renewed only once. The Commissioner is to be selected with 2 main criteria:

- Well known professional in the fields of Telecoms/ Law/ IT/ Economics/ Engineering.
- No affiliation to a political party.

Grounds of dismissal are:

- Inability to carry out duties due to illness
- Gross misconduct.

OCECPR does not act as a collegiate body and it currently around 40 employees.

NRA budget is not autonomously defined (approval by Council of Ministers and Parliament is needed) but it is independently implemented. For 2016 was € 4.38 Million coming from Regulated undertakings (e.g. annual administrative charges).

NRA's competences and powers

It has competence on Telecommunications, Broadcasting – TV Transmission-, Postal sectors, and Cybersecurity.

Regarding the telecommunication sector this authority is competent in:

- Market analysis
- Imposition of obligations
- Control of obligations
- Resolution of disputes
- Numbering
- Standardization of equipment
- Quality of service
- Consumers' protection
- Networks' security

When it comes to OCECPR powers, the Ministry cannot give instructions to the NRA for the exercise of the tasks assigned to this authority. However, the Ministry formulates and publishes the policy in the sector.

The NRA has the power to request information from operators. The main remedies that can be imposed by OCECPR are all kinds of remedies within the European Regulatory Framework. NRA's decisions are directly enforceable and judicial appeals with full review of decisions are possible at the Supreme Court. Dispute settlement body is not a separate body from NRA.

Fines and penalties are imposed by OCECPR. According to Article 42 of the Law, where the Commissioner has sufficient evidence to indicate that an undertaking may not comply with the legislation or the conditions of the general authorization governing the undertaking's activity in the sector, he invites that undertaking to a hearing where the undertaking states its views. After a hearing proceeding, the Commissioner may impose a proportionate administrative fee. Where the Commissioner has evidence of serious and repeated breaches, he may prevent the undertaking from providing its services by revoking the undertaking's general authorization.

NRA can submit proposals for sectorial legislative amendments to the Parliament, as it also has an advisory role to the Ministry.

NRA's accountability and transparency

It is mandatory for the NRA to make public consultations before adopting regulatory decisions as does is it for decisions to be published. OCECPR is accountable before Parliament, the Government and the Supreme Court. Co-ordination takes place between OCECPR and Ministry of Communication & Works, Ministry of Commerce, Ministry of State Competition, Authority Data Protection, Authority Spectrum Management Authority, Content Regulation Authority.

Market entrance conditions in electronic communications

Authorization regime

OCECPR follows notifications EU Telecom framework regime.

Rights of way, radio spectrum and frequency management

OCECPR is empowered to grant rights of way. However, it cannot grant spectrum licenses. NRA has no competency in frequency management.

Numbering management

NRA is responsible for:

- Development of the National Numbering Plan.
- Assignment of rights to use numbers, addresses and names.

Regulatory framework for market analysis

Relevant markets

Cyprus identifies relevant markets and it does apply competition law principles. It also identifies operators with Significant Market Power (SMP). Consequently, it imposes regulatory obligations on operators with SMP after periodically market review rounds (every 3 years).

Remedies

FIXED VOICE TELEPHONY MARKETS				
	WHOLESALE			RETAIL
	Access & origination	Termination	Transit	Retail
Obligation of Interconnection	x	x		
Implementation of wholesale offers				
Transparency (reference offer)	x	x		
Non-discrimination	x	x		
Accounting separation	x	x		
Price control	x	x		
Cost accounting	x	x		
Tariff rebalancing				
Retail price cap control				
Other regulation of retail tariffs				

MOBILE VOICE TELEPHONY / SMS MARKETS			
	WHOLESALE		RETAIL
	Access & origination	Termination	Retail
Obligation of Interconnection	x	x	
Implementation of wholesale offers			
Access to Mobile Virtual Operators (MVNOs)	Already covered in "Access and Origination"		
Collocation facilities	x		
Transparency (reference offer)	x	x	
Non-discrimination	x	x	
Accounting separation	x	x	
Price control	x	x	
Cost accounting	x	x	
Retail price cap control			
Other regulation of retail tariffs			

FIXED BROADBAND MARKETS				
	WHOLESALE			RETAIL
	Duct access	Unbundling of local loops	Bitstream access	Retail
Implementation of wholesale offers	x	x	x	
Transparency (reference offer)	x	x	x	
Non-discrimination	x	x	x	
Accounting separation	x	x	x	
Price control	x	x	x	
Cost accounting	x	x	x	
Retail price cap control				
Other regulation of retail tariffs				

Consumer issues

Consumer protection

As for Cyprus, specific legislation for consumer protection for Electronic communication services has been adopted. In that sense, it deals with:

- Contract conditions for telecommunication services.
- Contract duration.
- Penalty payments in case of withdrawal.
- Procedure for handling complaints by consumers.
- Data protection

Additionally, OCECPR is empowered to handle consumers' complaints and regulation does set a maximum initial duration of contract no longer than 24 months. Operators are obliged to publish periodically information on tariffs of telecommunication services and OCECPR publish

periodically information on tariffs of telecommunication services on this website:
<http://tel2me.ocecpr.org.cy>

Quality of service (QoS) and switching

In Cyprus, specific legislation to ensure quality of service on telecommunication services and networks has been adopted. (<http://www.ocecpr.org.cy/el/content-menu/1-poiotita/1-deiktes-poiotitas>)

Current QoS legislation establishes QoS indicators regarding fixed and mobile telephony services. OCECPR is in the process of establishing QoS indicator for fixed broadband. Service control can be required of any operator. Regarding switching, OCECPR is responsible for mobile and fixed portability. Number portability in Cyprus has no cost for consumers, whereas for operators there is a porting fee on both fixed and mobile number portability.

Universal Service

OCECPR is responsible for:

- Provision of access at a fixed location.
- Provision of access to functional Internet services.
- Directory enquiry services and directories.
- Measures for disabled users and those of low incomes.

Universal service is not yet financed by a fund in Cyprus. OCECPR is competent in designating the operator/s with universal service obligations, calculating the net cost of universal service provision, implementing and managing the funding mechanism of universal service and, finally, it also supervises obligations related to the provision of universal service. CYTA is the designated Universal Service provider for the period 2014 – 2017 for all the elements in the scope of universal service, with the exception of the public pay telephones and the directories.

International Roaming

In Cyprus, international Roaming is regulated as it follows:

- Wholesale voice calls
- Wholesale SMS
- Wholesale data
- Retail voice calls
- Retail SMS
- Retail data

Net neutrality

OCEPR is currently running a consultation process in order to create secondary legislation about net neutrality to implement EU 2015/2120.

Promotion of broadband

OCECPR puts in place an incentive regulation in order to promote the deployment of NGAs' networks. Regulatory Strategy for promoting investment in NGA has been published. Strategy for the creation of conditions for Information Society is under implementation.

9.4 Egypt

Indicator	2014	2015	Ø 2014	Ø 2015
Coverage mobile (2G/3G/4G)	100,00	100,00	99,52	99,64
Coverage 3G/4G	na	na	95,59	93,41
Mobile cellular penetration	114,31	110,99	113,73	115,50
Internet Usage	31,70	37,82	64,64	67,45
Fixed broadband subscriptions/100 inhabitants	3,68	4,52	21,06	22,36
Portion of HH with Internet access at home	36,80	39,20	63,52	68,94

Institutional layout

NTRA is the independent National Regulatory Authority with competences on Telecommunications, referring to the Act number 10 Year 2003. The Ministry has no power to give instructions to the NRA for the exercise of the tasks assigned to the NRA and there are no other institutions in Egypt with competences on the regulation of the Telecommunications sector. NTRA President is appointed for two years by the Prime Minister and it can be renewed multiple times. NTRA does not act as a collegiate body and it currently has 450 employees. NRA budget is autonomously defined independently implemented as it can autonomously recruit staff.

NRA competences and powers

It has competence on Telecommunications sector. Regarding the telecommunication sector this authority is competent in:

- Market analysis
- Imposition of obligations
- Control of obligations
- Resolution of disputes
- Numbering
- Standardization of equipment
- Quality of service
- Consumers' protection
- Allocation of spectrum

When it comes to NTRA powers, the Ministry cannot give instructions to the NRA for the exercise of the tasks assigned to this authority. The NRA has the power to request information from operators. The main remedies that can be imposed by NTRA are both behavioural and structural. NRA's decisions are not directly enforceable and judicial appeals with full review of decisions are possible. Dispute settlement body is not a separate body from NRA. Fines and penalties are imposed by NTRA. NRA can submit proposals for sectoral legislative amendments to the Parliament, as it also has an advisory role to the Ministry.

NRA's accountability & transparency

Despite not being mandatory for the NRA, NTRA makes public consultations before adopting regulatory decisions as does is it for decisions to be published. NTRA is accountable before Parliament and Government. The NTRA cooperate effectively with other ministries, entities, and institutions. For example, The NTRA signed a cooperation protocol with the Competition Authority to ensure fair competition in the market and mutual transfer of experience and knowledge. The NTRA also signed MoUs with different ministries for providing ICT services and broadband connections to social communities (e.g. schools, hospitals, youth centers, etc).

Numbering management

NRA is responsible for: Development of the National Numbering Plan, the assignment of rights to use numbers (only on some exception) and the management and control of the rights to use numbers (only on some exception).

Market entrance conditions in electronic communications

Authorization regime

Licenses for specific services and Individual licenses (multi-services) are provided. Moreover, the NTRA is currently in process to issue the unified license regime in Egypt.

Rights of way, radio spectrum and frequency management

NTRA is empowered to grant rights of way. Additionally, NRA grants spectrum licenses given the fact that the Government does not play a role for granting spectrum licenses and its approval is not needed for NTRA to grant them. NRA has competency in frequency management, while secondary trading of spectrum and refarming is not allowed in Egypt.

Regulatory framework for market analysis

Relevant market

Egypt identifies relevant markets and it does apply competition law principles. It also identifies operators with Significant Market Power (SMP). Consequently, it imposes regulatory obligations on operators with SMP.

Remedies

FIXED VOICE TELEPHONY MARKETS				
	WHOLESALE			RETAIL
	Access & origination	Termination	Transit	Retail
Obligation of interconnection	x	x		
Implementation of wholesale offers	x			
Transparency (reference offer)	x	x		
Non-discrimination				
Accounting separation	x			x
Price control				x
Cost accounting				
Tariff rebalancing				
Retail price cap control				
Other regulation of retail tariffs				x

MOBILE VOICE TELEPHONY / SMS MARKETS			
	WHOLESALE		RETAIL
	Access origination	& Termination	Retail
Obligation of interconnection	x	x	
Implementation of wholesale offers			
Access to Mobile Virtual Operators (MVNOs)	x(in process)		
Collocation facilities			
Transparency (reference offer)	x	x	x
Non-discrimination			
Accounting separation			
Price control			
Cost accounting			
Retail price cap control			
Other regulation of retail tariffs			

FIXED BROADBAND MARKETS				
	WHOLESALE			RETAIL
	Duct access	Unbundling of local loops	Bitstream access	Retail
Implementation of wholesale offers		x	x	
Transparency (reference offer)		x	x	x
Non-discrimination				
Accounting separation				
Price control				
Cost accounting				
Retail price cap control				
Other regulation of retail tariffs				x

Consumer issues

Consumer protection

As for Egypt, specific legislation for consumer protection for Electronic communication services has been adopted. Additionally, NTRA is empowered to handle consumers' complaints and regulation does not set a maximum initial duration of contract. Any user has the right to change from an operator to another at any point in time, if he wishes so. No operator signs contracts with the end-users stipulating an initial duration. Operators are obliged to publish periodically information on tariffs of telecommunication services.

Quality of service (QoS) and switching

In Egypt, specific legislation to ensure quality of service on telecommunication services and networks has been adopted. Current QoS legislation establishes QoS indicators and NTRA periodically revises them. Service control can be required to:

- Legacy operator
- Incumbent/dominant/SMP operator
- Mobile operators

Regarding switching, NTRA is responsible for mobile portability (fixed portability is not available in Egypt but it is planned to be introduced in 2015).

International Roaming

In Egypt, international Roaming is regulated as it follows:

- Retail voice calls
- Retail SMS
- Retail data

Universal Service

NTRA is responsible for:

- Provision of access at a fixed location.
- Provision of access to functional Internet services. X Directory enquiry services and directories.

Universal service is financed by a fund in Egypt. NTRA is competent in designating the operator/s with universal service obligations and implementing and managing the funding mechanism of universal service.

Net neutrality

No net neutrality considerations.

Promotion of broadband

NTRA adopted measures to promote the deployment of NGAs' networks (<http://www.tra.gov.eg/emisr/>). Egypt's national broadband plan e-misr address three main targets: Availability target that aims to enhance the infrastructure deployment and ensure access to broadband network and services across Egypt. Penetration target that aims to increase the number of broadband subscribers to reach the critical mass that can boom the industry. Social target that aims to provide broadband connection to citizen in order to improve the service offered in other sectors such as education, health, agriculture, etc.

9.5 France

Indicator	2014	2015	Ø 2014	Ø 2015
Coverage mobile (2G/3G/4G)	99,90	99,90	99,52	99,64
Coverage 3G/4G	99,80	99,80	95,59	93,41
Mobile cellular penetration	101,21	102,61	113,73	115,50
Internet Usage	83,75	84,69	64,64	67,45
Fixed broadband subscriptions/100 inhabitants	40,17	41,34	21,06	22,36
Portion of HH with Internet access at home	83,00	82,60	63,52	68,94

Institutional layout

ARCEP is the independent National Regulatory Authority with competences on economic regulation of electronic communication and postal sectors, referring to the law n° 96-659, 26th July 1996 (<http://www.arcep.fr/index.php?id=8372&L=1>).

The chairman of the Authority (whose term is for 6 non-renewable years) is appointed by the President of the Republic on proposal of the Prime Minister. Since the Act of 5 March

2007 on the future television, he is appointed after consulting the relevant parliamentary committees on electronic communications and postal sector (Committee on Economic Affairs, Environment and Territory to the National Assembly and Committee on Economic Affairs for the Senate). All Board members are irrevocable and ARCEP works as a collegiate body.

ARCEP has 169 employees and its budget (non-autonomously defined but with autonomy in its implementation) for 2014 was 22.6 million € coming 100% from Public sources.

NRAs competences and powers

It has competence in Telecommunications and Post sectors.

Regarding the telecommunication sector this authority is competent in:

- Market analysis
- Imposition of obligations
- Control of obligations
- Resolution of disputes

- Numbering
- Allocation of spectrum
- Quality of service

When it comes to ARCEP powers, the Ministry cannot give instructions to the NRA for the exercise of the tasks assigned to this authority. Not only has ARCEP the power to request information from operators but also can it impose both behavioural and structural remedies (coming from EU framework).

Additionally, some of ARCEP's decisions have a general regulatory scope. These decisions have to be homologated by the Ministry and have to be published in the Journal officiel de la République.

ARCEP can impose fines and penalties and judicial appeals with full review of decisions are possible.

In terms of infringement procedures Order No. 2014-329 draws conclusions on the decision of 5 July 2013, wherein the Constitutional Council considered the legal provisions concerning ARCEP's power to impose sanctions in the electronic communications sector to be unconstitutional. It introduces a new sanctions procedure in the postal and electronic communications sectors, based on the CNIL (French data protection authority) model whose constitutionality has been validated by the "Conseil d'Etat", France's highest administrative court. The new provisions in the French Postal and electronic communications code introduce a separation of the proceedings and the adjudication functions by assigning them to different members of the ARCEP Executive Board. A body composed of four Board members, including the Chairman of ARCEP, will adopt decisions on formal notices, investigations, dispute settlements and inquiries, and a second body composed of the Board's three other members will adopt decisions concerning sanctions.

As for dispute settlement, ARCEP has the power to settle disputes between operators (cf. L.36-8 CPCE, I, and L. 34-8), in case of refusal of interconnection (the linking of telecommunications networks in order to allow one operator' subscribers to communicate with another operator's subscribers) or refusal of access (network to which customer equipment is directly connected, giving access to services); in case of a failure of commercial negotiation, or in case of dispute over the conclusion or execution of an interconnection or access agreement. ARCEP needs to be requested to intervene and is also competent in case of a failure of commercial negotiation in particular matters (cf. L.36-8, II) : the conclusion or execution of national roaming, the technical and financial conditions for providing a subscriber list, the conditions and possibilities of operators sharing existing facilities installed on public domains or private property, etc. The parties that bring a claim before ARCEP to settle disputes, benefit from procedural guarantees stemming from fair trial regulations: adversarial action and a reasonable time to take a decision

(4 months max). The Decision is prepared by 2 “reporting/investigating judges nominated by the Director of the legal department. They carry out technical, economic and legal consultations or evaluations, respecting the confidentiality of investigations. They can send preliminary questions to operators, conduct visits, etc. They finally write a report to the College of the ARCEP, read during the hearing and the College decide to approve it or to ask for some changes before it. This decision could be cancelled in appeal. If agreement between the parties: procedure can be stopped whenever, on demand of both parties. ARCEP adopts a decision considering their withdrawal.

NRAs accountability and transparency

It is mandatory for the NRA to make public consultations before adopting regulatory decisions as does is it for decisions to be published. NRA is accountable for Parliament.

The Regulatory Authority shall work together with the Ministry in charge of Digital Economy. The Minister approves part of ARCEP regulatory power. Additionally, there is a very straight institutional relationship with the Competition Authority, cross advice regarding Decisions. Regarding frequencies, ARCEP is in charge of the organization and allocation procedures of the frequencies assigned by the Prime Minister for the electronic communication sector; the National Agency for Frequencies (ANFR) is in charge of spectrum planning. Finally, there is collaboration with the Broadcasting Authority, which is in charge of contents regulation and radio and TV services provision.

Market entrance conditions in electronic communications

Authorization regime

For entering the telecoms market, notification is the general rule and individual licenses only exist for specific spectrum assignment (when it is proved that frequencies have to be considering as scarce resources). This authorization regime comes from the EU framework. Next step will be more open licensing system in accordance with EU Framework. One operator already achieves the right to deliver 4G services with frequencies he first acquires for 2G uses

Rights of way, radio spectrum and frequency management

ARCEP is not empowered to grant rights of way.

Regarding spectrum licensing, Prime Minister approves the granting process proposed by ARCEP and launchin the beauty contest or auction but ARCEP choose the winning bidder(s). Additionally, NRA is the authority for frequency management, and secondary trading of spectrum is allowed in France as it is refarming migration. France has taken a decision on the digital dividend and the 800 MHz band has been allocated to three of the main telecom operator to deliver 4G services. Government and ARCEP are now preparing a new allocation procedure for the 700MHz band. It will probably take place in 2015.

2G/3G spectrum allocation to French mobile operators: 3 mobile bands were allocated for 2G and 3G networks: 900 MHz (2G/3G), 1800 MHz (2G/3G but only used in 2G), 2,1 GHz (3G). Each MNO has access to low and high frequencies in a balanced way.

First allocations of 3G spectrum in France is the early 2000's in band 2,1 GHz

- 2001: Orange France and SFR
- 2002: Bouygues Telecom
- 2010: Free Mobile is authorized as the 4th MNO, 3G-only

In the late 2010's, ARCEP took appropriate measures to conform with the growth of the 3G market France was the first country in Europe to open the 900 MHz band to 3G in 2008, therefore contributing to provide a broad coverage of population by 3G networks.

New 3G frequencies (10 MHz) were made available in 2010 in band 2,1 GHz, preventing from a capacity crunch (allocated to Orange and SFR).

A fourth MNO, Free Mobile was authorized in 2010 as a 3G-only operator, with frequencies in the 900 MHz and 2,1 GHz bands.

In the meantime, ARCEP was preparing the allocation procedures of 4G frequencies. In the longer term, these frequencies are meant to offer higher data rate to consumer and alleviate the heavy load of 2G/3G networks

The allocation of 4G licenses took place at the end of 2011 in France. Allocation of bands 800 MHz and 2.6 GHz occurred through 2 separate procedures, which were launched simultaneously in May 2011. The 2.6 GHz FDD band, offering a complement of capacity in the dense zones, was allocated in October 2011. The 800 MHz band, providing good properties of propagation for a broad coverage, was allocated in January 2012.

Three main objectives have been set for the award of 2.6 GHz FDD and 800 MHz:

First, digital regional development, which was the top priority set for the allocation of the 800 MHz band. The selected operators are subject to a very ambitious roadmap whose ultimate target is coverage of at least 99.6% of the population of mainland.

Second, competition strengthening in the mobile market. As a result of the auctions, each of the four existing mobile operators will notably be able to deploy 4G services and improve the capacity and quality of their network.

Third, monetizing the State's intangible assets. The total income resulting from the auctions for the State budget is close to €3.6 billion, compared to a reserve price of €2.5 billion. Digital regional development was a priority objective of the Government for the allocation of the 800 MHz band, resulting from the digital dividend and it is written in the Law. Therefore, ARCEP defined the following three provisions:

First, ambitious coverage targets, both nationwide and at the departmental level

National : 99,6% of pop in 15 years - 98% of pop in 12 years

Department : 95% of pop in 15 years - 90% of pop in 12 years

Second, an obligation to perform rollouts in sparsely populated areas first. A priority rollout area has been defined (18% of pop and 63% of surface). Specific deployment obligations are attached: 90% of population in 10 years - 40% in 5 years.

Third, the system includes measures for encouraging operators to share their network and their frequencies in these areas that are hard to cover.

An operator in the lower 20 MHz of band 800 MHz will have to agree on sharing in the “priority rollout area”, when asked to by such another operator. RAN-sharing contributes to reduce roll-out costs, and thus facilitates coverage of rural areas.

ARCEP will closely follow the roll-outs of 4G networks. As for 2G and 3G networks, ARCEP will carry out field measurements of 4G coverage. The launch of 4G services and prospects on future 4G frequencies are now in process. French mobile operators launched 4G LTE networks in 2014. After the allocation procedures, mobile operators are to roll-out their 4G networks.

In March 2012, all four MNO announced the launch of their 4G services in 2013. ARCEP will closely follow the roll-outs of 4G networks, with first coverage obligations to be controlled in 3 years. The refarming of band 1800 MHz is now available for LTE, in terms of spectrum management and Bouygues Telecom already use this band to offer 4G services.

Numbering management

NRA is responsible for:

- Development of the National Numbering Plan.
- Assignment of rights to use numbers, addresses and names.
- Management and control of the rights to use numbers, addresses and names.

Regulatory framework for market analysis

Relevant markets

France identifies relevant markets but it does not apply competition law principles since it applies relevant markets defined by European Commission. ARCEP also identifies operators

with Significant Market Power (SMP). Consequently, it imposes regulatory obligations on operators with SMP after periodically market review rounds, every 3 years

Remedies

FIXED VOICE TELEPHONY MARKETS				
	WHOLESALE			RETAIL
	Access & origination	Termination	Transit	Retail
Obligation of interconnection	x	x		
Implementation of wholesale offers	x	x		
Transparency (reference offer)	x	x		
Non-discrimination	x	x		
Accounting separation	x	x		
Price control	x	x		
Cost accounting	x	x		
Tariff rebalancing				
Retail price cap control				
Other regulation of retail tariffs				

MOBILE VOICE TELEPHONY / SMS MARKETS			
	WHOLESALE		RETAIL
	Access origination	& Termination	Retail
Obligation of interconnection		x	
Implementation of wholesale offers		x	
Access to Mobile Virtual Operators (MVNOs)			
Collocation facilities	x		
Transparency (reference offer)		x	
Non-discrimination		x	
Accounting separation		x	
Price control		x	
Cost accounting		x	
Retail price cap control			
Other regulation of retail tariffs			

FIXED BROADBAND MARKETS				
	WHOLESALE			RETAIL
	Duct access	Unbundling of local loops	Bitstream access	Retail
Implementation of wholesale offers	x	x	x	
Transparency (reference offer)	x	x	x	
Non-discrimination	x	x	x	
Accounting separation	x	x	x	
Price control	x	x	x	
Cost accounting	x	x	x	
Retail price cap control				
Other regulation of retail tariffs				

Consumer issues

Consumer protection

As for France, consumer protection for Electronic communication services is part of Consumer Law. There is no specific Law for the sector.

- Contract conditions for telecommunication services.
- Contract duration.
- Penalty payments in case of withdrawal.

However, ARCEP is not empowered to handle consumers' complaints and regulation sets a maximum initial duration of contract, no longer than 24 months.

In particular ARCEP missions regarding consumer protection are:

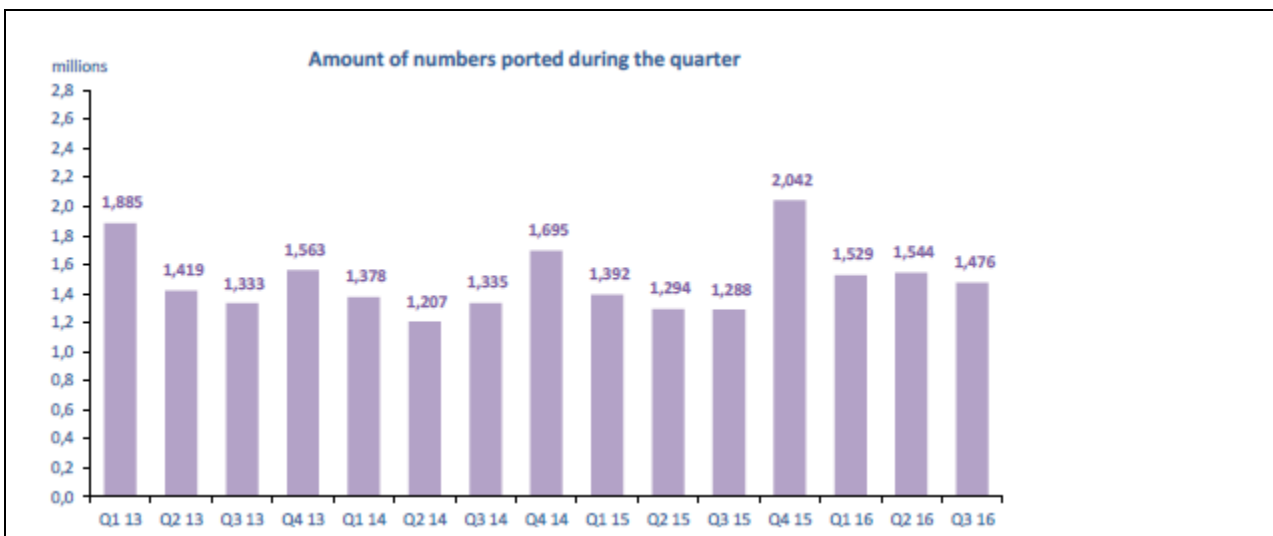
- To ensure an effective competition for consumer benefits (art. L32-1, Code des Postes et des Communications Electroniques - CPCE).
- To ensure high level of consumer protection, in particular: consumer information, tariffs and uses conditions transparency for electronic communication services (art.L32-1, CPCE).
- To fix minimum quality of service expectations (art.L36-6/5°, CPCE).
- To ensure that the minimum legal informations required by the Code de la consommation (art. L121-83) are duly stipulated in the contracts signed by consumers. This supervision prerogative is exercised according to the terms of the Code des postes et des communications électroniques (art. L130). ARCEP therefore puts forward recommendation on regulatory texts published jointly by the Ministry in charge of consumer protection and the Ministry in charge of electronic communications regarding this issue.

Quality of service (QoS) and switching

In France, a certain degree of quality of service is required in operators' authorizations (fixed operators) and licenses (mobile operators). It is also in the terms of the Universal service provider operator obligation.

Regarding switching, ARCEP is responsible for fixed and mobile portability.

Mobile portability : Since the beginning of 2016, after a peak of more than two million ported numbers in the fourth quarter of 2015, the number of mobile numbers retained by customers following a change of operator remains at a high level of around 1,5 million per quarter. In 2016 (Q4 2015-Q3 2016), the total amount of mobile portability is around 6,591,000 compared to 5,660,000 in 2015 (Q4 2014-Q3 2015), so an increase of 16%.



Fixed portability : The number of fixed telephone ported numbers during 2016 (Q4 2015-Q3 2016) is approximately 2,440,000. It has been rising since the beginning of 2016. In 2015, the number was 2,309,000. So, there is an yearly increase of 5,7%.

International Roaming

In France, international Roaming is regulated in the following sections:

- Wholesale voice calls
- Wholesale SMS
- Wholesale data
- Retail voice calls
- Retail SMS
- Retail data

Universal Service

NRA is responsible for:

- Provision of access at a fixed location.
- Provision of access to functional Internet services.
- Measures for disabled users and those of low incomes.

The concept: in network industries such as telecommunications, electricity, gas, water and postal services, universal service obligations provide a baseline level of services and goods, at a price which makes them affordable to consumers who might not otherwise be able to afford them.

Services inclusion criteria	Basic service, used by the majority of subscribers <u>Its non-availability can cause social exclusion</u>
Designation	Access and quality telephone service available to everyone at an affordable price in case of market failure One or several operator(s)
Financial compensation	If the net cost of providing universal services constitutes an excessive burden for the designated operator(s)

In France, the « Universal Service » includes only: **A connection and telephone service:** (art. 4 of “Universal Service” Directive) ; this covers the connection to the fixed public telephone network and the provision of a quality telephone service, which implies a sufficiently high quality access to the internet (at the speed normally offered by a telephone line r). The designated

operator is required to supply telephone services (currently subscription and calls) at the same price nationwide, which is commonly referred to as « geographically balanced ». Following the reviewed European framework, the two sub-components – “connection” and “service” – can be provided by two different operators.

The universal service includes measures in favor of disabled users, so as to guarantee them equal access as other users, within the limits of available technologies that can be implemented at a reasonable cost.

Arcep determines the cost of the universal service and decides whether to finance it (in case of excessive burden on the provider operator). In this case, Arcep also establishes the amounts of operators' contributions to the financing of universal service obligations and supervises the mechanisms of such financing.

Net Neutrality

Proactive dialogue with operators

In France, the Digital Republic Act¹⁰ introduces the principle of net neutrality into national law, and gives Arcep investigative and punitive powers to ensure compliance. Arcep will thus be able to fully carry out its mandate of custodian of the principle of net neutrality.

It is with this in mind that Arcep has reaffirmed its desire to help operators properly implement the European regulation. The Arcep body responsible for settling disputes, legal proceedings and investigations (referred to in French as “RDPI”) will thus engage a proactive dialogue with them in the coming months.

In the more immediate future, operators will be sent a questionnaire whose purpose is to obtain a detailed snapshot of practices in the marketplace. It is also meant to bring operators to question the relevance and justification of their practices with respect to the new regulation.

European cooperation

The task of monitoring the compliance of operators' practices will not be a solitary one. Plans are already in place for national regulatory authorities' reports and analyses to be shared at the European level, to ensure that the open internet access regulation is enforced consistently. A

¹⁰ At national level, the Digital Republic Act that entered in force on the 6 October 2016 strengthens Arcep's powers and tasks the Authority with protecting net neutrality. Following the adoption of European regulation on open internet access and of the BEREC guidelines, the Digital Republic Act introduces the principle of net neutrality into the national legal framework, and endows Arcep with an investigatory and sanctioning power to ensure compliance. Arcep will thus be able to fully satisfy its mandate as custodian of the principle of net neutrality. http://www.arcep.fr/fileadmin/reprise/textes/lois/loi_2016_1321-republique-numerique.pdf

series of meetings has already begun to guarantee smooth and open communication within BEREC – of which France is the Chair in 2017 – and to develop common supervision tools.

First status reports in mid-2017

As stipulated in the European regulation, Arcep and its counterparts will produce their first annual report on their monitoring of and findings regarding net neutrality. These reports will be made public, and will be submitted to both BEREC and the European Commission.

Arcep plans on using this report as an opportunity to deliver a broader state of play on the internet, including details on issues such as data interconnection, quality of service, adoption of IPv6, etc.

A comparative analysis of the national reports on net neutrality will mark an important step in the process of confirming that the European regulation is being enforced consistently. Their contents will be summarised in a single Europe-wide report that BEREC will work on, and which will be released in late 2017.

Promotion of broadband

The Plan France Très Haut Débit (PFTHD), initially launched in 2011 as Programme national très haut débit, aims to a complete coverage of the territory in fixed high-speed internet access in 2022.

To achieve this goal the PFTHD is mainly based on shared FttH network. It has for it 20 billion euros for a ten year period, coming from the State, local authorities and the operators.

The deployment of high-speed broadband networks takes place in parallel between urban and rural areas, based on the involvement of private operators, public authorities and the State.

In urban areas, private operators deploy FttH networks. These include very dense areas as well as lesser-dense areas, where operators are signing conventions with local authorities describing their commitments to deploy FttH by 2022. it represents 57% of the territory and 6 to 7 billion euros

In rural areas where private initiative is not sufficient, local authorities deploy “public initiative networks”. These networks are at minima at département level, in order to ensure an economically viable scale for the network.– it concerns 43% of the territory. It is based on a technological mix : mostly FttH, but also improving currant performances of the copper network using fiber to the street cabinet (FttC called) as well as wireless technologies. These “public initiative networks” will be partly funded by public funds (6, 5 billion €), including 3 billion € from the State, the rest coming from local authorities. completed by a loan coming from the

European Investment Bank. Public initiative FttH networks are then commercialized to retail operators, who then act on the retail market.

In view of these national objectives, Arcep has developed a regulation aiming at supporting competition, investment and connectivity across France's territory. Arcep has been regulating fiber networks since 2009 with these objectives. This regulation ensures non-discriminatory access to fiber networks. It has also developed guidelines on access pricing for FttH public initiative networks that ensures the respect of State aids rules and protect public investment in these networks. It has also issued recommendations to ensure the complete deploy of FttH networks on a given area, to make sure most or all households will be connected to FttH ultimately. Arcep has also taken decisions to smoothen the process of FttH access between operators. As regards wireless solutions, Arcep is considering identifying some bands for local authorities to prolong and have their wireless network evolve in the next 10 years

9.6 Israel

Indicator	2014	2015	Ø 2014	Ø 2015
Coverage mobile (2G/3G/4G)	99,00	99,00	99,52	99,64
Coverage 3G/4G	99,00	90,00	95,59	93,41
Mobile cellular penetration	121,45	133,47	113,73	115,50
Internet Usage	71,45	77,35	64,64	67,45
Fixed broadband subscriptions/100 inhabitants	27,24	27,44	21,06	22,36
Portion of HH with Internet access at home	70,60	72,10	63,52	68,94

Institutional layout

Ministry of Communications is the regulatory authority for Telecommunications, Broadcasting and Post services. The Communications and Broadcasts Law regulates the sector locally and the Minister of Communications is a member of the government (cabinet) and is appointed by the Prime Minister. The Board is not a collegiate body.

This institution has approx. 165 employees subject to civil service rules and it has no own budget either autonomy to implement it, since all sources come from State budget (69.5 million Israeli Shekel of the Ministry in 2016).

NRAs competences and powers

It has competence in Telecommunications, Broadcasting and Post sectors. Regarding the telecommunication sector this authority is competent in:

- Market analysis
- Imposition of obligations
- Control of obligations
- Resolution of disputes
- Numbering
- Networks' security
- Allocation of spectrum
- Standardization of equipment
- Quality of service
- Consumers' protection

According to the Communications and Broadcasts Law it can request information to operators and the Ministry may impose behavioural remedies such as tariff control or marketing restrictions such as bundling, structural remedies such as structural separation, and market-based remedies such as wholesale access.

However, Tariff control requires the agreement of the Minister of Finance. Enforcement powers are vested in the Minister, who has delegated authority to the enforcement division. All enforcement actions are subject to a hearing before implementation.

NRA's accountability and transparency

It is mandatory for the NRA to make public consultations before adopting regulatory decisions as does is it for decisions to be published. NRA is accountable for Parliament and Government.

The Ministry of Communications coordinates with the Israel Antitrust Authority on matters of mergers and acquisitions, and other relevant issues. In addition, it coordinates with the Ministry of Finance on industry-wide reforms and with other agencies as appropriate

Market entrance conditions in electronic communications

Authorization regime

Licenses are granted as general licenses (for a variety of services) or special licenses (for specific services or services granted to a relatively small number of users).

- Licenses for specific services
- Individual licenses (multi-services)
- Unified licenses (global)

Rights of way, radio spectrum and frequency management

NRA is no empowered to grant rights of way but it does has powers when it comes to spectrum licenses and frequency management. However no refarming migration is allowed and Israel has not reach a decision on the digital dividend.

Israel has allocated spectrum for 3G services in the 1800 Mhz and 2100 Mhz bands. 4G services are located in the 1800 Mhz band.

Numbering management

NRA is responsible for:

- Development of the National Numbering Plan.
- Assignment of rights to use numbers, addresses and names.
- Management and control of the rights to use numbers, addresses and names.

Regulatory framework for market analysis

Relevant markets

Israel identifies relevant markets applying competition law principles and also identifies operators with Significant Market Power (SMP). Consequently, it imposes regulatory obligations on operators with SMP after periodically market review rounds.

Remedies

FIXED VOICE TELEPHONY MARKETS				
	WHOLESALE			RETAIL
	Access & origination	Termination	Transit	Retail
Obligation of interconnection		x		
Implementation of wholesale offers	pending			
Transparency (reference offer)	x	x	x	
Non-discrimination	x	x	x	
Accounting separation	X			
Price control		x		
Cost accounting	X			
Tariff rebalancing				
Retail price cap control				
Other regulation of retail tariffs				

MOBILE VOICE TELEPHONY / SMS MARKETS			
	WHOLESALE		RETAIL
	Access origination	& Termination	Retail
Obligation of interconnection		x	
Implementation of wholesale offers			
Access to Mobile Virtual Operators (MVNOs)	X		
Collocation facilities			
Transparency (reference offer)	X	X	
Non-discrimination	X	X	
Accounting separation			
Price control			
Cost accounting			
Retail price cap control			
Other regulation of retail tariffs			

FIXED BROADBAND MARKETS				
	WHOLESALE			RETAIL
	Duct access	Unbundling of local loops (SLU)	Bitstream access	Retail
Implementation of wholesale offers	X	X	x	
Transparency (reference offer)	X	X	X	
Non-discrimination	X	X	X	
Accounting separation	X	X	X	
Price control	X	X	X	
Cost accounting				
Retail price cap control				
Other regulation of retail tariffs				

Consumer issues

Consumer protection

Israel has not adopted specific legislation to protect telecommunications' end users' right. However, this authority is empowered to handle consumers' complaints, and operators are obliged to publish the tariffs on their website and contracts length cannot be extended for more than 24 months. In fact, contracts are now barred and all consumers may switch without penalty

Quality of service (QoS) and switching

In Israel, there is no specific legislation to ensure quality of service but any operator can be subject to service control.

The communications law has been amended to required net neutrality.

Switchover in less than 30 minutes. No fees, one-stop shop (by the Recipient service provider). No causes for rejection by service provider

International Roaming

Not regulated.

Universal Service

NRA is responsible for:

- Provision of access at a fixed location.
- Provision of access to functional Internet services.
- Directory enquiry services and directories.
- Public pay telephones.
- Measures for disabled users and those of low incomes.

Universal service is not financed by a fund in Israel, and the authority is competent in the following areas:

- Designation of the operator or operators with universal service obligations.
- Supervision of obligations (rates, quality of services, etc.) related to the provision of universal service.

Bezeq and HOT telecom are the designated universal operators. They are required to offer all services (including broadband) throughout the country.

Net Neutrality

The Telecommunication law prohibits operators to block or restrict services, applications or telecommunication equipment.

The minister of communication may give instructions regarding the terms and conditions which when fulfilled, shall be considered as proper and fair management.

Promotion of broadband

As for Israel, Broadband service is universal.

9.7 Italy

Indicator	2014	2015	Ø 2014	Ø 2015
Coverage mobile (2G/3G/4G)	99,00	100,00	99,52	99,64
Coverage 3G/4G	98,00	100,00	95,59	93,41
Mobile cellular penetration	154,25	142,12	113,73	115,50
Internet Usage	61,96	65,57	64,64	67,45
Fixed broadband subscriptions/100 inhabitants	23,54	24,37	21,06	22,36
Portion of HH with Internet access at home	72,60	75,40	63,52	68,94

Institutional layout

Agcom was established by law 31 July 1997 n.249, entitled: "Istituzione dell'Autorità per le garanzie nelle comunicazioni e norme sui sistemi delle telecomunicazioni e radiotelevisivo.

The Electronic Communications Code allocates tasks in the electronic communications sector to AGCOM and also to the Ministry of economic development, which is in charge of assigning spectrum and numbering resources to the operators which have been selected after procedures carried out in accordance to the rules set by AGCOM. The Ministry is also issuing the general authorizations prescribed by the Electronic Communications Code.

Pursuant to Law 249/1997 and Law 481/1995, AGCOM Chairman is appointed by decree of the President of the Republic, upon proposal by the Prime Minister (in agreement with the Minister for Economic Development); the designation by the Prime Minister is subject to the binding favourable opinion by the competent parliamentary committees, to be expressed by 2/3 majority of all their component members; such committees can also hear designated candidates; the hearing, aimed at further examining the proposed candidate, is live broadcast on the Parliament's website.

The Law 249/1997 sets out also the appointment of the AGCOM Board members

According to Art. 1 of the above mentioned Law 249/97, both the Lower Chamber and the Senate appoint two Board Members each (each MP has the right to vote for one Member); in particular, each Chamber identifies one Member of AGCOM's Infrastructure and networks committee and one of the Services and products committee (the overall number of AGCOM

Board members was indeed reduced from 8 to 4 by Law-decree 201/2011). The relevant appointment is subject to a decree by the President of the Republic.

During the last appointing procedure, candidates were asked by the Parliament to send their CVs. The list of official candidates and their curricula were both made publicly accessible on the Parliament's website.

AGCOM President and four commissioners (members of the board) are appointed for seven years and it cannot be renewed. The President is appointed by the President of the Italian Republic on the basis of the proposal of the Italian Prime Minister, and is suggested by the Ministry for the economic development. Commissioners are appointed by the President of the Italian Republic on the basis of a Parliamentary vote. AGCOM acts as a collegiate body and its President cannot be dismissed.

AGCOM had 364 employees at the Annual report to the Parliament, in 2016

AGCOM budget (autonomously defined and implemented) for 2015 was € 71,773,346 (2015); (year 2015 – last final balance officially approved in June 2016 (Delibera n. 311/16/CONS)

After the Italian Financial Law 2006, the State contribution (which had been progressively reduced in the previous years) has ceased and AGCOM is now financed only by regulated operators, who contribute with a sum amounting to up to 0,2% of their annual revenues referred to the activities regulated by AGCOM. The percentage of the revenues due by the operators is decided on a yearly basis by AGCOM on the basis of the cost incurred in the previous year.

According to article 34, n. 2-bis (as introduced by the recent Law 29 July 2015, n. 115) of the Electronic Communications Code, the income that AGCOM receives from the regulated operators of the electronic communications sector may be used to cover the administrative costs globally incurred in by AGCOM to setup and implement its regulatory activities as well as the activities related to monitoring, dispute resolution and enforcement.

NRAs competences and powers

It has competence on Telecommunications, Broadcasting – TV Transmission-, Content TV and Post sectors.

Regarding the telecommunication sector this authority is competent in:

- Market analysis
- Imposition of obligations
- Control of obligations
- Resolution of disputes
- Numbering
- Allocation of spectrum

- Quality of service
- Consumers' protection

When it comes to AGCOM powers, the Ministry cannot give instructions to the NRA for the exercise of the tasks assigned to this authority. The NRA has the power to request information from operators.

Following EU regulation the main remedies that can be imposed by AGCOM are:

- Obligation of transparency
- Obligation of non-discrimination
- Obligation of accounting separation
- Obligations of access to, and use of, specific network facilities
- Price control and cost accounting obligations
- Functional separation

NRA's decisions are directly enforceable and judicial appeals with full review of decisions are possible. Dispute settlement body is in first instance a separate body from NRA, but in second instance AGCOM is competent.

Fines and penalties are imposed by the relevant department and AGCOM can submit proposals for sectoral legislative amendments to the Parliament, as it also has an advisory role to this and the Government in matters of competence.

NRA's accountability and transparency

It is mandatory for the NRA to make public consultations before adopting regulatory decisions as does is it for decisions to be published. NRA is accountable before Parliament

Market entrance conditions in electronic communications

Authorization regime

Licenses for specific services

Notifications: According to the EU Telecom framework, "general authorizations" (very similar to notifications) are issued to operators wishing to enter the telecom market with no use of scarce resources. If scarce resources are needed to operate, then the Ministry will issue "individual licenses" granting the "rights of use" of the spectrum.

Rights of way, radio spectrum and frequency management

AGCOM is not empowered to grant rights of way. Additionally, it cannot grant spectrum licenses as it is the Government (Ministry of economic development) who plays a role for granting spectrum license and provides the approval to grant licenses. However, assignment plans are defined by the Authority and shall be applied.

NRA is the authority for frequency management, and both limited secondary trading and refarming migration of spectrum are allowed in Italy.

Italy has taken a decision on the digital dividend. As a matter of fact, 800 Mhz band has been already assigned and is used for wireless broadband (LTE). An auction based on AGCOM regulation has been carried out by the Ministry in 2011. The 700 MHz band is also under consideration at EU level, taking into account the work ongoing within European bodies such as RSPG and CEPT, to be used in future for wireless broadband, based on the ITU co-primary allocation to the mobile services that will start in November 2015.

Italy had already carried out a comprehensive spectrum assignment process for the 800 MHz, 900 MHz, 1800 MHz, 2.1 GHz, 2.6 GHz and 3.5 GHz bands. Some blocks of spectrum in 900 and 1800 MHz bands have been already authorized to be refarmed at request of operators, respectively, to UMTS and LTE use. Some specific reorganizations of the bands have also been carried out in order to reach contiguity of spectrum in each band. The assignment and the refarming process established requirements of investment in infrastructures which have been implemented over the past years. Italy also completed the switchover to digital terrestrial television and completed the migration of BC service below 800 MHz in 2012. Activities for 3.7 and 1.5 GHz bands are ongoing.

There have been positive developments as regards LTE in Italy, where a number of operators started to provide LTE commercial service in 2013. Existing GSM bands also started to provide 3G/4G services while maintaining GSM existing obligations.

As explained in the previous box Agcom provides for the assignment plans of scarce frequencies bands for ECNS and in particular for harmonized bands, where we closely follow the EU regulation. Ministry of Communication is in charge of spectrum allocation and of issuing rights of use and general authorisations.

Numbering management

The NRA is competent in the development of the National Numbering Plan, not with regard to the assignment of numbers (besides some exceptions)

Regulatory framework for market analysis

Relevant markets

Italy identifies relevant markets and it does apply competition law principles. It also identifies operators with Significant Market Power (SMP). Consequently, it imposes regulatory obligations on operators with SMP after periodically market review rounds. Market analysis are renewed periodically.

Remedies

FIXED VOICE TELEPHONY MARKETS				
	WHOLESALE			RETAIL
	Access & origination	Termination	Transit	Retail
Obligation of interconnection	x	x	x	
Implementation of wholesale offers	x	x	x	
Transparency (reference offer)	x	x	x	
Non-discrimination				
Accounting separation	x	x	x	
Price control	x	x	x	
Cost accounting	x	x	x	
Tariff rebalancing				
Retail price cap control				
Other regulation of retail tariffs				

MOBILE VOICE TELEPHONY / SMS MARKETS			
	WHOLESALE		RETAIL
	Access origination	& Termination	Retail
Obligation of interconnection			
Implementation of wholesale offers			
Access to Mobile Virtual Operators (MVNOs)			
Collocation facilities			
Transparency (reference offer)		x	x
Non-discrimination			
Accounting separation		x	
Price control		x	
Cost accounting		x	
Retail price cap control			
Other regulation of retail tariffs			

FIXED BROADBAND MARKETS				
	WHOLESALE			RETAIL
	Duct access	Unbundling of local loops	Bitstream access	Retail
Implementation of wholesale offers	x	x	x	
Transparency (reference offer)	x	x	x	
Non-discrimination	x	x	x	
Accounting separation	x	x	x	
Price control	x	x	x	
Cost accounting	x	x	x	
Retail price cap control				
Other regulation of retail tariffs				

Consumer issues

Consumer protection

As for Italy, specific legislation for consumer protection for Electronic communication services has been applied (General laws such as Codice del Consumo and Codice della privacy and specific legislation -Codice delle comunicazioni elettroniche-, both implemented by several AGCOM's decisions).

In that sense, it deals with:

- Contract conditions for telecommunication services.
- Contract duration.
- Penalty payments in case of withdrawal.
- Procedure for handling complaints by consumers.
- Data protection

Additionally, AGCOM is empowered to handle consumers' complaints and regulation does set a maximum initial duration of contract no longer than 24 months.

Operators are obliged to publish periodically information on tariffs of telecommunication services and AGCOM publish periodically information on tariffs of telecommunication services on this website: www.supermoney.eu.

The tariff comparison software www.supermoney.eu is a tool developed by Italian private service providers that allows the consumers in Italy to compare prices and offers of the telecommunications operators.

Article 72 of the Italian Electronic Communications Code (Decree no 259/2003), named "Transparency and publication of information", states that AGCOM shall encourage the provision of information to enable end-users, as far as appropriate, and consumers to make an independent evaluation of the cost of alternative usage patterns, by means of, for instance, interactive guides. In order to enforce the provisions on transparency of the tariffs' economic conditions, with Decisions no. 96/07/CONS and no. 126/07/CONS, AGCOM imposed the obligation for the telephone operators -fixed and mobile- to publish the economic conditions of their offers and specify all the details that compose the actual telephone traffic cost. In particular, as far as mobile telephony is concerned, operators must indicate in their offers, in the case of tariff plans based on consumption (such as prepaid cards), the total cost of voice calls lasting at least 1 minute and 2 minutes. Such costs include the set-up fee.

In order to allow consumers to make an adequate comparison of offers on the market, telephone operators must fill in one template for each of their offers and publish it on their own websites. In addition, for an easier consultation by the consumers, AGCOM publishes the list of the operators' offers and the links to the operators' webpages where they are described. Such type of transparency has been defined "Static comparison". The "Static comparison" works pretty well, but it has a disadvantage: even though the operators fill in the templates for each of their tariffs and describe correctly the economic conditions of their offers to the public, the huge amount of plans available and the difficulties in explaining concisely the conditions of flat offers makes it very hard for the consumers to compare the plans.

Therefore AGCOM decided to take a different approach and to favor the development of third party calculators that could create software engines aimed at offering a "Dynamic comparison". In other words, the third party calculator should provide the consumer with an engine able to scan the various offers of the operators and identify the most suitable ones for the specific needs of each consumer. The whole procedure and regulation is governed by AGCOM Decisions 126/07/CONS and 331/09/CONS. With the latter decision, enforced in 2009, AGCOM introduced a procedure aimed at giving an accreditation to those providers of tariff comparison engines who meet a number of criteria. In order to be accredited by AGCOM, the engine has to be:

- “independent”: no relationship with operators;
- “recognized”: in business by at least one year before applying for accreditation;
- “easily accessible”: accessible also to users without broadband access and free of costs;
- “transparent”: showing all the information about its functionalities;
- “accurate”: giving detailed information about all kind of tariff offers;
- “complete”: enlisting all the characteristics of the users consumption.

At the moment there is only one tariff comparison engine in Italy that has met all the mentioned criteria and has been awarded the accreditation: the website www.supermoney.eu. In such website the consumers may fill in their requirements and wishes and the software will quickly search for the best offer able to meet the consumer’s needs.

Quality of service (QoS) and switching

In Italy, specific legislation to ensure quality of service on telecommunication services and networks have been adopted.

QoS on telecommunication services and networks is ensured by the Codice delle comunicazioni elettroniche and AGCOM decisions (e.g. 179/03/CSP, 254/04/CSP for fixed voice services, 154/12/CONS and 104/05/CSP for mobile services, 131/06/CSP and 244/08/CSP for internet services, 278/04/CSP for pay-tv services, 79/09/CSP for call center services).

Service control can be required to any operator. Regulation establishes penalties for non-compliance with QoS standards. AGCOM periodically revises QoS parameters.

Regarding switching, Agcom is responsible for one-day mobile portability as it is so for fixed portability.

International Roaming

In Italy, international Roaming is regulated as it follows:

- Wholesale voice calls
- Wholesale SMS
- Wholesale data
- Retail voice calls
- Retail SMS
- Retail data

Universal Service

The aim of universal service is ensuring that some specified services are made available at the quality specified to all end users in the territory independently of geographical location and at an affordable price.

In the electronic communications sector the universal service includes:

- Provision of access at a fixed location.
- Provision of access to functional Internet services (In Italy it isn't set the minimum connection speed. According to our law data rates have to be sufficient to permit a functional Internet access).
- Directory enquiry services and directories.
- Public pay telephones.
- Measures for disabled users and those of low incomes.

In the postal sector the universal service includes:

- the collection, transport, sorting and distribution of postal items up to 2 kg;
- the collection, transport, sorting and distribution of parcel items up to 20 Kg;
- services for registered mail and insured mail;
- "bulk mail" (bank notices, bills and payment bulletins, etc.).

In the electronic communications, in Italy there is only a provider of Universal Service, that is Telecom Italia. Our law (Codice delle Comunicazioni elettroniche, Dlgs. 259/2003) establishes that universal service will be provided by Telecom Italia until a designation procedure is carried out.

In Italy the principles of unfair burden and net cost are applied. In detail NRA calculates the net cost of the universal service obligation, taking into account any market benefit which accrues to the undertaking designated to provide universal service

Net Neutrality

A group of Italian Members of the Parliament has presented a legislative proposal in July 2014 (see Bill n° 2520/2014, concerning "Rules on Internet access provision for competition and users' freedom of access).

Promotion of broadband

Agcom has approved an incentive regulation (decision is no. 1/12/CONS, approved in January 2012) in order to promote the deployment of NGAs' networks. According to the above decision, the SMP operator in the fixed access markets has the obligation to provide, inter alia, fibre unbundling services at the local exchange level once technically feasible.

Moreover, Agcom has recently regulated the procedures for the access to incumbent's cabinets to support the unbundling of the local sub-loop (SLU) service which is a relevant service in the FTTC investment scenario.

9.8 Jordan

Indicator	2014	2015	Ø 2014	Ø 2015
Coverage mobile (2G/3G/4G)	99,00	99,00	99,52	99,64
Coverage 3G/4G	98,00	94,00	95,59	93,41
Mobile cellular penetration	147,80	179,43	113,73	115,50
Internet Usage	44,00	53,40	64,64	67,45
Fixed broadband subscriptions/100 inhabitants	4,69	4,16	21,06	22,36
Portion of HH with Internet access at home	35,40	69,00	63,52	68,94

Institutional layout

TRC is the only independent National Regulatory Authority with competences regulation of electronic communication sector as well as Antitrust for Telecom and Promotion of IT and e-Government referring to TELECOMMUNICATIONS LAW NO. (13) of 1995 and its amendments.

According to article (8/a) in the telecommunication law: The Commission (i.e. NRA) shall be administered and supervised by a Board, known as the (Board of Commissioners), which shall be composed of five full-time members appointed by a resolution of the Council of Ministers, upon nomination by the Prime Minister based on the recommendation of the Minister, provided that there be amongst them distinguished experience in the field of Telecommunications. The Chairperson and Deputy Chairperson shall be named in this resolution. Board term is four years and TRC act as a collegiate body and it currently has 184 employees autonomously recruited.

According to article (10/a) in the telecom law the membership of the appointed Board member shall be terminated for any of the following reasons:

- 1) Resignation.
- 2) Expiry of the term of membership.
- 3) If he fails to attend three consecutive sessions or six non-consecutive sessions throughout the year without a reason acceptable to the Board.

4) If the conditions of Paragraph (a) of Article (9) of this Law is confirmed. i.e.:

- No member of the Board, their spouses or first-degree or second-degree relatives, may have a direct or indirect interest in investments in the telecommunications and information technology sectors throughout the term of his membership on the Board.
- Each member of the Board, before assuming the powers of his work, must submit a declaration in writing to the effect that there is no interest between him and the investors in the telecommunications and information technology sectors, and must inform the Board of any such interest that has developed or may develop during the term of his membership on the Board. Failure to do so shall be subject to legal liability.)

5) If he forfeits any condition of membership.

6) If he is convicted of a crime or an offense against morals and honour.

7) If he becomes incapable, either physically or mentally, to perform the duties assigned to him as a member of the Board.

Yet article 10/b of the same law stipulates: Notwithstanding the provisions of this Law, the Council of Ministers, upon the recommendation of the Minister, may terminate the membership of any member of the Board.

TRC budget (autonomously defined and implemented) for 2016 was JD 1.030.900 .

NRAs competences and powers

It has competence in Telecommunications and Post sectors as well as Antitrust for Telecom and Promotion of IT and e-Government. Regarding the telecommunication sector this authority is competent in:

- Market analysis
- Imposition of obligations
- Control of obligations
- Resolution of disputes
- Numbering
- Allocation of spectrum
- Standardization of equipment
- Quality of service
- Consumers' protection
- Privacy and data protection

When it comes to NRA powers, the Ministry cannot give instructions to the NRA for the exercise of the tasks assigned to this authority. Not only has RTC the power to request

information from operators but also can it impose both behavioural and structural remedies within the competence allocated to RTC.

TRC decisions enforcement powers are stipulated in Article 40 of the law, where the TRC has the Authority to cancel either partial or fully the license in the circumstances of not applying the TRC's decisions. The terms and conditions of the license also gives the TRC further enforcement powers as licensees are obliged to comply themselves to the legislations including TRC's instruction as stipulated within the License's granted to them. Furthermore, TRC's fine's decisions are considered administrative and collected on the base of granting the TRC powers to such fines where the state procedures are applied to collect the fines.

TRC in regard to Article 6/P of the Telecommunication Law may propose legislations related to the Telecommunication sector to be submitted to the Ministry of Telecommunication and Information Technology which has the authority to introduce such proposals to the Cabinet

NRA's accountability and transparency

It is mandatory for the NRA to make public consultations before adopting regulatory decisions as does is it for decisions to be published. NRA is accountable before Parliament and Government.

In Jordan, the TRC is responsible for all telecom matters and coordination is there between the TRC and other regulatory institutions where there are both complementary roles or where there are dual jurisdictions for matters related to the telecom sector and there is no clear legal position on the competent jurisdiction. So to control any dispute regarding the dual competences and jurisdictions especially on matters of competitions, the TRC entered many MoUs (i.e. memorandum of understanding agreement with the relevant parties for example the Competition Directorate within the ministry of industry and trade. Another example related to the Type Approvals for Telecom devices and peripherals the TRC signed an MoU with Jordan Institution for Standards and & Methodology).

Market entrance conditions in electronic communications

Authorization regime

Others: two type of licenses issued by TRC: Individual and class.

In Jordan we have simplified licensing regime where potential entrant to the telecom market can choose from amongst two types of licenses namely: Individual license or class license where the differences between them are mainly the use of scarce resources in the case of individual license. However both licenses are general licenses and not specific to particular telecom services.

Spectrum has its own licensing management process.

Rights of way, radio spectrum and frequency management

TRC is not empowered to grant rights of way and the approval of Government is not necessary to grant licenses given the fact that Government does not play a role for granting spectrum licenses. Additionally, NRA is the authority for frequency management, and secondary trading of spectrum is not allowed in Jordan while refarming migration it is. Jordan has taken a decision on the digital dividend for LTE services.

TRC coordinates with all stakeholders to align its spectrum management processes with that of the ITU region 1, it also makes sure to avail the needed spectrum to meet the industry needs on time.

TRC granted licenses in the following frequency bands: 900 MHz, 1800 MHz, 2100 MHz for 2G, 3G, 4G MNP's and 3500, 5300 MHz for FBWA operators, the allocation process varied from purely administrative (as per the 2G frequencies) to auctions as for the 3G,4G and FWBA.

The first digital dividend frequency band namely 800 MHz was made available for licensing, but no interest currently shown from the operators side. On the road map the second digital dividend is planned on the 700 MHz band according to the decisions and resolution of WRC-15.

The digital switch over will take a place during 2015-2016.

Numbering management

NRA is responsible for:

- Development of the National Numbering Plan.
- Assignment of rights to use numbers, addresses and names.

Regulatory framework for market analysis

Relevant markets

Jordan identifies relevant markets and it does apply competition law principles so as to define relevant markets. TRC also identifies operators with Significant Market Power (SMP). Consequently, it imposes regulatory obligations on operators with SMP after periodically market review rounds, every 3 or 4 years.

TRC concluded the market review exercise first time in 2011 during which it has reviewed relevant telecommunications markets. TRC anticipates a market review cycle of 3 to 4 years

.Any new analysis will consider the effective implementations of the remedies and markets dynamic.

Remedies

FIXED VOICE TELEPHONY MARKETS				
	WHOLESALE			RETAIL
	Access & origination	Termination	Transit	Retail
Obligation of interconnection	x	x	x	
Implementation of wholesale offers	x	x	x	
Transparency (reference offer)	x	x	x	x
Non-discrimination	x	x	x	
Accounting separation	x	x	x	x
Price control	x	x	x	x
Cost accounting	x	x	x	x
Tariff rebalancing				
Retail price cap control				x
Other regulation of retail tariffs				

MOBILE VOICE TELEPHONY / SMS MARKETS			
	WHOLESALE		RETAIL
	Access origination	& Termination	Retail
Obligation of interconnection	x	x	
Implementation of wholesale offers	x	x	
Access to Mobile Virtual Operators (MVNOs)			
Collocation facilities	x	x	
Transparency (reference offer)	x	x	
Non-discrimination	x	x	
Accounting separation		x	
Price control	x	x	
Cost accounting	x	x	
Retail price cap control			
Other regulation of retail tariffs			

FIXED BROADBAND MARKETS				
	WHOLESALE			RETAIL
	Duct access	Unbundling of local loops	Bitstream access	Retail
Implementation of wholesale offers		x	x	
Transparency (reference offer)		x	x	
Non-discrimination		x	x	
Accounting separation		x	x	
Price control		x	x	
Cost accounting		x	x	
Retail price cap control				
Other regulation of retail tariffs				

Consumer issues

Consumer protection

As for Jordan, specific legislation to protect telecommunications' end users' rights was adopted, dealing with:

- Contract conditions for telecommunication services.
- Contract duration.
- Penalty payments in case of withdrawal.
- Data protection.
- Procedure for handling complaints by consumers.

Additionally, TRC is empowered to handle with consumers' complaints and regulation sets a maximum initial duration of contract, no longer than 24 months. TRC does oblige operators to publish their prices for their wholesale services (and other retail services if any) within the

TRC's approved RIOs on their websites, but regarding the unregulated retail services or any services in general there is a legal evidence in the telecom law to be published on an ex-ante basis (i.e. in advance) to their expected consumers.

Quality of service (QoS) and switching

In Jordan, instructions for implementing the quality of service framework were adopted to ensure quality of service on telecommunication services and networks for any operator. Regarding switching, in Jordan there is not availability for fixed and mobile portability, but TRC has responsibilities on switching regulation.

International Roaming

In Jordan, international Roaming is not regulated

Universal Service

NRA is responsible for:

- Provision of access at a fixed location.
- Provision of access to functional Internet services.
- Public pay telephones.
- Measures for disabled users and those of low incomes.

In Jordan the Fixed Network incumbent is designated as the US provider. The universal service (US) is not financed by a fund.

However, TRC is competent in:

- Designation of the operator or operators with universal service obligations.
- Calculating the net cost of universal service provision.
- Implementation and management of the funding mechanism of universal service.
- Supervision of obligations (rates, quality of services, etc.) related to the provision of universal service.

Until it is determined in accordance with the USO Instructions that effective competition has begun to the fixed line incumbent's (Jordan Telecom JT then) provision of a Public Switched Voice Service, JT shall continue to be the USP in all geographic areas and that JT shall continue to bear the entire cost of the USO under the terms of its licenses and these USO Instructions.

The relevant provisions of the USO Instructions are:

1. The Universal Service shall be available to any Person requesting such service at the prevailing standard connection and other rates for the Basic Public Telephone Service charged by the relevant Universal Service Provider.
2. The Universal Service shall be available in all municipalities and populated areas recognized by the Minister of Municipalities and Environment of Jordan that have a population of 300 or more permanent inhabitants as determined from time to time by the Department of Statistics, or its successor.
3. The Universal Service shall also be available outside such municipalities and populated areas to any Person requesting such service at the prevailing standard connection and other rates for the Basic Public Telephone Service charged by the designated USP for the area that covers the location where service is requested, provided however that in such circumstances the USP shall be permitted to recover from such customer the full incremental cost of connection over and above the average cost of connection of the USP if and to the extent such cost exceeds the USP's average cost of 50 man hours work plus 500 JD.

Net Neutrality

No net neutrality considerations.

Promotion of broadband

The TRC is directed to encourage infrastructure sharing where possible and feasible, where the "STATEMENT OF GOVERNMENT POLICY 2012" directs the TRC in approaching the high penetration rate of broadband services to consider amongst others the following:

- Enforcing infrastructure and facilities sharing between operators, and encouraging sharing of facilities with public utilities (such as electricity providers), at reasonable prices and conditions, in order to reduce the costs of providing and extending Internet service.
- Ensuring the provision of physical network infrastructure access services such as Local Loop Unbundling and all forms of unbundled and shared access to local loops and sub loops at each feasible location, including access to associated facilities and services on a non-discriminatory basis.

So taking into consideration the efforts made by many operators and public infrastructure owner in the deployment of fibre networks and other important infrastructure provides step ahead towards the deployment of NGAs' networks.

It is an obligation upon the TRC to consider the deployment of high speed internet (i.e. Broadband services), where the "STATEMENT OF GOVERNMENT POLICY 2012" declares that fast, reliable, and affordable Internet access for all users is an important national goal and that Internet penetration, particularly broadband access, should be significantly increased, in all

areas of Jordan, particularly in rural areas. Government further declares that such access should be made available using both wired and wireless technologies and using a variety of Internet access devices, particularly those which provide mobile access.

In this regard it is worth mentioning that TRC granted 4G spectrum license to one of the mobile operators which in it turn will enhance the availability of Broadband services

9.9 Malta

Indicator	2014	2015	Ø 2014	Ø 2015
Coverage mobile (2G/3G/4G)	100,00	100,00	99,52	99,64
Coverage 3G/4G	100,00	100,00	95,59	93,41
Mobile cellular penetration	126,99	129,30	113,73	115,50
Internet Usage	73,17	76,18	64,64	67,45
Fixed broadband subscriptions/100 inhabitants	35,23	37,85	21,06	22,36
Portion of HH with Internet access at home	80,70	81,90	63,52	68,94

Institutional layout

MCCAA is the independent National Regulatory Authority with competences on competition and regulation of electronic communication and postal sectors, referring to the Malta Communications Authority Act (Chapter 418). There is also the Office of the Information and Data Protection Commissioner (OIDPC) in matters relating to privacy and data protection.

The Authority chairman and the 4 members of the Board (whose term is for 3 renewable years) are appointed by the Minister and works as a collegiate body. Grounds of dismissal include:

- (a) if the member due to infirmity of mind or of body or of any other cause is effectively unable to continue to discharge his duties as a member;
- (b) if the behaviour or performance of the member brings into question his suitability or ability to continue as a member, in particular for behaviour that affects or may affect his reputation, independence or autonomy, or the reputation, independence or autonomy of the Authority;
- (c) if the member has been convicted of a criminal offence affecting public trust, or of theft or fraud, or of knowingly receiving property obtained by theft or fraud or of bribery or of money laundering, provided that the Minister may suspend the member if he is being investigated for a criminal offence; or
- (d) if member fails to perform his duties for a prolonged period without any valid justification.

Provided that notwithstanding the above, it shall be a cause for the removal of a member if that member for any reason fails to perform his duties, including attending for Board meetings, for a continuous period exceeding six months.

MCCAA has 73 employees and its budget (autonomously defined and implemented) for 2016 was € 5.1 million.

NRAs competences and powers

It has competence in Telecommunications and Post sectors.

Regarding the telecommunication sector this authority is competent in:

- Market analysis
- Imposition of obligations
- Control of obligations
- Resolution of disputes
- Numbering
- Networks' security
- Allocation of spectrum
- Quality of service
- Consumers' protection

When it comes to MCCAAs powers, the Ministry cannot give instructions to the NRA for the exercise of the tasks assigned to this authority. Not only has NRA the power to request information from operators but also can it impose both behavioural and structural remedies.

NRA can impose fines and penalties and judicial appeals with full review of decisions are possible. Additionally, MCCAAs decisions are directly enforceable. Please refer to MCA Act (Cap. 418) Part VI – <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=8884&l=1> -

NRA can submit proposals for sectorial legislative amendments to the Parliament. However such proposals are submitted to the competent ministry for approval. The ministry then forwards the proposals to Parliament for approval.

NRAs accountability and transparency

It is mandatory for the NRA to make public consultations before adopting regulatory decisions as does is it for decisions to be published. NRA is accountable before Parliament.

The extent of the action the MCA can take in relation to a consumer issue depends on the particular nature of the issue and the MCA's relevant legal powers. There are instances, such as for example, unfair commercial practices; misleading advertising; false pre-sale advice; unfair contractual terms; and others, over which the MCA currently has no jurisdiction and

therefore cannot provide redress to consumers. In such cases, the MCA refers arising issues to the Consumer Authority which is the entity responsible from addressing such complaints.

The MCA is required by law where necessary to co-operate with the national competent authorities responsible for competition and/or consumer issues (see art. 4(8) of Chapter 418). In the case of the national competition office the MCA had some years entered into an MoU delineating the procedure to be followed in dealing with matters which may relate to both entities. The MCA also consults with other regulatory bodies as necessary where an issue may impact both the role of the MCA and of that other regulatory body [e.g. issues relating top data protection in the telecoms sector].

Market entrance conditions in electronic communications

Authorization regime

Notifications

Rights of way, radio spectrum and frequency management

MCCAA is not empowered to grant rights of way and the approval of Government is necessary to grant licenses. Government plays a role in the establishment of certain policy aspects of a frequency band, such as the fees to be levied. Additionally, NRA is the authority for frequency management, and both secondary trading and refarming migration of spectrum is allowed in Malta.

Malta has taken a decision on the digital dividend and the 800 MHz band has been allocated to deliver 4G services. The digital dividend band (790-862 MHz) is planned to be used for the provision of terrestrial electronic communications services. The technical conditions associated with this band are those established by Commission Decision 2010/267/EU.

Malta has already carried out a spectrum assignment process for the 900 MHz and 1800 MHz bands (220 MHz in total) in 2011. The rights of use include obligations for nationwide coverage. In July 2014 Malta published a policy covering the assignment of spectrum in the 800 MHz and 2.5 GHz bands. In line with this policy the assignment process will be initiated upon market demand. Malta completed the switchover to digital terrestrial television in February 2011.

There have been positive developments as regards LTE in Malta, where Vodafone started to provide LTE commercial service in the course of 2013. Part of the spectrum in the 3.4 – 3.6 GHz band was assigned in 2005. The unassigned spectrum in 3.4 – 3.8 GHz band is available on the market, but so far there was no demand for the spectrum in question.

Numbering management

NRA is responsible for:

- Development of the National Numbering Plan.
- Assignment of rights to use numbers, addresses and names.

Regulatory framework for market analysis

Relevant markets

Malta identifies relevant markets and it does not apply competition law principles. MCCA also identifies operators with Significant Market Power (SMP). Consequently, it imposes regulatory obligations on operators with SMP after periodically market review rounds. The normal market analysis cycle is 3 years however an analysis can be extended if there are no significant changes in the market. On the other hand an analysis can be updated more frequently if the market exhibits significant changes.

Remedies

FIXED VOICE TELEPHONY MARKETS				
	WHOLESALE			RETAIL
	Access & origination	Termination	Transit	Retail
Obligation of interconnection		✓		
Implementation of wholesale offers		✓		
Transparency (reference offer)		✓		
Non-discrimination		✓		
Accounting separation		✓		
Price control		✓		
Cost accounting		✓		
Tariff rebalancing				
Retail price cap control				
Other regulation of retail tariffs				

MOBILE VOICE TELEPHONY / SMS MARKETS			
	WHOLESALE		RETAIL
	Access origination	& Termination	Retail
Obligation of interconnection		✓	
Implementation of wholesale offers		✓	
Access to Mobile Virtual Operators (MVNOs)		✓	
Collocation facilities			
Transparency (reference offer)		✓	
Non-discrimination		✓	
Accounting separation		✓	
Price control		✓	
Cost accounting		✓	
Retail price cap control			
Other regulation of retail tariffs			

FIXED BROADBAND MARKETS				
	WHOLESALE			RETAIL
	Duct access	Unbundling of local loops	Bitstream access	Retail
Implementation of wholesale offers		✓ ¹¹		
Transparency (reference offer)		✓		
Non-discrimination		✓		
Accounting separation		✓		
Price control		✓		
Cost accounting		✓		
Retail price cap control				
Other regulation of retail tariffs				

Consumer issues

Consumer protection

As for Malta, specific legislation for consumer protection for Electronic communication services has been applied. In that sense, it deals with:

- Contract conditions for telecommunication services.
- Contract duration.
- Penalty payments in case of withdrawal.

¹¹ In order to facilitate further the deployment of SLU and LLU, the MCA proposed to supplement these existing remedies with an obligation to provide access to backhaul facilities specifically for unbundling purposes, which includes access to Ethernet connections, dark fibre, and duct access. GO is required to negotiate in good faith and on a commercial basis with access seekers requesting such backhaul services. The MCA will intervene to set terms and conditions (including prices) only in the case these commercial negotiations fail.

Also, given that fibre is included in the market, the MCA also proposed a set of new remedies that are to be applicable to fibre.

- Procedure for handling complaints by consumers.
- Data protection.

Additionally, MCAA is empowered to handle consumers' complaints and regulation sets a maximum initial duration of contract, no longer than 24 months. It is important to highlight that periodical information on tariffs of telecom services is available here: <http://www.telecosts.com/>

The MCA is listing a set of decisions issued in the recent years which are intended to provide further end user protection: Subscriber Contracts; Modifications to the Terms and Conditions of Subscriber Contracts; Standard and Itemised Billing.

The MCA has regularly publishes reports on end-user complaints it receives. The reports may be accessed from the following link: <http://www.mca.org.mt/consumer/reports>

Quality of service (QoS) and switching

In February 2013, the MCA published a decision which obliged all fixed broadband ISPs to collect and measure a set of QoS parameters as specified in the Decision. ISPs have insofar collected and presented it in quarterly reports to the Authority.

In November 2016, the MCA published an amendment to the 2013 Decision extending the obligation to all services marketed as fixed broadband services however these are provided, in addition to services offered over fixed networks. This revision allows for operators which, under specific circumstances are not able to exert full control on the broadband QoS to be exempted from the provisions of the Decision subject to specific conditions.

During 2017, the Authority is planning to commence work in view of establishing a QoS framework for mobile services.

International Roaming

International roaming is regulated for the following services:

- Provision of access at a fixed location
- Provision of access to Internet access services
- Directory enquiry services and directories
- Public pay phones
- Measures for disabled users and users with low incomes

Universal Service

NRA is responsible for:

- Provision of access at a fixed location.
- Provision of access to functional Internet services.
- Public pay telephones.
- Directory enquiry services and directories.
- Measures for disabled users and those of low incomes.

Universal Service in Malta is not fund by an agreement on financing achieved between operators.

MCCAA is competent in the following areas

- Calculating the net cost of universal service provision.
- Supervision of obligations (rates, quality of services, etc.) related to the provision of universal service.
- Designation of the operator or operators with universal service obligations.

A minimum set of electronic communication services essential for the general public to participate in society, and those which are already available to the great majority of citizens. These services should be made available at just, reasonable and affordable rates ensuring that persons on low income, those residing in rural, insular, or high installation cost areas, persons with disabilities, and other vulnerable groups, have access to these services at reasonable prices.

Net Neutrality

During the last few months, the MCA has reviewed the terms and conditions that offer Internet service operators in Malta and requested service providers update these terms and conditions with the information requirements laid down in Regulation (EU) 2015/2120/EC of the European Parliament and of the Council relating to open access to the Internet (Net Neutrality). The MCA will continue to monitor the practices adopted by service providers to ensure that the requirements of the open access to the Internet are being adhered to. In this context, the MCA also will participate in a working group within the BEREC (the unity within the EU responsible for coordination between the various regulators in States) you discuss the same matter.

The MCA adopted regulation EU 2015/2120 as published. At this stage the Authority did not feel it necessary to complement this regulation with specific national measures related to Net Neutrality.

Amendments to Part VI of Malta Communications Authority Act (Cap. 418 of the Laws of Malta) were affected to include enforcement powers and impose sanctions in case of infringement of EU 2015/2120.

Promotion of broadband

A number of regulatory measures have been taken to facilitate the deployment of high-speed next generation fixed and mobile broadband networks.

The MCA has imposed a wholesale access obligation on the fibre-to-the-home (FTTH) network being deployed by the incumbent. At the same time, the MCA is mindful not to hamper the investment in the roll-out of the FTTH network. Furthermore, the Authority has also made available further spectrum for the deployment of high-speed broadband (LTE) networks.

The MCA has designated an operator to provide the universal service obligation in Malta. The designated universal service provider is required to provide a publicly available telephone network at a fixed location, capable of supporting voice, facsimile and data communications at data rates that are sufficient to permit functional internet access in areas where no other undertakings offer such a service at an affordable price. Currently, at the discretion of the end-user, the designated USP is required to provide a broadband connection at a guaranteed access line speed of 4 Mbps (subject to certain conditions). Also refer to the Digital Malta Strategy: <https://digitalmalta.org.mt/en/Pages/Strategy/Digital-Malta-Download.aspx>

9.10 Morocco

Indicator	2014	2015	Ø 2014	Ø 2015
Coverage mobile (2G/3G/4G)	99,00	99,00	99,52	99,64
Coverage 3G/4G	75,00	75,00	95,59	93,41
Mobile cellular penetration	131,71	126,87	113,73	115,50
Internet Usage	56,80	57,08	64,64	67,45
Fixed broadband subscriptions/100 inhabitants	2,97	3,38	21,06	22,36
Portion of HH with Internet access at home	45,30	66,50	63,52	68,94

Institutional layout

ANRT is an National Regulatory Authority with competences regulation of telecommunications sector as well as Antitrust for Telecom referring to Act n°24-96 relating to the post and telecommunications promulgated by Dahir n°1-97-162 of august, 7th, 1997.

The General Director of ANRT is nominated by the council of ministers (chaired by the King of Morocco) under the proposal of the Head of Government.

ANRT take its orientations actions through the board of directors (chaired by the Head of Government) and settle disputes through management comity, it currently has 191 employees autonomously recruited.

ANRT budget (autonomously defined and implemented) for 2016 was 263,82 MDHS.

NRAs competences and powers

It has competence in Telecommunications and Post sectors.

Regarding the telecommunication sector this authority is competent in:

- Market analysis
- Control the respect of obligations
- Resolution of disputes related to interconnections, sharing infrastructures and competition

- Numbering
- Allocation of frequencies
- Type approval of equipment
- Supervision of quality of service of public networks

ANRT decisions (related to his competences as defined in the Telecommunications Act (Law n°24-96) are directly enforceable. The appeal made by concerned operator does not suspend the ANRT decisions, unless the appeal body finds that the ANRT exceeded its powers or did not respect the procedure, especially the rights of the operator.

ANRT can also impose administrative fines and penalties.

Decisions of the ANRT have a binding force once taken. And notified to those concerned. If not respected, the authority send a formal notice to respect the decision (the duration of the notice is generally 30 days except some urgent case).

ANRT may make proposals for texts (Law and Decree), to the government (General secretary of Government) which make public consultation and collect reviews of the various stakeholders involved in the concerned text, then the text is put in the system of adoption

NRAs accountability and transparency

The NRA can make public consultations before adopting regulatory decisions.

The agency is working in cooperation with the High Authority for Audiovisual Communication (HACA), which was thus established under the Dahir n°1-02-212 of August 31, 2002. It is an independent administrative body responsible for regulating the broadcasting sector.

The cooperation is established especially within an Agreement on the harmonization of radio frequency allocation.

The ANRT inform also the Competition Council about the decision taken concerning settlement of competition dispute

Market entrance conditions in electronic communications

Authorization regime

Licenses for specific services: Licenses for the establishment and operation of public telecommunications networks occupying the public domain or using the radio frequency spectrum shall be delivered to any legal entity selected in a call for tender. The license is subject to the payment of a license fee .

Rights of way, radio spectrum and frequency management

The approval of Government is necessary to grant licenses.

ANRT is the authority for all frequency management. Secondary trading of spectrum is not allowed in Morocco while reframing migration it is.

800 MHz band is used for 4G technologies.

The National Frequency Plan is established by ANRT, and approved by his Administration Board after the consultation of concerned parties.

ANRT is responsible for management and monitoring of spectrum, including for allocating spectrum linked to licenses and authorizations subject to payment of a fee. Ministry decides fees for spectrum to be assigned, based on the ANRT initiative and proposal. A new decree has been recently adopted on the 28th of September 2016 on the conditions of elaborating and updating the national plan of frequencies. It's published on the official bulletin and available on ANRT's website.

Numbering management

NRA is responsible for:

- Development of the National Numbering Plan.
- Assignment of rights to use numbers, addresses and names.

Regulatory framework for market analysis

Relevant markets

Every three years, the ANRT establishes a decision on the definition of relevant markets. This decision may be reviewed in the period if the market demands it.

Currently, six (6) relevant market are defined by the ANRT:

- Market of termination of fixed telephony including restricted mobility.
- Market of voice mobile termination
- Market of SMS termination
- Market of leased lines (wholesale).
- Market of wholesale access to physical infrastructures related to local loop (all type of ULL).
- Market of wholesale access to civil engineering.

Each year, the agency defined, after consultation and gathering the necessary information from the operators, the operators with Significant Market Power on a relevant market.

Remedies

FIXED VOICE TELEPHONY MARKETS				
	WHOLESALE			RETAIL
	Access & origination	Termination	Transit	Retail
Obligation of interconnection	x	x	x	
Implementation of wholesale offers		x	x	
Transparency (reference offer)		x	x	x
Non-discrimination		x	x	x
Accounting separation		x	x	
Price control		x	x	
Cost accounting		x	x	
Tariff rebalancing				x
Retail price cap control				
Other regulation of retail tariffs				x

MOBILE VOICE TELEPHONY / SMS MARKETS			
	WHOLESALE		RETAIL
	Access origination	& Termination	Retail
Obligation of interconnection	X	x	
Implementation of wholesale offers		x	
Access to Mobile Virtual Operators (MVNOs)			
Collocation facilities	X	x	
Transparency (reference offer)	X	x	x
Non-discrimination	x	x	x
Accounting separation	X	x	
Price control		x	
Cost accounting	X	x	
Retail price cap control			
Other regulation of retail tariffs			x

FIXED BROADBAND MARKETS				
	WHOLESALE			RETAIL
	Duct access	Unbundling of local loops	Bitstream access	Retail
Implementation of wholesale offers		x	x	
Transparency (reference offer)		x	x	
Non-discrimination		x	x	
Accounting separation		x	x	
Price control		x	x	
Cost accounting		x	x	
Retail price cap control				
Other regulation of retail tariffs				

It's important to note that the retail offer of all operators SMP or not SMP are subject to the respect to guidelines set by ANRT after concertation with all operators. These guidelines are set via a decision of ANRT and were subject to review, the last one was issued on April 2016.

Consumer issues

Consumer protection

As for Morocco, there is a law about consumer protection which includes a specific part about telecommunications' end users. Consequently, specific legislation to protect telecommunications' end users' rights was adopted, dealing with:

- Contract conditions for telecommunication services.
- Contract duration.
- Penalty payments in case of withdrawal

ANRT is empowered to receive complaints from Consumer associations, but even if it receives direct claims, it intervenes within the limit of its competences.

Operators are obliged to publish the tariffs whatever the support.

Tariffs are set freely in accordance with the law n ° 06-99 concerning freedom of prices and competition. However, ANRT assess these prices regarding the principle of fair competition.

Quality of service (QoS) and switching

Monitoring the quality of service is achieved using two approaches:

Analysis dashboard KPIs (Key Performance Indicators) or those submitted on request of ANRT during significant or unusual events;

Launching campaigns field measurements for evaluating the quality of service as perceived by users.

Thus, the ANRT conducts regularly on the basis of significant samples, measurement campaigns and survey indicators QoS.

In order to ensure the representativeness of measurements and relevance of the results, each campaign is conducted on the basis of a significant sample (number of measurements, cities, services ...). The measurements are performed in an intuitive and random in a protocol of measures adopted by the ANRT, for an assessment of the quality of service, as actually perceived by the user.

The ANRT had taken a new decision on the number portability. The decision 04/15 of October 08th, 2015 comes to modify and to complete the modalities and the conditions of implementation of the number portability.

The new decision, which comes in application of the Note of general orientations for the pursuit of the development of the sector at the horizon 2018, aims at improving more this competitive lever for the benefit of the operators and for the benefit of the Moroccan consumer.

This new decision, result of a wide consultation with three global operators since June, 2015, deals with two essential aspects:

- improvement of the operational modalities of number portability to facilitate the portability for the customers and the reduction of the delay for porting operation
- precision of the process which will be followed for the implementation of the centralized database for the portability of the numbers, which would be effective and operational at the latest in June, 2017

For that purpose, a process of exchanges is begun between the operators. In case this process would not be decisive for the deadlines determined by the new Decision, the ANRT will launch

the steps and the necessary actions to select and appoint the Entity which will be in charge of the management of the centralized database. It's the case now, since the 26 of October 2016, ANRT make public consultation in order to select the entity in charge of centralized database for ported number (see the ANRT's website)

This new decision also considers the next implementation of a unique identifier for the fixed and/or mobile contracts in order to facilitate the identification of the line during the requests of number portability. The modalities of its implementation by the operators will be later specified by ANRT.

International Roaming

In Morocco, international Roaming is not regulated.

Universal Service

NRA is responsible for:

- Access at a fixed location.
- Access to functional Internet services.
- Public pay telephones.
- Directory enquiry services and directories
- Measures for disabled users and users with low incomes

An interdepartmental committee called the "Committee of management of the Universal Service Telecommunications (CGSUT)" is primarily responsible for the definition and validation of the Universal Service programs (such as the PACT program : provide access to telephony and Internet at 9263 rural localities, the NAFIDA program : to facilitate access to and use these tools in the educational system; the INJAZ program : for students of second cycle university and PhD in fields of technology and science .

The funding is provided by the Universal Service Fund (FSUT) created for this purpose by the Finance Act 2005. The FSUT is powered by contributions from telecommunications operators up to 2% of their turnover. The fund may also receive other contributions in the form of donations and bequests allocated in the development programs of Universal Telecommunications Service.

Net Neutrality

No net neutrality considerations.

Promotion of broadband

The ANRT adopted on 2012 the national broadband plan (see : <https://www.anrt.ma/sites/default/files/Fiche%20VF%20Plan%20Haut%20debit-15%20Mai%202012.pdf>)

9.11 Palestine

Indicator	2014	2015	Ø 2014	Ø 2015
Coverage mobile (2G/3G/4G)	na	na	99,52	99,64
Coverage 3G/4G	na	na	95,59	93,41
Mobile cellular penetration	72,08	77,62	113,73	115,50
Internet Usage	53,67	57,42	64,64	67,45
Fixed broadband subscriptions/100 inhabitants	5,30	6,03	21,06	22,36
Portion of HH with Internet access at home	na	na	63,52	68,94

Institutional layout

MTIT acts as regulator, however is not an independent body for the telecommunication sector. As a matter of fact, Act No 15/2009 to create NRA has not enforced yet.

There are 330 permanent and 170 temporary staff working at the ICT and Post Authority.

The budget of the ministry is resourced by the government (10.430.000 \$ in 2016), and NRA competences belong to the Ministry.

NRAs competences and powers

It has competence in Telecommunications, Broadcasting –only assigning spectrum-, Post sectors as well as in Promotion of IT & e-Government.

Regarding the telecommunication sector this authority is competent in:

- Market analysis
- Imposition of obligations
- Control of obligations
- Resolution of disputes
- Numbering
- Networks' security
- Allocation of spectrum
- Standardization of equipment
- Quality of service

- Consumer's protection
- Privacy and data protection

The Ministry exercises these regulatory tasks even though MTIT has authority power to request information from operators.

The Ministry can exercise remedies - e.g Hadara the internet provider was functionally separated from the incumbent operator (PATEL)

NRA decisions are directly enforceable and judicial appeals with full review of decisions are also possible. NRA can submit proposals for sectoral legislation amendments to the Parliament. The

Ministry through the cabinet has this role. The Parliament is currently not active.

NRA's accountability and transparency

MTIT regulates the telecom sector completely except for the broadcasting it coordinates with the Information Ministry and Interior Ministry.

MTIT is accountable before Parliament and Government and it publish its decisions. It is compulsory to make public consultations before adopting regulatory decisions.

Market entrance conditions in electronic communications

Authorization regime

Licenses for specific services

Individual licenses (multi-services) The Ministry grants two types of license:

- Individual license for operators
- Class license for service providers

Planning for Unified licenses in near future.

Rights of way, radio spectrum and frequency management

MTIT is empowered to grant rights of way and spectrum licenses -approval of Government is not necessary to grant licenses-. Individual licenses require cabinet approval.

MTIT is responsible for frequency management and refarming migration is allowed in Palestine.

The allocation and assigning frequencies is ruled by the Telecom law No 3/96 which says that the ministry shall allocate the needed frequencies to those licensees there license allowed them to use frequencies and an annex will be attached to the license explaining the frequency band and the assigned frequencies and the annual payment for the use of these frequencies ,according to price regime decided by the cabinet .

we should say that there is no tendering for the frequency and no auctions , the tendering is for the service providing and if the service needs frequencies they will be allocated to the licensees and the will pay annual fees for the frequency use.

Numbering management

NRA is responsible for:

- Development of the National Numbering Plan.
- Assignment of rights to use numbers, addresses and names.

Regulatory framework for market analysis

Relevant markets

MTIT does not define relevant markets and it does apply competition law principles. However, it does identify operators with Significant Market Power (SMP) and,

consequently, it may impose regulatory obligations on operators

Remedies

FIXED VOICE TELEPHONY MARKETS				
	WHOLESALE			RETAIL
	Access & origination	Termination	Transit	Retail
Obligation of interconnection	*	X	X	
Implementation of wholesale offers				
Transparency (reference offer)	*	*	*	
Non-discrimination	*	*	*	
Accounting separation			,	
Price control	X	X	X	
Cost accounting				
Tariff rebalancing				
Retail price cap control				
Other regulation of retail tariffs				X

MOBILE VOICE TELEPHONY / SMS MARKETS			
	WHOLESALE		RETAIL
	Access origination	& Termination	Retail
Obligation of interconnection		x	
Implementation of wholesale offers			
Access to Mobile Virtual Operators (MVNOs)			
Collocation facilities	x	x	
Transparency (reference offer)			
Non-discrimination	*	*	
Accounting separation			
Price control		*	
Cost accounting			
Retail price cap control			
Other regulation of retail tariffs			

FIXED BROADBAND MARKETS				
	WHOLESALE			RETAIL
	Duct access	Unbundling of local loops	Bitstream access	Retail
Implementation of wholesale offers			*	
Transparency (reference offer)			*	
Non-discrimination			*	
Accounting separation				
Price control			*	
Cost accounting				
Retail price cap control			*	*
Other regulation of retail tariffs				

Consumer issues

Consumer protection

As for Palestine, there is no specific legislation to protect telecommunications’ end users’ rights.

However, MTIT is empowered to handle consumers’ complaints. Operators are obliged to publish their tariffs on their websites

Quality of service (QoS) and switching

It stated in all license agreements that The licensee has to deposit a performance bond equal to 3% of their paid up capital as a grantee for the licenses quality of service obligations. Regarding switching, neither fixed nor mobile portability is available.

International Roaming

In Palestine, there is no regulation regarding international Roaming.

Universal Service

NRA is responsible for:

- Provision of access at a fixed location.
- Directory enquiry services and directories (and for emergency services)
- Directory enquiry services and directories.
- Public pay telephones.

The « Universal Service » is not financed by a fund.

The NRA is competent in the following areas

- Designation of the operator or operators with universal service obligations.
- Supervision of obligations (rates, quality of services, etc.) related to the provision of universal service

Net Neutrality

No net neutrality considerations.

Promotion of broadband

No specific broadband plans.

9.12 Portugal

Indicator	2014	2015	Ø 2014	Ø 2015
Coverage mobile (2G/3G/4G)	99,10	99,80	99,52	99,64
Coverage 3G/4G	99,10	97,10	95,59	93,41
Mobile cellular penetration	112,11	110,41	113,73	115,50
Internet Usage	64,59	68,63	64,64	67,45
Fixed broadband subscriptions/100 inhabitants	25,67	29,62	21,06	22,36
Portion of HH with Internet access at home	64,90	70,20	63,52	68,94

Institutional layout

ANACOM, the national regulatory authority for postal communications and electronic communications in Portugal, is established under the Act approved by Decree-Law no. 309/2001 of 7 December (<http://www.anacom.pt/render.jsp?contentId=974442>).

(Note: ANACOM follows to the corporate entity of the ICP, the former telecommunications institute established by Decree-Law no. 188/81 of 2 July, maintaining all the rights and legal or contractual obligations that are within the respective legal sphere.)

According to the statutes of ANACOM (articles 21 and 22), the members of the board of administration are appointed by resolution of the Council of Ministers, upon proposal by the member of Government responsible for communications. The members of the board of administration are nominated from among people of recognized capacity, independence and technical and professional competence. Also, those who have been members of the managing bodies of companies in the communications sector for the past two years (i.e., who have worked with or been permanent collaborators of same with directorial or leadership duties during that same period of time) are ineligible for nomination. Further, the members of the board of administration may not retain interests of a financial nature or shares in regulated companies in the sectors of communications.

Finally, the members of the board of administration may not, during their mandate, exercise any other public function or professional activity, except with regard to part-time teaching activities in higher education, being subject to the incompatibilities and impediments regarding holders of high public office.

The members of ANACOM Board are appointed for a non-renewable term of five years (ANACOM statutes, article 21, n. 6). However, in 2013, the Parliament enacted the Law n. 67/2013, of August 28th, approving the “Legal Framework on Regulators”. Pursuant to this law, a revision of ANACOM’s statutes is currently taking place (which will most likely lead to certain modifications of ANACOM’s institutional framework, such as e.g. the term of the mandate of the members of the board which will increase from five to six years (non-renewable)).

According to ANACOM’s current statutes the Members of the Board may be dismissed by Resolution of the Council of Ministers in the event that serious fault is demonstrated in the pursuit of duties. In concrete terms, according to article 24 of ANACOM statutes, the board of administration can only be dissolved by resolution of the Council of Ministers and following an opinion issued by the ANACOM advisory council, in the following cases:

- a) Serious irregularities in the functioning of the body;
- b) Considerable excesses in expenses over those stipulated in the budget, without due justification.

ANACOM has 397 employees and has full control over its budgeted expenditure, subject only to an independent audit. However, since 2011, in the context of the Portuguese Financial and Economic Assistance Programme, ANACOM was required to apply the reduction in staff remuneration approved by the Parliament (State Budget Law) that determined a salary cut for public employees and the staff of public institutions subject to a special scheme; meanwhile all career progression and other salary updates have been frozen since 2011.

NRAs competences and powers

ANACOM has competence in Telecommunications and Post sectors. Regarding the telecommunication sector this authority is competent in:

- Market analysis
- Imposition of obligations
- Control of obligations
- Resolution of disputes
- Numbering
- Networks’ security
- Allocation of spectrum
- Standardization of equipment
- Quality of service
- Consumers’ protection

According to the Electronic Communications Law (ECL)[1], the NRA is charged with certain powers regarding market analysis and regulatory control (cfr. articles 55 to 85), under which can impose behavioural remedies (cfr. articles 66 and following and articles 77 and following), or even impose an obligation of functional separation (cfr. article 76-A). Consequently, ANACOM has authority to request information from operators and can impose behavioural and structural remedies.

As a matter of fact, the NRA may impose a) Financial penalties as provided for in this statutory instrument; b) Orders to cease or delay provision of a service or bundle of services which, if continued, would result in significant harm to competition, pending compliance with access obligations imposed (cfr. article 110).

It also has an advisory role to the Parliament or Government formally envisaged by law in the matters of competence.

NRA's accountability and transparency

Before approval or modification of any regulation whose issuance is under its competence, ANACOM must inform the respective minister of tutelage, the concessionary or licensed entities, operators, the various registered service providers and consumers associations of generic or specific interest in the area of communications, providing them access to the respective texts and ensuring that same are available on its website (article 11 of its statutes).

ANACOM is subject to the jurisdiction of the Audit Court, under terms of the pertinent legislation. Additionally, it has to submit to the Assembly of the Republic an annual report, also to be sent to the Government.

ANACOM is independent in the exercise of its functions, in the context of law, without prejudice to the guiding principles of communications policy set by the Government, according to constitutional and legal terms and the acts subject to ministerial tutelage under terms anticipated by law and in its statutes. So, without prejudice to its organic and functional independence, ANACOM is subject to tutelage by the member of Government responsible for communications and, when the case arises, by the Minister of Finance, under terms of ANACOM's statutes and all other applicable legislation.

Second, ANACOM pronounces itself on all matters within its area of responsibilities that are submitted to it namely by the Assembly of the Republic or the Government and may, on its own initiative, suggest or propose political or legislative measures in matters pertinent to its responsibilities (cfr. Article 7 of its statutes).

Further, ANACOM assists the Government, upon its request or on own initiative, in the definition of strategic guidelines and general policies for communications and the activity of communications operators, including the issuance of and the drafting of legislation in the field of communications.

According to the ECL (art.7), ANACOM and the competent authorities and services, particularly in the area of consumer protection, shall jointly cooperate, whenever necessary, in matters of common interest. It is also set that ANACOM and the Autoridade da Concorrência (the Competition Authority) shall cooperate with each other in matters related with the application of the legal regime of competition in the electronic communications sector. In the cases set out in articles 37 (Transfer of rights of use for frequencies) and 61 (draft measures in respect of the analysis of the market and the determination of whether or not an undertaking holds significant market power) of the ECL, ANACOM shall request the prior opinion of Autoridade da Concorrência (The Competition Authority).

At this level, there is a cooperation agreement between ANACOM and the Competition Authority, aiming at facilitating cooperation between the two authorities in the performance of their duties, in accordance with the duties that are legally assigned to them, with the aim of avoiding duplication of work and ensure consistency between the taken decisions or actions.

The same happens with the ERC - Entidade Reguladora para a Comunicação Social (Regulatory Entity for the Media).

Market entrance conditions in electronic communications

Authorization regime

According to the ECL, the provision of electronic communications networks and services, whether publicly available or not, is subject only to the general authorisation regime and is not dependent on any prior decision or act of the NRA (cfr. paragraph 2 of article 19).

The use of numbers and frequencies is also subject to the general authorisation regime and depends, additionally, on the allocation by the NRA of rights of use, in all cases for numbers, and exceptionally for frequencies (cfr. paragraph 3 of article 19, article 30 and article 36).

The general authorisation regime works as follows: undertakings which intend to provide electronic communications networks and services shall previously submit to the NRA a short description of the network or service they wish to initiate and shall give notice of the date upon which the activity is estimated to commence, submitting also such details as are necessary for their full identification under terms defined by the NRA.

Following said notification, undertakings may immediately commence activity, subject to the limitations resulting from the allocation of rights to use frequencies and numbers (cfr. article 21).

The use of frequencies for electronic communications services, whether or not depending of the allocation of rights of use, is subject to the conditions for use of radio spectrum provided for in Decree-Law 151-A/2000, of 20 July, as amended (cfr. paragraph 4 of article 15 of the ECL).

Indeed, Decree-Law 151-A/2000, of 20 July foresees that the use of the radio spectrum shall be subject to the licensing provisions there envisaged and the use of the electromagnetic spectrum using optical radiation in non-guided resources shall be subject to registration with ICP-ANACOM, when such use is in connection with the supply of publicly available electronic communications services (cfr. paragraphs 1 and 2 of article 3).

The use of radiocommunications networks and stations shall be subject to the possession of a licence, which ICP-ANACOM is responsible to grant (cfr. paragraphs 1 and 2 of article 5). A radio licence shall be required for the use of radiocommunications networks (cfr. article 7) and the use of stations, which comprise a licensed radiocommunications network, shall not require a licence, except in certain cases (cfr. article 8).

Rights of way, radio spectrum and frequency management

It is incumbent on the member of the Government in charge of the communications area to approve regulations for allocation of rights of use for frequencies only where such regulations involve competitive or comparative selection procedures, and where such allocation involves frequencies which are being made available for the first time within electronic communications, or otherwise where such frequencies are intended to be used for new services. It is incumbent on the NRA to approve regulations for allocation of rights of use for frequencies in all other cases (cfr. paragraphs 7 and 8 of article 30).

The use of the Digital Dividend I (790-862 MHz) was based on the allocation of the band in the framework of the multiband auction for the provision of electronic communications services in the 450 MHz, 800 MHz, 900 MHz, 1800 MHz, 2,1 GHz and 2,6 GHz bands, See <http://www.anacom.pt/render.jsp?categoryId=340980&themeMenu=1#horizontalMenuArea> for further information.

The assignment and allocation of radio spectrum is described in the ECL - Electronic Communications Law (Law no. 51/2011, of 13 September which amends and republishes Law no. 5/2004, of 10 February - <http://www.anacom.pt/render.jsp?contentId=1099877>). In particular the ECL establishes that It is incumbent on ANACOM to publish and to keep up to date the National Frequency Allocation Plan (NFAP) (article 15 of ECL). It has also to be highlighted that in situations where the use of frequencies is dependent upon the allocation of rights of use, according to the National Frequency Allocation Plan, it is incumbent upon ANACOM, pursuant to paragraph 3 of article 19 of Law number 5/2004, of 10 February (ECL - Electronic Communications Law) to allocate the referred rights. It is noted that the use of frequencies depends on the allocation of rights of use only where this is necessary to: a) Avoid harmful

interference; b) Ensure technical quality of service; c) Safeguard efficient use of spectrum; d) Meet another general interest objective defined in the law (see article 30 of ECL)

Numbering management

NRA is responsible for:

- Development of the National Numbering Plan.
- Assignment of rights to use numbers, addresses and names.

Regulatory framework for market analysis

Relevant markets

ANACOM identifies relevant markets applying competition law principles and also identifies operators with Significant Market Power (SMP). Consequently, it imposes regulatory obligations on operators with SMP after periodically market review rounds.

Remedies

FIXED VOICE TELEPHONY MARKETS				
	WHOLESALE			RETAIL
	Access & origination	Termination	Transit	Retail
Obligation of interconnection	X (MEO only)	x		
Implementation of wholesale offers	X (MEO only)	X (the reference offer is only imposed to MEO)		
Transparency (reference offer)	X (MEO only)	x		
Non-discrimination	X (MEO only)	x		
Accounting separation	X (MEO only)	x ¹²		
Price control	X (MEO only)	x		
Cost accounting	X (MEO only)	x ¹³		
Tariff rebalancing				
Retail price cap control				
Other regulation of retail tariffs				

¹² A new draft decision on the wholesale fixed call termination market was already notified to the European Commission, removing this obligation, but no final decision has yet been taken in this regard http://www.anacom.pt/render.jsp?contentId=1387413&languageId=1#.V_-alhJer9I.

¹³ A new draft decision on the wholesale fixed call termination market was already notified to the European Commission, removing this obligation and adopting a pure BU LRIC rate, but no final decision has yet been taken in this regard http://www.anacom.pt/render.jsp?contentId=1387413&languageId=1#.V_-alhJer9I.

MOBILE VOICE TELEPHONY / SMS MARKETS			
	WHOLESALE		RETAIL
	Access origination	& Termination	Retail
Obligation of interconnection	x	x	
Implementation of wholesale offers			
Access to Mobile Virtual Operators (MVNOs)	x ¹⁴	x	
Collocation facilities	x	x	
Transparency (reference offer)		x	
Non-discrimination		x	
Accounting separation			
Price control		x	
Cost accounting			
Retail price cap control			
Other regulation of retail tariffs			

¹⁴ Only imposed to operators that acquired 800 MHz and 900 MHz in the Multiband auction.

FIXED BROADBAND MARKETS				
	WHOLESALE			RETAIL
	Duct access	Unbundling of local loops	Bitstream access	Retail
Implementation of wholesale offers	x	x	x	
Transparency (reference offer)	x	x	x	
Non-discrimination	X	X	X	
Accounting separation	x	x	x	
Price control	x	x	x	
Cost accounting	x	x	x	
Retail price cap control				
Other regulation of retail tariffs				

Consumer issues

Consumer protection

Portugal adopted specific legislation to protect telecommunications' end users' right. In particular regulation deals with:

- Contract conditions for telecommunication services.
- Contract duration. Service providers also shall offer all users the possibility to subscribe to a contract with a maximum duration of 12 months.
- Penalty payments in case of withdrawal.
- Data protection.
- Procedure for handling complaints by consumers

ANACOM publishes information on tariffs of telecommunication services in its comparison tool, named after "Com.Escolha" (www.anacom.pt/tarifarios/PaginaInicial.do?channel=graphic,

made available on Consumer's website (www.anacom-consumidor.com). However, ANACOM is only responsible for the software development of the comparison tool, being that the information provided is responsibility of the service providers.

According to Electronic Communications Law (<http://www.anacom.pt/render.jsp?contentId=1099877>), contracts concluded between consumers and undertakings providing electronic communications services shall not mandate an initial commitment period that exceeds 24 months.

Service providers also shall offer all users the possibility to subscribe to a contract with a maximum duration of 12 months.

Without prejudice to any minimum contractual period, pursuant to the preceding paragraph, service providers shall not impose disproportionate conditions or procedures for contract termination that are excessively burdensome and that act as a disincentive against changing service provider.

Quality of service (QoS) and switching

According to the Electronic Communications Law (Law n°5/2004, of 10 of February amended by the Law n° 51/2011 of 13 of September-<http://www.anacom.pt/render.jsp?contentId=1099877>), which transposes to the Portuguese legislation the EU Directives, undertakings that provide publicly available electronic communications services shall publish comparable, adequate and up-to-date information for end-users on the quality of their services (article 40°).

Also according to the same article, for this purpose it is incumbent upon the NRA, following the general consultation procedure referred to in article 8, to specify, inter alia, the quality of service parameters to be measured, and the content, form and manner of information to be published.

In this context, ICP-ANACOM published a Regulation of Quality of Service (Regulation no. 46/2005, of 14 June, amended by the Regulation no. 372/2009 (<http://www.anacom.pt/render.jsp?contentId=940179&languageId=1>;<http://www.anacom.pt/render.jsp?contentId=982635>) - applicable to the services of access to the public telephone network at a fixed location and the publicly available telephone service at a fixed location. This Regulation defines a set of parameters to be measured by all fixed telephone service providers, as well as the contents of such parameters and the formats and manner of information to be published, in order to ensure that the information disclosure to the end-users, about quality of service, is clear, up-to-date and comparable.

Under the scope of Regulation ANACOM hasn't established performance objectives to fixed telephone service providers. Such performance objectives are set and disclosed by the operators themselves. (<http://www.anacom.pt/render.jsp?contentId=1145943>)

By determination of 11 December 2008 ANACOM also published guidelines on minimum contents of standard contracts (currently under revision), in which some mandatory particulars must be included, namely, the required time for start-up connections and other quality of service levels supplied (<http://www.anacom.pt/render.jsp?contentId=808758&languageId=1>)

Specifically:

- The contract must establish the obligation upon undertakings to provide regular and uninterrupted service.
- The contract must clearly set the levels of quality which the service provider undertakes to uphold with its customers, i.e. the minimum (target) service levels of quality to which the customer is entitled, non-compliance with which determines the payment of compensation or reimbursement (given that service providers have voiced uncertainties with regard to parameters concerning which levels of quality should be set, in addition to the obligation of including in the contracts the required time for start-up connections, ANACOM, has suggested some other parameters in Appendix I of the referred determination).

According article 48.^o of the ELC ANACOM can set the minimum service quality levels to include in contracts, by the service providers, namely the time for the initial connection, as well as other quality of service parameters, as defined pursuant to article 40.

By determination of 10 October 2011, ANACOM approved the object and form of public disclosure of conditions of provision and use of electronic communication services - Amendment to determination of 21 April 2006 <http://www.anacom.pt/render.jsp?contentId=1101389&languageId=1>

Undertakings providing public communications networks or publicly available electronic communication services must make available to the public, some information, such as information on levels of quality provided. Specifically for Internet access services, undertakings must guarantee:

- a) That interested parties are provided with clear and accurate information for the various service offers, distinguishing between upload and download speeds, the maximum access speed provided and the average access speed estimated by the provider (the speed which on average is estimated by the provider to be made available under normal usage conditions, which may frequently differ from the maximum access speed disclosed).
- b) The disclosure of levels of quality related to maximum and average access and browsing speeds must be supplemented, where appropriate, by a warning that the provided speed may not be ensured for each and every connection, as this depends on the level of use of the network and server which the customer connects to.

c) The provision to interested parties of clear and accurate information on migration between offers, specifically to meet a customer request to change its maximum speed.

It is recommended that providers make available and duly highlight at their websites a feature that allows interested parties to measure their access upstream/downstream speed for a given period, whether instant or average.

International Roaming

In Portugal, international Roaming is regulated as it follows: X Wholesale voice calls

- Wholesale SMS
- Wholesale data
- Retail voice calls
- Retail SMS
- Retail data

Universal Service

ANACOM is responsible for:

- Provision of access at a fixed location.
- Provision of access to functional Internet services.
- Directory enquiry services and directories.
- Public pay telephones.
- Measures for disabled users and those of low incomes.

NOS Comunicações S.A. is the designated Universal Service provider for a 5 years period (june 2014- june 2019) for the provision of “Connection at a fixed location to the public telephone network and access to publicly available telephone services at a fixed location”. The universal service provider was designated by a tender for a maximum amount of 11.971.176,75 euros for the entire term of the respective contract.

- MEO –Serviços de Comunicações e Multimédia, S.A. is the designated universal service provider for a 5 years period for the provision of public payphones. The universal service provider was designated by a tender for the total amount of 12.333.000,00 euros for the entire term of the respective contrat.

- MEO –Serviços de Comunicações e Multimédia, S.A. is the designated universal service provider for the provision of a comprehensive directory and of a comprehensive telephone directory enquiry service for a period of 3 years. The universal service provider has been designated by a tender for a maximum amount of 3.523.600,00 euros.

The compensation fund has been established by Law. According to that Law n. 35/2012 the compensation fund is under the administration of ANACOM

Concerning the net costs of universal service (NCUS) prior to the provision of universal service by the providers chosen by tender procedure, ANACOM approved: (i) in 19.09.2013 (<http://www.anacom.pt/render.jsp?contentId=1175587&languageId=1>) the NCUS of 23,584,976.93 euros, 20,168,431.93 euros and 23,057,573.48 euros for 2007, 2008 and 2009, respectively; (ii) in 20.11.2014 (<http://www.anacom.pt/render.jsp?contentId=1340632#.WFJ997muz9I>) the NCUS of 23,522,982.66 euros and 23,527,625.33 euros for 2010 and 2011, respectively; (iii) in 17.12.2015 (<http://www.anacom.pt/render.jsp?contentId=1375172&languageId=1#.WFKAUrmuz9I>) the NCUS of 20,343,490.71 euros for 2013; and (iv) in 27.10.2016 (<http://www.anacom.pt/render.jsp?contentId=1399238&languageId=1#.WFKBHrmuz9I>) the NCUS of 7,721,670.71 euros for 2014 (note that concerning 2014 this NCUS corresponds only to a part of the year, as the provision of the US under new contracts started during 2014).

Net Neutrality

Seeking to safeguard the rights of consumers and driven by the need to ensure greater transparency in the sector, ANACOM approved, on June 2014, a decision to prohibit providers from using the term "unlimited" to refer to voice call/SMS or internet offers which are in fact subject restrictions or limits. Accordingly, providers may only use terms such as "unlimited traffic" or "unlimited calls/SMS" to refer to offers which are in actual fact free from limits or restrictions throughout the duration of the contract.

ANACOM's decision stemmed, in particular, from a series of complaints made by consumers who subscribed to "unlimited" offers in the belief that they would receive unrestricted access without limitations to services, but then found that the services provided were in fact subject to certain limits and not therefore "unlimited" as advertised.

ANACOM considered it necessary to correct this situation; an offer cannot be properly advertised as "unlimited" - or advertised using any other expression that would lead consumers to conclude that an offer was unlimited - when in fact the offer is subject to limits. Such practices mislead consumers and are contrary to the legal requirements governing transparency and the suitability of information provided to the public.

Moreover, under the same decision, the application, in unlimited offers, of restrictive measures or limits to internet traffic is only permissible in exceptional circumstances - i.e. to prevent overcapacity on a network segment. The duration of such measures must be limited and normal service must be restored as soon as the exceptional circumstances justifying the application of restrictions are resolved. Any restrictions must be applied fairly in terms of the equitable treatment of different users using the same tariff/bundle.

Lastly, in the terms and conditions governing offers, providers must provide clear and transparent information on any measures that may be applied, so that consumers are aware of their existence, and must provide indication of the impact of measures on quality of service.

Meanwhile, rules governing net neutrality, applicable to all European Union Member-states without requiring transposition to national law, were published under the EU Regulation 2015/2120 of 25 November 2015 and came into force, with few exceptions, on 30th April 2016. These rules overlap, up to a certain point, the above mentioned ANACOM's 2014 decision, which is still effective in what concerns the use of the term "unlimited" to describe a commercial offer.

The Regulation established the principle of open Internet within the EU, according to which operators must treat all traffic equally, providing their service through a high-quality open Internet.

Operators are therefore prohibited from blocking or slowing down content, applications or services provided by their competitors. This prohibition is, however, subject to a limited number of exceptions. Accordingly, traffic management may exceptionally be employed:

- where deemed necessary to ensure compliance with national or European law on the legality of content under criminal law, or implementing measures under this legislation;
- where necessary to preserve network integrity and security;
- where necessary to mitigate the effects of exceptional or temporary network congestion; however, an operator whose network is continuously and repeatedly congested cannot rely on this exception, and is required to invest in increased network capacity.

The Regulation also stipulates that Internet service providers inform consumers about network speed in their contracts. For fixed networks, this information must refer to minimum speed, to the speed generally available, to maximum speed and to advertised download and upload speed. In the case of mobile networks an estimate needs to be given of the maximum speed and advertised download and upload speed. Any significant and recurring difference between a service's actual performance and the download and upload speeds specified in the contract shall be held as being non-compliant with contracted performance for the purposes of the avenues of redress available to consumers.

With the new legal framework, in the event of any infringement of the open Internet provisions, Member States will be bound to apply sanctions which are effective, proportionate and dissuasive. Service providers will be subject to administrative and financial penalties, to be defined under national law.

Promotion of broadband

A Resolution of the Council of Ministers no. 120/2008, of 30 of July, determined that the investment on next generation networks should be deemed as one of the strategic priorities for

the Country as far as the electronic communications sector is concerned. This Resolution includes the Government's strategic guidelines for next generation networks (NGA), such as an effective and non-discriminatory access to ducts and other infrastructures, regardless of the respective owner, the provision for technical standards on infrastructures for telecommunications in housing developments, urban settlements and concentrations of buildings, and the adoption of solutions aimed at eliminating or reducing vertical barriers to the roll out of fibrefiber optics. This regime also aims for the removal or reduction of barriers to the construction of infrastructures suitable for the accommodation of electronic communications (fiber) networks, laying down rules directed towards an easier coordination of underground intervention, namely the requirement to communicate any works undertaken to enable the construction of infrastructures adapted to the accommodation of electronic communications networks and to accept the association of sector companies in this intervention. This specific regime was implemented through a Decree Law (DL 123/2009 of 21 May - <http://www.anacom.pt/render.jsp?contentId=975261&languageId=1>).

In July 2009, the Portuguese Government launched a series of Public Tenders (for the installation, management, operation and maintenance of high-speed electronic communications networks/NGAs in the Centre, North, Alentejo/Algarve zones of mainland Portugal and the islands of Azores and Madeira) in order to create several NGAs in broad rural areas with the aim of promoting social and territorial cohesion and equal opportunities in access to high quality services.

This is an investment in total of 156.5 million euros, which already provides high speed access (at least 40 Mbps and up to 100 Mbps) electronic communications networks, covering more than one million people (more than 10% of the all population living in almost half of the total municipalities). The network installation was finalized between end of 2013 and beginning of 2014 (except Madeira) and several thousand retail (triple-play) accesses are already connected.

9.13 Spain

Indicator	2014	2015	Ø 2014	Ø 2015
Coverage mobile (2G/3G/4G)	100,00	100,00	99,52	99,64
Coverage 3G/4G	98,90	99,40	95,59	93,41
Mobile cellular penetration	107,85	108,20	113,73	115,50
Internet Usage	76,19	78,69	64,64	67,45
Fixed broadband subscriptions/100 inhabitants	27,63	28,69	21,06	22,36
Portion of HH with Internet access at home	69,80	78,70	63,52	68,94

Institutional layout

CNMC is the independent National Regulatory Authority with competences on Telecommunications, Audiovisual, Post, Energy, Railways and Airports regulation as well as application of Antitrust, as referred by in the Act 3/2013, of June 4, on the creation of the Spain's National Authority for Markets and Competition, (<https://www.boe.es/buscar/doc.php?id=BOE-A-2013-5940>).

However, other public institutions also have competences on the telecom sector, in particular the Ministry of Industry, Energy and Tourism.

CNMC Chairman and 9 commissioners (members of the Board) are appointed for six years and their mandate cannot be renewed. CNMC acts as a collegiate body.

The Board operates through a Plenary session and two Chambers (on Antitrust and Regulatory oversight), depending on the issue being addressed.

The Antitrust Chamber, composed by 5 members of the Board and chaired by the Chairman of CNMC, Mr. José María Marín Quemada, is responsible for the enforcement of competition law and promotion of competition. The Chamber usually meets weekly.

The Regulatory oversight Chamber, composed by 5 members and chaired by the Vicechair of CNMC, Ms María Fernández Pérez, is responsible for the oversight, control and conflict resolution in the sector-specific regulated markets. The Chamber usually meets weekly.

According to Act 3/2013 and referring to its article 15 on the appointment of the Head and the members of the Board, terms for appointment are the following:

- Board members, including the Chairman and Vice-Chairman, shall be appointed by the Government, by Royal Decree, at the proposal of the Minister of Economy and Competitiveness, from among persons of recognized standing and professional competence in the field of action of the Commission, following the appearance of the person proposed for the position before the corresponding Committee of the Congress of Deputies. Congress, through the competent Committee and by virtue of a resolution adopted by an absolute majority, may veto the appointment of the proposed candidate within one calendar month of receipt of the relevant communication. If at the end of this period there has been no express declaration from the Congress, the corresponding appointments shall be deemed to have been accepted.
- The term of office of the members of the Board shall be six years, without the possibility of re-election. Members of the Board shall be replaced partially every two years, so that no member of the Board remains in office for longer than six years.

Regarding grounds for dismissal, it is article 23 which explains causes of removal from the post:

- Members of the Board shall cease to hold office upon:
 - Resignation accepted by the Government. b. Expiry of their term of office.
 - A situation of incompatibility arising.
 - Having been convicted of a felony.
 - Permanent disability
 - Dismissal decided on by the Government for serious breach of the duties of his office or breach of duty on incompatibilities, conflicts of interest or the duty of confidentiality. The dismissal shall be decided by the government, regardless of any penalty system that might apply, following investigation of the case by the Minister for the Economy and Competitiveness.

The NRA has 486¹⁵ employees as of 31th December 2016 (www.cnmc.es).

Regarding the CNMC budget (€ 60.019.610 in 2016), although CNMC has autonomy in preparing its own draft budget, it is submitted the Ministry of Finance for approval by the Parliament. In terms of implementation, CNMC is subject to limitations. The budgetary system is, as the Act 3/2013 establishes, of a “limitative” nature, in the sense that the amount set for every budget line represents an upper cap. On the other hand, the regime applicable to transfers between lines is set out in the Organic Statute of CNMC, which is approved by the Government

NRAs competences and powers

¹⁵ FTE equivalent.

CNMC has competences on Telecommunications, Broadcasting – TV Transmission-, Content TV and Post sectors as well as Antitrust and other public utilities (energy, railways and airports).

Regarding the telecommunication sector this authority is competent in:

- Market analysis.
- Imposition of obligations.
- Control of obligations.
- Resolution of disputes.

When it comes to CNMC powers, the Ministry cannot give instructions to the NRA for the exercise of the tasks assigned to this authority.

The NRA has the power to request information from operators.

Following EU regulation the main remedies that can be imposed by CNMC are:

- Obligation of transparency.
- Obligation of non-discrimination.
- Obligation of accounting separation.
- Obligations of access to, and use of, specific network facilities.
- Price control and cost accounting obligations.
- Functional separation.

Both, behavioural and functional separation remedies can be imposed by CNMC. According to the European Directives, structural separation must be authorized by EC. Not other structural remedies can be imposed.

NRA's decisions are directly enforceable and judicial appeals with full review of decisions are possible. Dispute settlement body is not a separated body from the NRA.

Fines and penalties can be imposed by CNMC.

The CNMC is entitled to impose administrative sanctions -see article 80 of the Telecoms Act 9/2014- if an infringement of the law or its decisions (regarding its competences) occurs. This enforcement power is subject to a legal sanctioning procedure as of applicable to all Public Administrations. The procedure is established in Act 39/2015, dated 1 October, on the common administrative procedure of the Public Administrations.

In the field of telecommunications, the maximum duration of the sanctioning procedure shall be one year and the deadline for submissions will have no less than one month duration.

The fines imposed by the CNMC are intended to have a deterrent effect. The fines for very serious infringements -see art. 79.1.a) of the mentioned Telecoms Act- cannot be less than, neither higher than five times, the gross revenues obtained by the operator as a result of the infringement. In case that these criteria would be impossible to apply, the maximum fine that can be imposed is 20 million euro. For serious infringements the maximum penalty will be up to the double of the gross benefit obtained or 2 Million euro, and for minor infringements the maximum penalty can be of 50.000 euro.

CNMC is also empowered to impose other measures on the operators, such as the prohibition to operate and exploit networks in the case of very serious infringements.

On the other hand, CNMC holds the competence to impose penalty payments to ensure compliance with its own resolutions, as a mean of enforced execution of the administrative act –see Additional Provision 6th of the existing Telecom Act.

NRA's accountability and transparency

The President of the CNMC shall appear at least annually before the corresponding Congressional Commission to present the annual activity report and action plan. Together with the President, one or more board members can appear by virtue of the proposal of the Congressional Commission. Additionally, every three years there will be a particular appearance of the President in order to debate the evaluation of CNMC action plan and the results achieved.

Even more, the President shall appear before the corresponding Congressional or Senate Commission, prior request of them under its own Regulations.

The CNMC is the result of the merger in one single body of the Telecom Telecommunications Authority (CMT), the Competition Authority (CNC), the Energy Commission (CNE), the Postal Sector Commission (CNSP), the Council for Audiovisual Media, the Airport Economic Regulation Commission and The Railways Regulation Committee (the last three, not yet created before the appearance of the CNMC).

After the entry into force of Act no. 3/2013, the functions, goals and organization, as scheduled in the law, are developed by the Organic Statute approved by the Council of Ministers by means of Royal Decree 657/2013, of August 30.

The division of tasks among different directorates or departments is based on the nature of the activity: antitrust, electronic communications, postal services, audio-visual/broadcasting, energy, railway and airport economic tariffs. Each Directorate or department investigates and provides draft proposals which are subsequently adopted or rejected by the Board of the CNMC. There is a formal segmentation between the units running the investigations and the Board and supporting units that adopt final decisions. The Board adopts the decisions and the Directions carry out the investigation.

According to the Act no. 3/2013, the CNMC has one Board with two Chambers: the Regulation Supervision Chamber, that adopts ex ante regulation, solve disputes between operators, and fulfil all the tasks granted to the NRA (including supervision of regulatory matters affecting the particular market), and the Competition Chamber, for antitrust matters in all markets. Most of the decisions are enacted by one or either chamber –and sometimes by the Plenary of the Board-. Coordination mechanisms are currently in place between both directorates and Chambers: there is system of cross reports between departments and Chambers, for matters that must be resolved by one Chamber but are of interest of the other one.

Moreover, Act 3/2013 foresees coordination and institutional cooperation in its article 4. This coordination is also foreseen in the Telecoms Act as CNMC is empowered of an advisory role. To that extend, CNMC shall be consulted by the Government and the Ministry of Energy, Tourism and Digital Agenda in regard to electronic communications, especially on matters that could affect the free and competitive development of the market. It may also be consulted on matters of electronic communications by the Autonomous Communities and local corporations. Specifically, the enactment of laws and regulations in telecommunications are subject to previous report –not binding- by the CNMC.

There are regular meetings with regional and national authorities to promote a better understanding of the e-com sector and other specific regulations such as privacy, data access, transparency, etc. For instance, in the field of electronic communications the Directorate has organized in the past annual legal workshops for representatives of the various Autonomous Communities, municipalities and the Administrative Court. There are informal agreements in force related to custody of administrative files, etc.

Market entrance conditions in electronic communications

Authorization regime

Pursuant to article 6.2 of the Telecoms Act of 2014 the interested undertakings for the provision of electronic communications networks/services must submit a prior communication of its intention to commence its activities to the Register of Operators. The undertaking can start its activity at the moment of the submission of the prior communication.

Upon notification, the undertaking is included in the Register of Operators. Among the information that the undertaking has to submit together with the prior communication, there is a responsible statement of compliance with the law and applicable regulations. Afterwards, CNMC shall confirm whether or not the notification fulfils with all the mentioned requirements, within the period of 15 days.

This decision is known as a resolution or official notification. In this resolution, the undertaking is informed of the need to comply with the law –general obligations/conditions-, the possibility of

being imposed further obligations and the need to request and obtain a specific authorization for the use of radio frequencies and numbering resources.

When the notification does not comply with all the stated requirements, CMT shall issue a dismissal resolution, in which case, the undertaking would have to stop its activity.

Traditionally, this competence belonged to CNMC. However, under the Telecoms Act of 2014, the competence to manage the Register of Operators is attributed to the Ministry of Energy, Tourism and Digital Agenda, although it has not yet been transferred to the Ministry.

Rights of way, radio spectrum and frequency management

The competent authority to grant rights of way in Spain is the owner of the public domain. The Ministry of Industry, Energy and Tourism is responsible for granting spectrum licenses. Usually they select one of these two methods (i) beauty contest or (ii) pure auction.

If the method selected is an auction, the requirement is the price.

If the method selected is a beauty contest, the result depends on the operators' commitments (coverage, investment, etc.).

CNMC is not the authority for frequency management (the Ministry of Industry is). Both limited secondary trading and refarming migration of spectrum are allowed in Spain.

The 800 MHz band was auctioned in 2011 and has been available to operators since April 2015. It is used to provide mobile services (LTE).

The 700 MHz band will be made available in the future according to EU harmonization (by 30 June 2020, with a possible delay of up to two years in duly justified cases).

All methods have been used in the past, although auction has been the preferred option. Open ascending-bid auction has been the most used auction format, although there were also cases of double-round first-price sealed-bid auctions.

Numbering management

NRA is responsible for:

- Development of the National Numbering Plan.
- Assignment of rights to use numbers, addresses and names.

Regulatory framework for market analysis

Relevant markets

CNMC identifies relevant markets and it does apply competition law principles. It also identifies operators with Significant Market Power (SMP). Consequently, it imposes regulatory obligations on operators with SMP after periodically market review rounds (minimum every 3 years).

Remedies

FIXED VOICE TELEPHONY MARKETS				
	WHOLESALE			RETAIL
	Access & origination	Termination	Transit	Retail
Obligation of interconnection	X	X		
Implementation of wholesale offers	X	X		
Transparency (reference offer)	X	X		
Non-discrimination	X	X		
Accounting separation	X	X		
Price control	X	X		
Cost accounting	X	X		
Tariff rebalancing				
Retail price cap control				
Other regulation of retail tariffs				X

MOBILE VOICE TELEPHONY / SMS MARKETS			
	WHOLESALE		RETAIL
	Access & origination	Termination	Retail
Obligation of interconnection	X	X	
Implementation of wholesale offers			
Access to Mobile Virtual Operators (MVNOs)	X	X	
Collocation facilities			
Transparency (reference offer)		X	
Non-discrimination		X	
Accounting separation		X	
Price control		X	
Cost accounting		X	
Retail price cap control			
Other regulation of retail tariffs			

FIXED BROADBAND MARKETS				
	WHOLESALE			RETAIL
	Duct access	Unbundling of local loops	Bitstream access	Retail
Implementation of wholesale offers	X	X	X	
Transparency (reference offer)	X	X	X	
Non-discrimination	X	X	X	
Accounting separation	X	X	X	
Price control	X	X	X	
Cost accounting	X	X	X	
Retail price cap control				
Other regulation of retail tariffs				

Consumer issues

Consumer protection

As for CNMC, it has no competences on consumer protection for electronic communications services.

Additionally, CNMC is not empowered to handle consumers' complaints. The Ministry of Industry, Energy and Tourism is responsible for it.

Quality of service (QoS) and switching

The Ministry of Energy, Tourism and Digital Agenda and within it, the Secretary of State for Information Society and Digital Agenda (former Secretary of State for Telecommunications and for the Information Society) is the entity entitled with the powers in the QoS area.

Order IET / 1090/2014 of 16 June of the Ministry of Industry, Energy and Tourism which regulates the conditions related to the quality of service in the provision of electronic communications services.

Regarding terms, the operators referenced below shall publish the required QoS parameters on a quarterly basis. However, no thresholds or penalties are defined, and the information provided is merely informative for the end-users.

Operators obliged to obtain and publish information on the most relevant quality levels, for the purpose of informing the users about the services offered to residential users, are the ones providing the following services and exceeding, upon entry into force of this order, the following annual turnover threshold:

- A) 20 million euros in the provision of the fixed telephone service available to the public.
- B) 20 million euros in the provision of the mobile telephone service available to the public.
- C) 20 million euros in the provision of the fixed Internet access service available to the public.
- D) 20 million euros in the provision of the mobile Internet access service available to the public.

Operators who exceed one of the thresholds of paragraph 1 above shall also come under obligation to obtain and publish information on the levels of quality of service at a date subsequent to the entry into force of this order. Said obligation shall commence after one year has elapsed from the date on which it occurred.

In addition, operators providing any of the services referred to in paragraph 1 above with market shares of more than 10% in any geographical area shall be obliged to obtain and publish information on the levels of quality of service when expressly required in accordance with the interests of the end-users involved by The Secretary of State for Telecommunications and for the Information Society .

International Roaming

In Spain, international roaming is regulated as it follows: X Wholesale voice calls

- Wholesale SMS
- Wholesale data
- Retail voice calls
- Retail SMS
- Retail data

Universal Service

Provision of a fixed network + telephone service on a fixed location + broadband connection of 1 Mbps on a fixed location: Any end-user may request to the USP for the reasonable provision of public communication networks to a fixed location (either on a fixed or radio electric network) and/or functional Internet access and data communications broadband downstream speed of 1 Mbit per second. End-users may request the provision of broadband connection over a pre-

existing fixed connection. In addition, end users have the right to publicly available telephone service. The USP shall fulfil with this obligation within the period of 60 days. When the USP cannot comply with the mentioned period of time, it must be done in the shortest time possible and automatically compensate by exempting the monthly connection payments fees in which that period has passed.

For more information: <http://www.minetur.gob.es/telecomunicaciones/es-ES/Servicios/InformeUniversal/Paginas/ConexServTelefyBA.aspx>

Directory enquiry services: The provision of directory enquiry services is not currently provided under the scope of US because, as the Ministry of Industry, Energy and Commerce determined and the CNMC reported, those services are currently provided by the market providers on competitive conditions.

Directories: All subscribers to fixed telephone service or mobile telephone service have the right to appear in the directory service and receive a copy of it. The right to be included is exercised through the telephone service providers' (also the right to be excluded), while the right to receive the directory shall be guarantee by the USP.

Public pay telephones in combination with other public's voice telephony access points: The USP shall ensure the provision of the existence of a sufficient supply of public pay telephones on a public domain. This offer must consists, at least, in one public pay telephone and one more per each 3.000 people, in each municipality of 1.000 or more people and one public pay telephone in each municipality of less than 1.000 people, where justified based on the criteria of minimum bid. It is up to each City Council to claim the USP all the necessary modifications to meet the criteria for the minimum bid, including the new terminal facility or location changes. The terminals must meet the minimum requirements set out in the regulations, such as: (i) provide for calls made to any telephone subscriber service available to the public including those free of charge, if applicable, (ii) allow free calls to the emergency number 112, (iii) allow service 24 hours a day, (iv) arrange in a visible place, adequate and updated information on the conditions of use and pricing information, (v) arrange collection of the communication at the end, and return the remaining credit on the basis of previously deposited coins, (vi) provide the option to pay by card coins and one terminal of each service point, (vii) allow free access to telephone directory service on subscriber numbers indicated in the cabin.

Moreover, the terminals and its supports must incorporate special accommodations or facilities to facilitate its use by persons with disabilities, such as: accessibility and usability and hearing and visual impairment.

Measures for disabled users: The CNMC does not have competences in all US issues. On this particular issue, the Ministry of Industry, Energy and Tourism (SETSI) is the competent body to establish the specific requirements to respond to the needs of disabled users. A summary of these specific requirements has been published by the Ministry in its web site.

Thus, the designated operator must ensure the existence of a sufficient supply and technologically up-to-date of specific terminals, which might be adapted to all different types of disabilities: blind or severely visually impaired users, deaf or severely hearing-impaired and/or phonation users, wheelchair users and/or people of a small stature. More information: <http://www.minetur.gob.es/telecomunicaciones/es-ES/Servicios/InformeUniversal/Paginas/Medidasespecificas.aspx>

Measures for users with low incomes: Social tariffs consist on a 70% discount on connection fee and a 95% discount on subscription fee. The affordability criteria are measured with an income public indicator (IPREM). The social tariffs beneficiaries are retirees and pensioners with a yearly income lower than a threshold public indicator (120% IPREM).

Net Neutrality

In Spain the Ministry of Energy, Tourism and Digital Agenda is responsible for implementing the EU Regulation on open Internet (except for disputes between agents, where CNMC is responsible). In any case, as members of BEREC, the CNMC has actively contributed to the drafting of the Guidelines on Net Neutrality.

In any case, as members of BEREC, the CNMC has actively contributed to the drafting of the Guidelines on Net Neutrality.

Promotion of broadband

In Spain, the Ministry of Energy, Tourism and Digital Agenda is responsible for approving the National Broadband Plan (see next question).

Within its competencies as a sectorial regulator, the CNMC also promotes / facilitates investment in NGA by regulating the broadband markets. In this sense, the CNMC recently analysed and adopted measures in the broadband markets in Spain (Markets 3a, 3b and 4 of the Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation 2014/710/EU).

Finally, the CNMC has mandated regulated access to Telefonica's passive infrastructure and this has enabled massive NGA deployments by alternative operators.

The Spanish Government adopted in February 2013 a "Digital Agenda for Spain" and included nine specific plans for its implementation and execution:

1. Telecommunications and Ultra-fast Networks Plan
2. ICT in SMEs and e-Commerce Plan
3. Digital Content Industry Comprehensive Plan

4. Technological Companies Internationalisation Plan
5. General State Administration's e-Government Action Plan
6. Digital Public Services Plan
7. Digital Ecosystem Confidence Plan
8. ICT Sector Development and Innovation Plan
9. Digital Inclusion Plan

Specifically the Telecommunications and Ultra-fast Networks Plan includes a Next-Generation Broadband Extension Programme which makes available public funding for deployment of NGA networks in areas not well served by market forces.

9.14 Switzerland

Indicator	2014	2015	Ø 2014	Ø 2015
Coverage mobile (2G/3G/4G)	100,00	100,00	99,52	99,64
Coverage 3G/4G	100,00	100,00	95,59	93,41
Mobile cellular penetration	136,68	136,47	113,73	115,50
Internet Usage	87,00	87,48	64,64	67,45
Fixed broadband subscriptions/100 inhabitants	42,47	45,11	21,06	22,36
Portion of HH with Internet access at home	90,60	82,60	63,52	68,94

Institutional layout

BAKOM and ComCom are the independent body for telecommunications sector for tasks which are not in the responsibility of ComCom. Consequently, it has competences in telecommunications, Broadcasting (TV transmission), content TV, Post (partially) and Promotion of IT and e-Government (partially) with coordination of the Ministry referring to Law on Telecommunications (LTC) of 30 April 1997.

- Federal Communications Commission ComCom)
- Competition Commission (COMCOM)
- State Secretariat for Economic Affairs (SECO)
- Surveillance of Price

The directors of BAKOM as well as the President of the ComCom are elected by the Federal Council (7 members, Executive body of the Swiss Confederation). Usual grounds for dismissal as infringements of contract or general conditions and rules.

ComCom is a collegiate body whereas BAKOM is not. ComCom has 7 members of the Board and its number of employees is 4, while for BAKOM is 270 (including some ministerial tasks).

BAKOM has no autonomy to define its own budget neither on its implementation.

The latest official report dates from 2014. BUDGET 2014 (Euros): 48 M€ (including some ministerial tasks)

NRAs competences and powers

When it comes to NRA powers, the Ministry cannot give instructions to ComCom for the exercise of the tasks assigned to this authority. However, it can give instructions to BAKOM. Not only has the ANR the power to request information from operators (The operators have the obligation to disclose any information required by BAKOM) but also can it impose behavioural remedies. In a future revision of the law, structural ones might be added.

There are criminal provisions for some infringements; see Art. Art. 49 – Art. 54. The power of prosecution and adjudication is within the Department DETEC (see 1.4.5), but it can delegate these tasks as well as the enforcement of decisions to BAKOM (Art. 55). Link: <http://www.admin.ch/ch/e/rs/7/784.10.en.pdf>

More relevant and common in practice are surveillance and legal remedies (Art. 58 et seq.).

If BAKOM detects an infringement of the law, it may:

- a) call for the operator to remedy the infringement or take measures to prevent any repetition of it; the person responsible for the infringement must inform BAKO; of the measures it has taken;
- b) require the operator to surrender to the Confederation any revenue generated during the infringement;
- c) make the licence subject to conditions;
- d) restrict, suspend, revoke or withdraw the licence or restrict, suspend or totally forbid the activity of the legal or natural person responsible for the infringement.

The operators have the obligation to disclose any information required by BAKOM.

BAKOM can sanction an operator which infringes the applicable law, the licence or a decision having force of law. This operator may be required to pay an amount up to 10 percent of the amount of its average turnover in Switzerland in the last three financial years. When assessing the penalty, BAKOM shall take into account the gravity of the infringement and the enterprise's financial situation (Art. 60).

NRAs accountability and transparency

BAKOM (Federal Office of Communications) is on the one hand part of the Federal Department of the Environment, Transport, Energy and Communication (DETEC) which acts as the ministry. Therefore BAKOM has some ministerial tasks (especially legislation, market observation, conformity with telecom legislation). On the other hand BAKOM is the regulator for those tasks which are not within the responsibility of the Federal Communications Commission ComCom). BAKOM also acts on behalf of ComCom.

Federal Communications Commission (ComCom): The ComCom is the independent regulatory authority for the telecommunications market for the following tasks:

- Granting licences for the use of radio communication frequencies
- Award of universal service licences
- Laying down the access conditions (unbundling, interconnection, leased lines, etc.) when service providers fail to reach an agreement
- Approval of national numbering plans
- Fixing the terms of application of number portability and carrier selection
- Decisions about supervisory measures and administrative sanctions regarding the aforementioned tasks.

As provided for in law, the Commission instructs the Federal Office of Communications (BAKOM) to prepare its business and implement its decisions. The Commission has moreover delegated some of its tasks to BAKOM.

<http://www.bakom.admin.ch/org/organisation/00541/index.html?lang=en>

There are other federal offices which have relevant tasks in the regulation of telecommunications:

Competition Commission (COMCO): If the question of market dominance must be analysed, the Competition Commission (ComCom) has to be consulted.

State Secretariat for Economic Affairs SECO: Cooperation with the SECO in the field of price indication in advertisements (relevant for all telecom services, especially Value Added Services and premium rate numbers), consumer protection, unfair competition as well as the evaluation of the impact of regulation on economy.

Surveillance of Price: The Surveillance of Price has the right to give its opinion on all prices regulated by the regulator. If there is a disagreement between both authorities, the regulator has to justify why it is not following the opinion of the Surveillance of Price.

If prices are not the result of fair competition and abusive and they are NOT within the responsibility of BAKOM, the Surveillance of Price can search for a conjointly agreement with the operator. If there is no agreement, the Surveillance of Price can fix the relevant prices.

Market entrance conditions in electronic communications

Authorization regime

Licenses for specific services

Notification

In general, market entrance is free for Telecom operators, but they have to notify BAKOM of their activities. Furthermore they must indicate a correspondence address in Switzerland.

If they want to use radio spectrum, they have to apply for specific licenses. The use of numbering resources is also regulated to some extent.

Rights of way, radio spectrum and frequency management

Spectrum has its own licensing management process.

In February 2012, the Federal Office of Communications (OFCOM), on behalf of ComCom, auctioned all mobile phone frequencies. In addition to the frequencies employed today using GSM and UMTS technology, additional frequencies were awarded in the 2600 MHz and 800 MHz ranges (the 'digital dividend').

The overall award of all mobile radio frequencies in a single auction was conducted successfully and generated total revenue in excess of CHF 996 million (approx. EUR 800 million). ComCom awarded the licences at the beginning of June 2012 to Orange, Sunrise and Swisscom.

Each of these three operators was able to acquire a future-proof spectrum allocation significantly larger than their previous one. Today, a large proportion of customers have already a smartphone and the data which is carried over mobile radio networks is doubling every 12 months.

The entry into force of the new mobile radio licences opens up the way for significant investment in the latest mobile technologies such as LTE (Long Term Evolution of UMTS). The early award of frequencies and a term which extends to the end of 2028 enable licensees to plan for the long term and make their investments on a solid basis.

In August 2014 the three mobile operators concluded successfully the refarming process in the 900 and 1800 MHz bands. The auction in 2012 resulted in changes in allocations in these bands, which made a refarming necessary.

Numbering management

NRA is responsible for:

- Development of the National Numbering Plan.
- Assignment of rights to use numbers, addresses and names.

Regulatory framework for market analysis

Relevant markets

Switzerland identifies relevant markets and it does apply competition law principles so as to define relevant markets. TRC also identifies operators with Significant Market Power (SMP). Consequently, it imposes regulatory obligations on operators with SMP and Market reviews solely on request of a market player (ex-post regulation).

Consultation of the Competition Commission (ComCom) is mandatory. If BAKOM disagrees with ComCo's expertise the difference has to be justified in BAKOM's final decision.

Remedies

FIXED VOICE TELEPHONY MARKETS				
	WHOLESALE			RETAIL
	Access & origination	Termination	Transit	Retail
Obligation of interconnection	X (also indirect interconnection)	X (also indirect interconnection)	X (partly)	
Implementation of wholesale offers	x	x	x	
Transparency (reference offer)	x	x	x	
Non-discrimination	x	x	x	
Accounting separation				
Price control	x	x	x	
Cost accounting	x	x	x	
Tariff rebalancing				
Retail price cap control				X (USP only)
Other regulation of retail tariffs				

MOBILE VOICE TELEPHONY / SMS MARKETS			
	WHOLESALE		RETAIL
	Access origination	& Termination	Retail
Obligation of interconnection		x (on request)	
Implementation of wholesale offers		x (on request)	
Access to Mobile Virtual Operators (MVNOs)			
Collocation facilities			
Transparency (reference offer)		x (on request)	
Non-discrimination		x (on request)	
Accounting separation			
Price control		x (on request)	
Cost accounting		x (on request)	
Retail price cap control			
Other regulation of retail tariffs			

FIXED BROADBAND MARKETS				
	WHOLESALE			RETAIL
	Duct access	Unbundling of local loops	Bitstream access	Retail
Implementation of wholesale offers	x	x		
Transparency (reference offer)	x	x		
Non-discrimination	x	x		
Accounting separation				
Price control	x	x		
Cost accounting	x	x		
Retail price cap control				
Other regulation of retail tariffs				

Consumer issues

Consumer protection

As for Switzerland, specific legislation to protect telecommunications' end users' rights was adopted, dealing with:

- Contract conditions for telecommunication services.
- Data protection.
- Procedure for handling complaints by consumers.

Additionally, BAKOM is empowered to handle with consumers' complaints and regulation does not set a maximum initial duration of contract.

BAKOM is not empowered (legally and by resources) to set up any comparison tools for telecom services. Some transparency and comparing tools are offered by private initiatives.

Quality of service (QoS) and switching

Consumer's will to switch operator decreased in 2013 – for mobile (from 276'247 in 2012 to 187'160 in 2013) as well as for fixed (82'846 to 66'917) numbers. Especially mobile operators have been successful to bundle services including unlimited traffic (calls and data) and to retain their clients, which explains the lower churn rates.

There is specific legislation for services and network connections in relation with the Universal Service Obligations. These rules only apply to the USP.

<http://www.bakom.admin.ch/org/grundlagen/00563/00564/00663/index.html?lang=en>
(Document available only in German and French).

Consumer's will to switch operator decreased in 2013 – for mobile (from 276'247 in 2012 to 187'160 in 2013) as well as for fixed (82'846 to 66'917) numbers. Especially mobile operators have been successful to bundle services including unlimited traffic (calls and data) and to retain their clients, which explains the lower churn rates.

International Roaming

In Switzerland, international Roaming is not regulated.

Universal Service

NRA is responsible for:

- Provision of access at a fixed location.
- Provision of access to functional Internet services (including broadband connection).
- Public pay telephones.
- Directories
- Measures for disabled users (services for hearing and visually impaired).

In Switzerland a fund can be set up if compensation is asked by the USP. The universal service (US) is not financed by a fund.

However, NRA is competent in:

- Designation of the operator or operators with universal service obligations.
- Calculating the net cost of universal service provision.
- Implementation and management of the funding mechanism of universal service.
- Supervision of obligations (rates, quality of services, etc.) related to the provision of universal service.

Consumers can choose between three types of connections (analogue, digital and broadband). These connections must allow calls, receiving and sending faxes and accessing the internet. The connection includes at least one telephone number and one directory entry.

A broadband connection must provide an internet connection at a minimum speed of 2000/200 kbit/s. In exceptional cases, this speed may be lower. In addition, the universal service licensee is not obliged to provide broadband access when a comparable alternative service is offered on the market by another operator.

Some services (national calls on the fixed network, transcription services for the hearing impaired, supplement for the use of public payphones) and all three types of connection are subjected to price ceilings.

The Federal Communications Commission (ComCom) designated Swisscom as the universal service Provider from 1 January 2008 till end of 2017. Swisscom has refrained from applying for any financial compensation from the funding system.

Please note that the incumbent Swisscom is only partly privatized; the majority of shares (51.22 %) still belongs to the Swiss Confederation.

Net Neutrality

Net neutrality is included in a law.

Future measures on net neutrality are announced.

Promotion of broadband

Switzerland doesn't have a national broadband plan. However the authority promoted the deployment of NGA's networks in different ways. It invited leading actors of the industry to participate in mixed working groups on a voluntary basis.

- The Round Table on fibre networks

The round table on fibre networks was launched in June 2008 by ComCom to discuss issues relating to the provision of households with fibre networks. ComCom wanted to prevent the creation of monopolies in this sector which would impede access for other telecommunications providers and obstruct competition. At the same time, construction of the network should be as efficient as possible, in order to allow economically feasible investment. A dozen heads of Swiss companies which are investing in fibre networks have taken part in nine Round Tables.

- Working Group NGA

BAKOM created in 2011 a working group tasked with developing the fundamentals in order to help policy makers in municipalities, regions and cantons make their decisions. Representatives of telecommunications network operators, electricity utilities, associations, cantons and the federal administration compiled and published details of the availability of high-speed broadband products and services (www.broadbandmap.ch), the demand for these and decision aids for municipalities and regions (www.hochbreitband.ch).

9.15 Tunisia

Indicator	2014	2015	Ø 2014	Ø 2015
Coverage mobile (2G/3G/4G)	99,20	99,00	99,52	99,64
Coverage 3G/4G	89,50	64,00	95,59	93,41
Mobile cellular penetration	128,49	129,91	113,73	115,50
Internet Usage	46,16	48,52	64,64	67,45
Fixed broadband subscriptions/100 inhabitants	4,49	4,34	21,06	22,36
Portion of HH with Internet access at home	17,10	17,10	63,52	68,94

Institutional layout

INTT is the independent National Regulatory Authority with competences on Telecommunications referring to Law of 2001-1 of January 15th, 2001.

There are other NRAs: Agence Nationale des Fréquences ; Agence Nationale de la Sécurité Informatique ; Agence Nationale de la Certification Electronique ; L'Office National de la Télédiffusion.

The President is appointed for 5 years with possibility of one renewal, and the authority works as a collegiate body with 7 members of the Board, with 3 years-term.

INTT has 60 employees and its budget (autonomously defined and implemented).

NRAs competences and powers

It has competence in Telecommunications sector.

Regarding the telecommunication sector this authority is competent in:

- Market analysis
- Imposition of obligations
- Control of obligations
- Resolution of dispute
- Numbering
- Quality of service

- Consumers' protection

When it comes to INTT powers, the Ministry cannot give instructions to the NRA for the exercise of the tasks assigned to this authority. Not only has NRA the power to request information from operators but also can it imposes both behavioural and structural remedies (such as Cost accounting, transparency, regulation of retail tariffs, obligation of interconnection)

NRA can impose fines and penalties (sanctions and referral measures) and judicial appeals with full review of decisions are possible. Additionally, INTT decisions are directly enforceable.

NRA cannot submit proposals for sectoral legislative amendments to the Parliament.

NRA's accountability and transparency

It is mandatory for the NRA to make public consultations before adopting regulatory decisions as does is it for decisions to be published. NRA is accountable for Parliament and Government.

Market entrance conditions in electronic communications

Authorization regime

Unified licenses (global)

Granting licenses is the responsibility of the TIC's Ministry.

Rights of way, radio spectrum and frequency management

NRA is empowered to grant rights of way and the approval of Government is necessary to grant licenses. Additionally, licenses are approved by decree.

However, NRA has no authority for frequency management, and secondary trading is not allowed in Tunisia. On the other hand, reframing migration within the granted license is allowed in Tunisia.

Numbering management

NRA is responsible for:

- Development of the National Numbering Plan.
- Assignment of rights to use numbers, addresses and names.

Regulatory framework for market analysis

Relevant markets

Tunisia identifies relevant markets applying competition law principles and also identifies operators with Significant Market Power (SMP). Consequently, it imposes regulatory obligations on operators with SMP after periodically market review rounds, every 3 years.

Remedies

FIXED VOICE TELEPHONY MARKETS				
	WHOLESALE			RETAIL
	Access & origination	Termination	Transit	Retail
Obligation of interconnection	x	x	x	
Implementation of wholesale offers	x	x	x	
Transparency (reference offer)	x	x	x	x
Non-discrimination				
Accounting separation				
Price control	x	x	x	x
Cost accounting	x	x	x	x
Tariff rebalancing				
Retail price cap control				
Other regulation of retail tariffs				

MOBILE VOICE TELEPHONY / SMS MARKETS			
	WHOLESALE		RETAIL
	Access origination	& Termination	Retail
Obligation of interconnection	x	x	
Implementation of wholesale offers	x	x	
Access to Mobile Virtual Operators (MVNOs)			
Collocation facilities	x	x	
Transparency (reference offer)	x	x	x
Non-discrimination			
Accounting separation			
Price control	x	x	x
Cost accounting	x	x	x
Retail price cap control			x
Other regulation of retail tariffs			x

FIXED BROADBAND MARKETS				
	WHOLESALE			RETAIL
	Duct access	Unbundling of local loops	Bitstream access	Retail
Implementation of wholesale offers				
Transparency (reference offer)				
Non-discrimination				
Accounting separation				
Price control				
Cost accounting				
Retail price cap control				
Other regulation of retail tariffs				

Consumer issues

Consumer protection

Tunisia has not adopted specific legislation to protect telecommunications' end users' right.

Via Consumer protection organizations INTT is empowered to handle consumers' complaints and regulation sets a maximum initial duration of contract, no longer than 24 months.

It also obliges operators to publish their services on their website but the authority does not publish periodically information on tariffs on its website yet.

Quality of service (QoS) and switching

In Tunisia, there is specific legislation to ensure quality of service in the Tender specifications.

Regarding switching, in Tunisia there is neither fixed nor mobile portability available.

International Roaming

In Tunisia, International Roaming is not regulated.

Universal Service

NRA is responsible for:

- Provision of access at a fixed location.
- Provision of access to functional Internet services.
- Directory enquiry services and directories.
- Public pay telephones.
- Measures for disabled users and those of low incomes.

Universal service is financed by a fund in Tunisia, and the authority is competent in the following areas:

- Calculating the net cost of universal service provision.
- Supervision of obligations (rates, quality of services, etc.) related to the provision of universal service

Net Neutrality

Tunisia is currently negotiating this subject at national and regional level with different players and intends to make a public consultation.

The principle is enshrined at the level of the license agreements. The article on the neutrality requires that the holder guarantee that its service is neutral regarding the information content transmitted over its network. Thus, under current regulations, he is obliged to take all necessary measures to guarantee the neutrality of its staff concerning the content of messages transmitted over its network. For this purpose, he provides the services without discrimination, whatever the nature of the transmitted messages and takes the appropriate measures to ensure entirety.

Promotion of broadband

- There are strategic studies on the promotion of the High speed broadband.
- A strategic plan is established

9.16 Turkey

Indicator	2014	2015	Ø 2014	Ø 2015
Coverage mobile (2G/3G/4G)	99,81	99,85	99,52	99,64
Coverage 3G/4G	na	na	95,59	93,41
Mobile cellular penetration	94,79	96,02	113,73	115,50
Internet Usage	51,04	53,74	64,64	67,45
Fixed broadband subscriptions/100 inhabitants	11,69	12,39	21,06	22,36
Portion of HH with Internet access at home	60,20	69,50	63,52	68,94

Institutional layout

ICTA is the independent National Regulatory Authority with competences on Telecommunications, Broadcasting – TV Transmission- and Post sectors, referring to Electronic Communications Law numbered 5809. Ministry of Transportation, Communication and Maritime is responsible for regulation of right of way. For the rest, NRA is responsible to regulate the telecommunication sector.

According to Article 67 of Electronic Communications Law numbered 5809, special budgeted Information Technologies and Communication Authority (ICTA) which has administrative and financial autonomy and which acts as public legal entity has been established with a view to exercise the authority and to perform tasks assigned by the Law.

According to Article 67 of Electronic Communications Law numbered 5809, personnel, in order to be appointed as Board members must be graduated from faculty or departments of electronic, electric-electronic, electronic and communications, industry, physics, mathematics, computer, telecommunications and business administration engineering for engineering field; faculty or departments of political sciences, economics and administrative sciences, economy, law, business administration for social sciences field; or they must be graduated as physicist or mathematician from the abovementioned faculties or departments; or from faculties abroad whose equivalency to the abovementioned faculties or departments are approved by the authorized bodies; or besides graduating from the specified departments, they must have studied for master's degree or doctorate in the mentioned fields; they must have sufficient knowledge and experience in occupational and electronic communications field, must have worked minimum ten years in public corporations or private sector, must meet the requirements

specified under sub-paragraphs of (1), (4), (5), (6) and (7) of clause (A) of Article 48 of Law no. 657, and they must not have taken part in management or supervision bodies of any political party or if so, must have seceded thereof.

Chairman's and seven members of the board are appointed for five years and it can be renewed multiple times. According to Article 67 of Electronic Communications Law numbered 5809, President and members of the Board may be deposed before term of office only in instances where they cannot perform their tasks due to any disease or illness or where they do not anymore meet the requirements for being appointed. ICTA budget in 2016 was 2.518.210.000 TL.

NRAs competences and powers

It has competence in Telecommunications, Broadcasting – TV transmission- and Post sectors.

Regarding the telecommunication sector this authority is competent in:

- Market analysis
- Imposition of obligations
- Control of obligations
- Resolution of disputes
- Numbering
- Allocation of spectrum
- Quality of service
- Consumers' protection
- Standardization of equipment
- Networks' security
- –Privacy and data protection

When it comes to ICTA powers, the Ministry cannot give instructions to the NRA for the exercise of the tasks assigned to this authority. But, at the same time according to the

45th provision of the decree law numbered 649 and dated 17.08.2012, the minister is entitled to audit performance and transactions of the national regulatory authorities in all aspects.

The NRA the power to request information from operators.

According to the article 19 of the Public Financial Management and Control Law dated

10/12/2003 numbered 5018, Grand National Assembly of Turkey approve the regulatory and supervisory bodies' budgets including ICTA. The Authority's decisions are enforceable directly without subject to an act from another authority. However according to the ECL, the Board shall publicize proper decisions by appropriate means foremost under internet environment. Regulatory Board Decisions as communique and by-law, after being consummated by the

Board, shall be forwarded to the relevant Ministry and the Prime Ministry so as to be published in the Official Journal.

The Authority shall be entitled to monitor and inspect the adherence to the legislation, right of use and other authorization requirements; to charge operators with administrative fine with the amount up to three percent of the previous calendar year's net sales in case of non-adherence, to take necessary measures for the enforcement of national security, public order or public services properly and for the implementation of provisions enacted by laws, if necessary to take over facilities in return for compensation and to revoke the authorization in case of a gross fault or in case the authorization fee is not paid in due time. Nevertheless, the Authority shall take the opinion of the Ministry in instances where authorizations regarding electronic communications services which cover the utilization of frequency bands allocated in national scale and which need to be provided by a limited number of operators, are need to be revoked.

Fines are imposed by the relevant department according as to the authorization mentioned in the resolution of Board.

NRAs accountability and transparency

It is mandatory for the NRA to make public consultations before adopting regulatory decisions as does is it for decisions to be published. NRA is accountable before Government and Parliament.

Additionally, according to Article 67 of Electronic Communications Law numbered 5809, ICTA shall be audited by the Court of Accounts.

According to Article 5 and 6 of the Electronic Communications Law numbered 5809, Ministry of Transport, Maritime affairs and Communications and ICTA are the competent bodies in electronic communications sector. The Ministry is mainly entitled to setting strategies and policies regarding electronic communications services and the Authority. The Authority is entitled to create and protect competition, to arrange regulations pertaining to the elimination of practices which are obstructive, disruptive or limitative for competition, to this end to impose obligations on operators with significant market power in the relevant markets and on other operators when required, and to take measures stipulated by the legislation in the electronic communications sector. According to Article 6 of the Electronic Communications Law, ICTA shall be competent to supervise the breaches of competition in electronic communications sector which are against this Law and against regulations within the scope of this Law, to impose sanctions and to take the opinion of Competition Board on the issues regarding the breach of competition in electronic communications sector, if specified by the legislation.

1- The number of rights of use could only be limited when the resources need to be operated by a limited number of operators and for the aim of ensuring the efficient and effective use of resources. In case the quantity of right of use is limited:

a) The Ministry determines the criteria such as the authorization policy regarding electronic communications services which cover the assignment of satellite position and frequency band in national scale and which need be operated by a limited number of operators, starting date of the service, the duration of authorization and the number of operators to serve and the authorization is done by the Authority. Nevertheless, when deems necessary, the Ministry may open tenders directly on its own, for electronic communications services which cover the assignment of frequency bands in national scale and which need to be operated by a limited number of operators.

b) Necessary procedures pertaining to the performance of electronic communications services which are out of those mentioned in clause (a) and which need to be provided by a limited number of operators and/or to the construction and operation of electronic communications network and infrastructure shall be performed by the Authority.

The Authority, with a view to ensure the efficient use of resources, shall take necessary measures after consulting the Ministry and determine the procedures and principles of the tender.

The cooperation envisaged by the Law between ICTA and Turkish Competition Authority TCA with regards to competition problems and applications was enhanced through a Protocol which entered into force on November 2nd, 2011. according to the paragraph 2 of the Article 7 of the Electronic Communications Law numbered 5809, TCA shall take into account primarily ICTA's views and regulatory acts while investigating and auditing and taking all decisions about the electronic communications sector. Also, in the paragraph 1 of the of the Article 6 of the same Law requires ICTA to take TCA's opinion on issues related to breach of the competition when prescribed by legislation. The cooperation envisaged by the Law between ICTA and TCA with regards to competition problems and applications was enhanced through a Protocol which entered into force on November 2nd, 2011. Under the referred Protocol, "Information Transfer", "Taking Views, Coordination and Cooperation" and "Final Notification" issues are set out in detail, and it is agreed that in January of each year, the Parties shall come together at the level of Vice President to discuss important issues and developments arising out of the implementation of the Protocol, and practices, operator activities, plans, investments and projections in the sector. Also, two authorities agreed to benefit from the other party's facilities for the education and training of personnel; arrangement of training, seminars, workshops and similar activities.

According to Article 5 and 6 of the Electronic Communications Law numbered 5809, Ministry of Transport, Maritime affairs and Communications and BTK are the competent bodies in electronic communications sector. The Ministry is mainly entitled to setting strategies and

policies regarding electronic communications services and the Authority. The Authority is entitled to create and protect competition, to arrange regulations pertaining to the elimination of practices which are obstructive, disruptive or limitative for competition, to this end to impose obligations on operators with significant market power in the relevant markets and on other operators when required, and to take measures stipulated by the legislation in the electronic communications sector. According to Article 6 of the Electronic Communications Law, BTK shall be competent to supervise the breaches of competition in electronic communications sector which are against this Law and against regulations within the scope of this Law, to impose sanctions and to take the opinion of Competition Board on the issues regarding the breach of competition in electronic communications sector, if specified by the legislation

1-The number of rights of use could only be limited when the resources need to be operated by a limited number of operators and for the aim of ensuring the efficient and effective use of resources. In case the quantity of right of use is limited:

a) The Ministry determines the criteria such as the authorization policy regarding electronic communications services which cover the assignment of satellite position and frequency band in national scale and which need to be operated by a limited number of operators, starting date of the service, the duration of authorization and the number of operators to serve and the authorization is done by the Authority. Nevertheless, when deems necessary, the Ministry may open tenders directly on its own, for electronic communications services which cover the assignment of frequency bands in national scale and which need to be operated by a limited number of operators.

b) Necessary procedures pertaining to the performance of electronic communications services which are out of those mentioned in clause (a) and which need to be provided by a limited number of operators and/or to the construction and operation of electronic communications network and infrastructure shall be performed by the Authority.

The Authority, with a view to ensure the efficient use of resources, shall take necessary measures after consulting the Ministry and determine the procedures and principles of the tender.

2- The cooperation envisaged by the Law between BTK and Turkish Competition Authority TCA with regards to competition problems and applications was enhanced through a Protocol which entered into force on November 2nd, 2011.

According to the paragraph 2 of the Article 7 of the Electronic Communications Law numbered 5809, TCA shall take into account primarily BTK's views and regulatory acts while investigating and auditing and taking all decisions about the electronic communications sector. Also, in the paragraph 1 of the of the Article 6 of the same Law requires BTK to take TCA's opinion on issues related to breach of the competition when prescribed by legislation. The cooperation envisaged by the Law between BTK and TCA with regards to competition problems and

applications was enhanced through a Protocol which entered into force on November 2nd, 2011. Under the referred Protocol, “Information Transfer”, “Taking Views, Coordination and Cooperation” and “Final Notification” issues are set out in detail, and it is agreed that in January of each year, the Parties shall come together at the level of Vice President to discuss important issues and developments arising out of the implementation of the Protocol, and practices, operator activities, plans, investments and projections in the sector. Also, two authorities agreed to benefit from the other party’s facilities for the education and training of personnel; arrangement of training, seminars, workshops and similar activities.

Market entrance conditions in electronic communications

Authorization regime

Companies who are willing to provide electronic communications services and/or to construct and operate electronic communications networks or infrastructures shall notify the Authority of their intention prior to the commencement of their activities, within the frame of the Authority regulations.

When companies who have notified the Authority do not need the assignment of resources such as number, frequency and satellite position for electronic communications services and/or electronic communications network or infrastructure which they plan to provide and/or to operate; they shall be authorized pursuant to the notification to the Authority. In case they need assignment of resources they shall be authorized upon receiving the right of use from the Authority.

Rights of way, radio spectrum and frequency management

ICTA is not empowered to grant rights of way. However, ICTA grants spectrum licenses and Government also plays a role for granting spectrum license.

In case spectrum licenses requires national wide frequency band, limited number of operators; licence criteria’s are determined by Ministry of Transport, Maritime Affairs and Communications and authorization are granted by the Authority. Ministry The auctions regarding those licences might be handled by Ministry.

800 MHz frequency band has been assigned to mobile operators in a technology neutral manner. Terrestrial TV services are provided in 700 MHz band at the moment but it has been decided to use 700 MHz frequency band for mobile broadband services.

Licenses requiring national wide frequency band and limited number of operators assigned by auction and licences having no limitation regarding number of operators are assigned by direct assignment.

According to related legislation, auction format shall be designated in accordance with the necessities of the licence.

Numbering management

NRA is responsible for:

- Development of the National Numbering Plan.
- Assignment of rights to use numbers, addresses and names.

Regulatory framework for market analysis

Relevant markets

Turkey identifies relevant markets and it does apply competition law principles. It also identifies operators with Significant Market Power (SMP). Consequently, it imposes regulatory obligations on operators with SMP after periodically market review rounds.

Market analysis are renewed in every three years, as a rule. However according to the secondary legislation (bylaw) on market analysis, ICTA may perform market analysis upon a well-reasoned application before the end of three year period.

Remedies

As a principle, remedies to be imposed on operators having significant market power in the relevant market shall be appropriate, proportionate and oriented to the source of the problem. BTK, without prejudice to existing provisions in the relevant legislation shall impose one, some or all of the remedies referred below on operators having significant market power: Provision of access and/or interconnection, Transparency, Non-discrimination, Publication of reference access and/or interconnection offers, Accounting separation, Tariff control (including margin squeeze tests on fixed voice market), Cost accounting, Providing minimum sets of leased lines, Co-location and Facility sharing.

According to the article 19 of the Public Financial Management and Control Law dated 10/12/2003 numbered 5018, Grand National Assembly of Turkey approve the regulatory and supervisory bodies' budgets including BTK. The Authority's decisions are enforceable directly without subject to an act from another authority. However according to the ECL, the Board shall publicize proper decisions by appropriate means foremost under internet environment. Regulatory Board Decisions as communique and by-law, after being consummated by the

Board, shall be forwarded to the relevant Ministry and the Prime Ministry so as to be published in the Official Journal.

FIXED VOICE TELEPHONY MARKETS				
	WHOLESALE			RETAIL
	Access & origination	Termination	Transit	Retail
Obligation of interconnection	x	x		
Implementation of wholesale offers	x	x		
Transparency (reference offer)	x	x		
Non-discrimination	x	x		
Accounting separation	x	x		
Price control	x	x		
Cost accounting	x	x		
Tariff rebalancing				
Retail price cap control				
Other regulation of retail tariffs				

MOBILE VOICE TELEPHONY / SMS MARKETS			
	WHOLESALE		RETAIL
	Access origination	& Termination	Retail
Obligation of interconnection	x	x	
Implementation of wholesale offers	x	x	
Access to Mobile Virtual Operators (MVNOs)	x		
Collocation facilities	x	x	
Transparency (reference offer)	x	x	
Non-discrimination	x	x	
Accounting separation	x	x	
Price control	x	x	
Cost accounting	x	x	
Retail price cap control			
Other regulation of retail tariffs			

FIXED BROADBAND MARKETS				
	WHOLESALE			RETAIL
	Duct access	Unbundling of local loops	Bitstream access	Retail
Implementation of wholesale offers	x	x	x	
Transparency (reference offer)		x	x	
Non-discrimination		x	x	
Accounting separation		x	x	
Price control		x	x	
Cost accounting		x	x	
Retail price cap control				
Other regulation of retail tariffs				

With regard to mobile access and call origination market, mobile broadband services are evaluated under the product market and subjected to the remedies which were imposed in the market analysis.

Consumer issues

Consumer protection

As for Turkey, specific legislation for consumer protection for Electronic communication services has been applied. In that sense, it deals with:

- Contract conditions for telecommunication services.
- Contract duration.
- Penalty payments in case of withdrawal.

- Procedure for handling complaints by consumers.
- Data protection.

Additionally, ICTA is empowered to handle consumers' complaints even though regulation does not set a maximum initial duration of contract.

Operators are obliged to publish periodically information on tariffs of telecommunication services. (See <http://www.btk.gov.tr/tr-TR/Sayfalar/Mobil-Tarife-Karsilastirma>)

Quality of service (QoS) and switching

In Turkey, quality of service on telecommunication services and networks are defined: <http://www.btk.gov.tr/File/?path=ROOT%2f1%2fDocuments%2fOrdinance%2fBy-Law%20On%20Quality%20Of%20Service%20In%20The%20Electronic%20Communications%20Sector.pdf>

Service control is required for legacy, incumbent/dominant/SMP operator, mobile and Universal service operators. Regulation establishes penalties for non-compliance with QoS standards. NRA periodically revises QoS parameters.

Regarding switching, ICTA is responsible for one-day fixed and mobile portability.

International Roaming

In Turkey, international Roaming is not regulated.

Universal Service

In Turkey, there is no Universal Service Law.

Net Neutrality

It will be considered "an official position" if a governmental authority or public organisation (e.g. Ministry, governmental representative, NRA, etc) has made public any position on regulating net neutrality in the national legal order of the country, regardless of whether the opinion is for or against it.

Promotion of broadband

A number of measures have been taken to ensure deployment of NGA in Turkey and it has adopted regulation to guarantee the access of all the citizens to broadband services.

With the decision of the BTK Board, dated 03/10/2011 and numbered 2011/DK-10/511, it is ensured that for the purpose of encouraging new investments, technological development and

production in the electronic communications sector, and within this context, promoting increase of newly emerging fibre internet access services and improving infrastructure based competition;

- Fibre access (FTTH/FTTB) is excluded from market analyses process for the five year period or till the percentage of fibre internet subscribers reaches the 25% of the whole fixed broadband subscribers, and
- Türk Telekom (the fixed incumbent) is required to comply with its commitment placed in its letter dated 24.08.2011 and numbered 809 that it provides resale and bitstream access at wholesale level on fibre infrastructure to ISPs on non-discriminatory basis and notifies such wholesale tariffs before entering into force.