WHOLESALE MARKETS FOR VOICE CALL TERMINATION

ON INDIVIDUAL MOBILE NETWORKS

- Definition of product markets and geographic markets, assessment of SMP and imposition, maintenance, amendment or withdrawal of regulatory obligations -

– Final Decision –

Public Version

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1. Introduction

1.1. Conclusions of the last market analysis

Under the Electronic Communications Law No 5/2004, of 10 February (hereinafter ECL[1])[2], Autoridade Nacional de Comunicações (ANACOM) is competent to define and analyse relevant markets[3], to declare companies with significant market power (SMP) and to determine suitable measures in respect of companies providing electronic communications networks and services[4], in compliance with principles of competition law.

To that extent, on 18.05.2010, and further to the approval by the European Commission (EC) of Recommendation 2009/396/EC, of 7 May 2009 (hereinafter EC Recommendation on Termination)[5], on the regulatory treatment of fixed and mobile termination rates in the EU, ANACOM adopted a decision on the analysis of wholesale markets for voice call termination on individual mobile networks (hereinafter Market 2)[6] in Portugal (hereinafter 2010 Decision on Market Analysis)[7].

In this document, ANACOM focused on the definition of product markets and geographic markets, the assessment of SMP and the imposition, maintenance, amendment or withdrawal of regulatory obligations on Market 2. It was concluded that no effective competition existed on those markets, given that, in markets under consideration, each operator held a 100% share, monopolizing the provision of call termination on its own mobile network, that there were high entry barriers that prevented other operators from providing competitive services in

[1] As amended by Law No 51/2011, of 13 September, and subsequently amended by Law No 10/2013, of 28 January, Law No 42/2013, of 3 July and Law No 82-B/2014, of 31 December (available at http://www.anacom.pt/render.jsp?contentId=930940#.VQa8KI64Jek)

[2] This statutory instrument transposes to the national legal system Directives 2002/19/EC (the "Access" Directive), 2002/20/EC (the "Authorisation" Directive) and 2002/21/EC (the "Framework" Directive), all of the European Parliament and of the Council, of 7 March, as amended by Directive 2009/140/EC of the European Parliament and of the Council, of 25 November, Directive 2002/22/EC (the "Universal Service" Directive), of the European Parliament and of the Council, of 7 March, as amended by Directive 2009/136/EC of the European Parliament and of the Council, of 25 November, and Directive 2002/77/EC (on competition in the markets for electronic communications networks and services) of the European Commission, of 16 September.

[3] Article 56 of ECL.

[4] Article 18 of ECL.

[5] Available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:124:0067:0074:EN:PDF.

[6] Market 2 cf. Recommendation 2014/710/UE (former Market 7 cf. Recommendation 2007/879/EC).

[7] Available at http://www.anacom.pt/render.jsp?contentId=1026366.

the short term, and that there were no operators exercising sufficient countervailing power to constrain the ability of mobile operators providing the wholesale call termination service to act largely independently of their competitors, customers and consumers.

ANACOM concluded also that the need for regulatory intervention over the past few years, intended to impose reductions in termination rates, confirmed the conclusion that there was no effective competition in wholesale markets for call termination on individual mobile networks.

As such, each of the three active mobile operators was identified at that time as having SMP on the respective network:

- TMN – Telecomunicações Móveis Nacionais, S. A. (**TMN**)[8]
- Vodafone Portugal – Comunicações Pessoais, S. A. (**Vodafone**)
- Optimus – Telecomunicações, S.A. (**Optimus**)[9]

In the light of the analysis carried out in the 2010 Decision on Market Analysis, described above, ANACOM concluded also that operators with SMP should remain subject to the same set of obligations that had already been imposed in the former determination of 25.02.2005, namely those described in Table 1.

[8] In January 2014, TMN changed its name to MEO - Serviços de Comunicações e Multimédia, S.A. In December 2014, the merger by acquisition of PT Comunicações, S.A. into MEO – Serviços de Comunicações e Multimédia, S.A. was registered, having the new operator been renamed MEO – Serviços de Comunicações e Multimédia, S.A. as from that date.

[9] In May 2014, the merger by acquisition of ZON TV Cabo Portugal, S.A. into Optimus Comunicações, S.A., was registered, having the new operator been renamed NOS Comunicações, S.A. (NOS) as from that date.

Table 1 - Regulatory obligations included in the 2010 market analysis

Obligation	Description
To respond to reasonable requests for access (article 72 of ECL)	This obligation seeks to ensure that no situations of refusal to negotiate and/or grant access occur in these markets without an objective justification. This requirement ensures, specifically, that operators complete calls that are originated on their networks and terminated on networks of other mobile network operators (especially operators with SMP).
Not to discriminate in the provision of access and interconnection, and in the respective provision of information (article 70 of ECL)	This obligation aims to ensure that operators who benefit from the provision of access or interconnection do not find themselves in a situation of unfair disadvantage, that is, that these operators' ability to compete is not affected by any discriminatory behaviour on the part of mobile network operators. This obligation should be interpreted in the sense that rates of call termination on a mobile network should be identical irrespective of the purchasers of the service and regardless of whether the origin of the call is the fixed network, another mobile network or an international call, taking into account that the service provided is the same.
Transparency in the publication of information (article 67 of ECL)	Operators with SMP are required to send to ANACOM, within a period of 10 days, a copy of all interconnection agreements which are concluded or amended, particularly with regard to interconnection rates charged. Operators are also required to make available to interconnection applicants all information and specifications required for interconnection, including changes with significant impact, where the respective implementation is planned to take place.
Price control and cost accounting (articles 74, 75 and 76 of the ECL)	This obligation results in the obligation for cost-orientation of prices and in the adoption of a cost accounting system.
Accounting separation (article 71 of ECL)	The obligation for accounting separation, including the obligation to report financial information (accounting records), is essential in order to allow the Regulatory Authority to monitor compliance with the non-discrimination and transparency obligations. It is also important in the scope of the obligation for implementation of the cost accounting system.

Source: ANACOM

On the same date, ANACOM took another decision, on the obligation to control prices in wholesale markets for voice call termination on individual mobile networks[10] (hereinafter 2010 Decision on Price Control), which materialised the terms of the implementation of the price control obligation for 2010 and 2011.

It was deemed, in the context of the analysis, namely the fact that maintaining high termination rates was a competition-distorting factor, both between fixed and mobile markets and between operators of a different size on mobile markets, that it was necessary and appropriate to determine a substantial reduction of mobile termination rates.

[10] Available at [Decision obligation to control prices - wholesale markets for voice call termination on individual mobile networks]

It should be noted that EC Recommendation on Termination, of 07.05.2009, supports the adoption of symmetrical termination rates, based on costs of an efficient operator and on the use of a bottom-up modelling approach using the “pure” long-run incremental costs (LRIC) cost methodology (BU-LRIC), by 31 December 2012.

As such, and given that the cost methodology to be applied according to EC Recommendation on Termination was not yet available, ANACOM opted, in the 2010 Decision on Price Control, to implement a benchmark, and determined a gradual price decrease (glide-path) which would last for six quarters. The choice of the time period was based on the fact that the mobile termination cost model, to be developed by ANACOM, was expected to be concluded and ready for adoption by the end of that period. The following evolution of termination price ceilings, as set out in Table 2 below, was established.

Table 2 - Downward movements of mobile termination rates (2010 Decision on Price Control)

	Mobile Termination Price Ceilings
Previous rate	0.0650€
24 May 2010	0.0600€
24 August 2010	0.0550€
24 November 2010	0.0500€
24 February 2011	0.0450€
24 May 2011	0.0400€
1 August 2011	0.0350€

Source: ANACOM

Based on methodological suggestions included in the above-mentioned EC Recommendation on Termination, and the deadline indicated therein for the application of a new cost model, ANACOM promoted in 2011, in the course of the development of the new cost model, a public consultation that aimed to collect contributions not only from mobile operators but also from the rest of the industry and other stakeholders on the methodological definition of the cost model to be implemented, the report of which was approved on 01.07.2011 and published together with contributions received.

ANACOM took the view that a cost methodology based on a “pure” LRIC model best allows termination rates that are appropriate to address identified competition concerns to be obtained, promoting sustained competition on the mobile sector and between fixed and mobile networks, increasing the static and dynamic efficiency of the market as a whole and maximising consumer welfare, both in terms of prices and of service provision. Moreover, it is stressed that the application of this methodology, in conformity with EC Recommendation on Termination, of 7 May 2009, contributes towards the objective of harmonising methodologies for calculating mobile termination costs amongst Member States.

As a result, at the end of the cost model development process, and further to contributions received on the specification of price control obligation in Market 2, namely the opinion of the *Autoridade da Concorrência* (AdC - the Competition Authority), contributions from stakeholders and the opinion of EC, ANACOM, deeming conclusions and regulatory obligations comprised in the 2010 Decision on Market Analysis to be valid, and having found that, two years on, rates charged had not decreased, compared to price ceilings set out in that determination, decided to intervene again in the scope of the imposition of price ceilings for voice call termination on individual mobile networks.

On 30.04.2012[11], ANACOM thus adopted the Decision on the specification of the price control obligation in wholesale markets for voice call termination on individual mobile networks (hereinafter 2012 Decision on Price Control), which not only adopted the mobile termination cost model described therein, but also determined a new reduction of termination rates in the scope of the price control obligation, on the basis of results of a new cost model using the "pure" LRIC methodology, in compliance with EC Recommendation on Termination.

The 2012 Decision on Price Control thus determined the following price ceilings for voice call termination on mobile networks, to be applied as from 07.05.2012 by the three operators with SMP, regardless of the call origin, as shown in Table 3.

Table 3 - Downward movements of mobile termination rates (2012 Decision on Price Control)

	Mobile Termination
7 May 2012	0.0277€
30 June 2012	0.0227€
30 September 2012	0.0177€
31 December 2012	0.0127€

Source: ANACOM

On 31 December 2012, Portugal thus became one of the few countries to impose by that date, on mobile operators, wholesale termination rates based on results of "pure" LRIC cost models, and consequently to apply one of the lowest rates in all of the European countries. In January

[11] Available at http://www.anacom.pt/render.jsp?contentId=1125452.

2013, according to the benchmark of the Body of European Regulators for Electronic Communications (BEREC), Portugal was the 5th country with the lowest mobile termination rates, among the 34 countries that integrated the benchmark at the time.

1.2. Developments in the electronic communications market

Further to the publication in 2010 of the last market analysis, the following relevant events occurred in the electronic communications market:

- On 1 July 2010, SONAECOM - Serviços de Comunicações, S.A. changed its corporate name to Optimus – Comunicações, S.A.;

- In 2010, ANACOM decided, in the context of the 900 MHz and 1800 MHz spectrum refarming[12], to unify into a single title the conditions for the exercise of rights of use for frequencies allocated for the provision of the land mobile service, in accordance with GSM 900/1800 and UMTS technologies, under the GSM Directive as well as Commission Decision 2009/766/EC, of 16 October;

- On 19 October 2011, ANACOM approved Regulation No 560-A/2011[13], which governs the procedure applicable to the allocation of rights of use for frequencies in the 450 MHz, 800 MHz, 900 MHz, 1800 MHz, 2.1 GHz and 2.6 GHz bands (Multi-band Auction);

- In the scope of the Multi-band Auction, free spectrum in the various frequency bands was made available. In this context, attention must be drawn to the provision of spectrum in the 900 MHz band (known as "Extended GSM") as well as in the 800 MHz[14] band, considered to be particularly relevant for the design of coverage solutions, complementing higher frequency bands, namely in the 1800 MHz, 2.1 GHz and 2.6 GHz, which were also made available, and which in general are preferably used to implement capacity solutions. The provision of spectrum under consideration came

[12] Determination of 8 July 2010 (Refarming and unification of GSM/UMTS titles).

[13] Available at Regulamento n.º 560-A/2011, de 19 de outubro .

[14] By determination of 16 December of 2010, ANACOM approved the final decision on the designation and availability of 790-862 MHz sub-band for the provision of electronic communication services, in accordance with Decision 2010/267/EU (Designation of 790-862 MHz sub-band for electronic communications services).

within the possibility of development of other technologies such as LTE (Long Term Evolution);

- On 9 March 2012, ANACOM approved a clarification of the "Regulatory framework for the activity of mobile virtual network operators (MVNO)"[15] as regards the allocation of addressing numbers of signalling system No 7, in the light of provisions established in the "Criteria and principles for the management and assignment of numbering resources", thus the *requirement for physical existence, on national territory, of one or more traffic switches* does not apply in the case of allocation of NSPC to MVNO[16];

- On 17 May 2012, ANACOM approved the final decision on the renewal of rights of use for frequencies allocated to Optimus in the 900 and 1800 MHz frequency band, for a period of 15 years, up to 20 November 2027[17];

- In September 2012, Lycamobile Portugal, Lda. (Lycamobile), started operating in Portugal, supported on Vodafone's network;

- In early 2013, Mundio Mobile (Portugal) Limited (Mundio) started operating, supported on Optimus' network;

- On 2 August 2013, Adc issued a Final Decision[18], not opposing to the merger operation that consisted in the acquisition by Altice Holdings, S.A.R.L. (company that holds Cabovisão – Televisão por Cabo, S.A. – hereinafter Cabovisão - through its subsidiary Altice Portugal, S. A.) of the exclusive control of Winreason, S. A., which held Onitelecom – Infocomunicações, S.A.;

- On 26 August 2013, Adc issued a Final Decision, not opposing to the merger[19] between Optimus and Zon, an operation which however was required to abide by a set of

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15 MVNO - mobile virtual network operators.

16 Available at [Allocation to MVNO of addressing numbers of signalling system no. 7 - clarification](#) .

17 Available at [Decision on the renewal of rights of use of frequencies allocated to Optimus in the 900 and 1800 MHz bands](#)

18 Available at http://www.concorrencia.pt/vPT/Controlo_de_concentracoes/Decisoes/Paginas/pesquisa.aspx?pNumb=19&yearNot=2013&pag=1&doc=True&est=2

19 Available at http://www.concorrencia.pt/vPT/Noticias_Eventos/Comunicados/Paginas/Comunicado_AdC_201318.aspx .

conditions and obligations, as it was concluded that the merger was likely to result in barriers to competition;

- On 18 December 2013, ZON started using Optimus' network in the scope of its MVNO operation;

- In the course of 2013, the three mobile network operations consolidated the implementation of 4th generation networks. In parallel, tests with LTE-Advanced technology were carried out and the first research projects intended for the launch of 5th generation mobile networks were disclosed;

- On 27 January 2014, TMN – Telecomunicações Móveis Nacionais, S.A. changed its corporate name to MEO – Serviços de Comunicações e Multimédia, S.A.[20].

- On 16 May 2014, ZON TV CABO PORTUGAL, S.A. merged into OPTIMUS COMUNICAÇÕES S.A., the resulting company having been renamed NOS Comunicações S.A.. ZON's virtual mobile operation terminated on the same occasion.

- The merger by acquisition of MEO – Serviços de Comunicações e Multimédia, S.A. into PT Comunicações, S.A. was registered on 29.12.2014, having the company resulting from this merger been renamed MEO – Serviços de Comunicações e Multimédia, S.A. as from that date.

- On 25 February 2015, Altice S.A.[21] notified the European Commission that it controlled the Portuguese assets of PT Portugal SGPS (which held MEO – Serviços de Comunicações e Multimédia, S.A.), the operation having been completed in June this year.

Without prejudice to the events listed above, the impact of some of them on specific mobile network termination markets is low or virtually non-existent.

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[20] Available at http://www.telecom.pt/NR/rdonlyres/821D0ABE-F5C9-41A4-8C5768A7C4B7CB24/1468182/MEOTMN_P.pdf

[21] Available at http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014H0710&from=EN

1.3. European Commission Recommendation on relevant markets

On 9 October 2014, the European Commission (EC) approved a new Recommendation 2014/710/UE, on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation, in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services[22] (hereinafter Recommendation).

As a result of market developments in the past few years, this Recommendation replaces, and thus updates, Commission Recommendation 2007/879/EC, of 17 December 2007, and instead of the former seven markets[23], only four[24] relevant markets susceptible to *ex ante* regulation have now been included.

Just as in previous versions of the Recommendation, the reviewed version is accompanied by an "Explanatory Note", wherein EC justifies why new markets were defined[25].

As a result of this review, the market under consideration (market 7 of the former Recommendation) maintains the former designation almost entirely and the same functional description: Market 2: Wholesale voice call termination on individual mobile networks.

1.4. The process of market analysis

ECL approved the legal system governing electronic communications networks and services and associated resources and services, setting out the competences of the National Regulatory Authority (NRA) in this area.

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[22] Available at http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014H0710&from=EN

[23] Strictly speaking, more than seven markets existed, bearing in mind that, in the case of fixed and mobile termination, the market definition is restricted to each network, and as such there are several termination markets.

[24] As follows:

- Market 1: Wholesale call termination on individual public telephone networks provided at a fixed location;
- Market 2 : Wholesale voice call termination on individual mobile networks;
- Market 3 : (a) Wholesale local access provided at a fixed location;
  (b) Wholesale central access provided at a fixed location for mass-market products; and
- Market 4: Wholesale high-quality access provided at a fixed location.

[25] Explanatory Note available at http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?action=display&doc_id=7056

Under ECL, it is incumbent on the NRA - ANACOM - to define and analyze relevant markets, to identify companies with significant market power and to determine appropriate measures to be imposed on providers of electronic communications networks and services (article 18 of Law No 5/2004).

This process is carried out according to the following stages (articles 55 to 61 of ECL)[26]:

- **Definition of relevant markets** (article 58 of ECL)

  It is incumbent on the NRA to identify relevant markets of products and services of the electronic communications sector, including relevant geographic markets, in line with principles of competition law.

  In the identification of relevant markets, and according to national circumstances, the NRA must have regard to the Recommendation and EC Guidelines[27] on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services (hereinafter referred to as “Guidelines”).

- **Analysis of relevant markets** (article 59 of ECL)

  It is incumbent on the NRA to review relevant markets defined under the previous point, taking into account the Guidelines.

  The market analysis procedure aims to investigate whether effective competition exists. There is no effective competition where it is possible to identify companies with SMP[28].

  It is considered that an undertaking has SMP, individually[29], or jointly with others, where it enjoys a position equivalent to dominance, i.e. a position of economic

[26] Cf. Framework Directive, articles 7 and 14 to 16.

[27] Available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2002:165:0006:0031:EN:PDF .

[28] Also according to the “Guidelines” (§ 24), “*Under the regulatory framework, markets will be defined and SMP will be assessed using the same methodologies as under competition law. (...) and the assessment of effective competition by NRAs should be consistent with competition case-law and practice. To ensure such consistency, these guidelines are based on (1) existing case-law of the Court of First Instance and the European Court of Justice concerning market definition and the notion of dominant position within the meaning of Article 82 of the EC Treaty and Article 2 of the merger control Regulation*”.

strength which enables the company to act largely independently of its competitors, customers and consumers.

- **Imposition, maintenance, amendment or withdrawal of regulatory obligations** (article 66 of ECL)

  Where ANACOM comes to the conclusion that a market is effectively competitive, it must refrain from imposing any specific regulatory obligation, removing such obligations where they exist.

  Where ANACOM determines that the relevant market is not effectively competitive, it must impose appropriate and specific regulatory obligations on companies with SMP in that market, or where such obligations already exist, maintain or amend such obligations.

  Obligations imposed:

  - must suit the identified problem and be proportionate and justified in the light of the regulatory objectives laid down in article 5 of ECL;
  - must be objectively justified regards networks, services or facilities concerned;
  - may not give rise to undue discrimination with respect to any entity;
  - must be transparent in relation to their intended purposes.

This market analysis was subject to the general consultation procedure under article 8 of ECL, as well as to the stakeholder hearing procedure, in conformity with articles 100 and 101 of the Administrative Procedure Code (APC), in both cases for a period of 20 days. AdC was requested

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[29] It is noted that, according to ECJ Judgement of 12 July 1984 *Hydrotherm*, the term 'undertaking' must be "*understood as designating an economic unit for the purposes of the subject-matter of the agreement in question even if in law that economic unit consists of several persons, natural or legal*".

Under article 3, paragraphs 1 and 2, of Law No 19/2012, of 8 May (which approves the Competition Act), "*1 – The term undertaking, for the purposes of this law, shall be deemed to be any entity that has an economic activity comprising the supply of goods or services in a specific market, irrespective of its legal status or means of financing. 2 – A group of undertakings is deemed to be a single undertaking, even if the undertakings themselves are legally separate entities, where such undertakings make up an economic unit or maintain interdependence ties deriving specifically from the following: a) The undertaking so defined has a majority of the share capital; b) It has more than half of the voting rights conferred by the share capital; c) It has the power to appoint more than half of the members of the board of directors or the supervisory board; d) It has the necessary powers to manage the businesses of the group and of each of its undertakings*."

to provide an opinion under article 61 of ECL. On the request of a stakeholder, the referred deadlines were further extended by five working days.

During the period of the general consultation and stakeholder hearing procedures, ANACOM held an informal working session, open to all, on options and characteristics of the “pure” LRIC cost model that had been implemented.

On 25.05.2015, AdC submitted its opinion, having agreed in general terms with ANACOM’s draft decision (DD). AdC mentions that the methodology adopted by ANACOM is adequate and generally consistent with the application of the Competition Law methodology. As such, the Authority did not oppose to the definition of wholesale relevant product and geographic markets, or to the assessment of SMP in wholesale markets for voice call termination on individual mobile networks.

AdC additionally refers that obligations proposed in the DD are deemed to be adequate and necessary, as it was demonstrated that operators that provide the voice call termination service on individual mobile networks hold a dominant position in the wholesale market that corresponds to their own network, reflected in the existence of SMP. It particularly stresses that it is appropriate to maintain a “pure” LRIC cost model in order to determine termination price ceilings.

In the scope of the consultation and hearing procedures, ANACOM received responses from 6 bodies, including a consumer association and 5 providers.

Having comments been analysed, a report on ANACOM’s DD was prepared (as well as a separate report on options that integrate the model), which comprises a summary of contributions received and the Regulatory Authority’s views thereon. The report, which already integrated the draft decision notified to the European Commission, is also an integral part of this final decision.

By determination of 1 July 2015, ANACOM approved the referred hearing and public consultation report, as well as the draft final decision on wholesale markets for voice call termination on individual mobile networks (and also a draft decision on the specification of price control obligation and the respective report).

On the same date, approval was given also to notification of draft decisions to EC, BEREC and NRA of other Member States, for the purpose of paragraph 1 of article 57 of ECL, such notification having taken place on that same date.

ANACOM received on 30 July 2015 a communication from EC (letter C(2015)5529 final), presented under article 7, paragraph 3, of Directive 2002/21/EC, regarding "wholesale markets of voice call termination on individual mobile networks" (process PT/2015/1763), in which EC refers that it has no observations to make as far as notified measures were concerned.

According to the methodology adopted in the Recommendation[30], the starting point for the definition and identification of relevant wholesale markets is the characterization of related retail markets, their geographical size and competitive pressures to which they are subject, on both the demand and supply side, in a forward-looking manner. As such, this first stage aims to analyse whether markets concerned present competition failures that possibly justify that regulatory obligations in related wholesale markets are maintained or imposed.

Subsequently, related wholesale markets are defined having regard to the same dimensions - product market(s) and geographic market(s) - and an assessment of any SMP in these markets is performed. Finally, an analysis is made as regards regulatory obligations to be imposed on undertakings with SMP, or, in the absence of SMP, how obligations previously imposed should be withdrawn.

This document thus constitutes a new ANACOM decision on the definition of product markets and geographic markets, the assessment of SMP and the imposition, maintenance, amendment or withdrawal of regulatory obligations on wholesale markets for voice call termination on individual mobile networks.

It should be referred that the need to review the analyses of this relevant market arises not only from changes that occurred in the market with potential impact on conditions thereof, but also from the review of EC Recommendation on relevant markets. It must also be referred that utmost account was taken of positions adopted both by EC and by the Body of European Regulators for Electronic Communications (BEREC).

[30] Cf. Explanatory Note accompanying the Recommendation on Relevant Markets, Section 2.1., available at http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?action=display&doc_id=7056

More specifically, principles defined in ERG *Guidance on the application of the three criteria test* are taken into account in the analysis of competition. Principles established in the scope of ERG common position on the imposition of obligations in electronic communications markets are also taken into account in the analysis and definition of obligations to be imposed (or withdrawn).

As regards the imposition of *ex ante* regulatory obligations, it must be highlighted that EC Recommendation on relevant markets provides that regulatory obligations at retail level should only be imposed where NRA consider that measures applicable at the level of wholesale markets do not guarantee an effective competition and compliance with public interest objectives.

The main purpose of this analysis is thus to identify whether effective competition exists in wholesale markets for call termination on individual mobile networks. In fact, it follows from EC Explanatory Note that the market definition exercise if not an end in itself, but a means to attain an end - "*The objective* (of market definition) *is to identify whether competitors are capable of constraining each other's behaviour and preventing the others from behaving independently of consumers within the defined market*". Market definition is thus a necessary means to assess whether users of a given product or service are protected by effective competition or, on the contrary, whether the imposition of *ex ante* regulation is required to guarantee it.

2. Mobile electronic communications services

The publicly available telephone service is a service which allows the population to originate and to receive, directly or indirectly, national and/or international calls through a number or numbers included in a national and international numbering plan. The mobile telephone service (MTS) is a public electronic communications service, in which the access network is constituted by radio means and where terminal equipment is mobile.

The service is provided by bodies qualified for the purpose, and the use of frequencies necessary for the respective operation requires the allocation of individual rights of use. Bodies that do not hold rights of use for frequencies, the so-called mobile virtual operators (MVNO)[31], are also able to provide a mobile telephone service, supporting their activity on the radio access network of mobile network operators.

In general terms, it is considered that the mobile telephone service in Portugal may include the retail provision of voice services in full duplex, video-call services, short message services (SMS), data services, including multimedia messaging services (MMS) and broadband Internet access services, as well as a range of different features.

The services concerned are provided to a multiplicity of business and non-business customers, by all active mobile network operators over the respective networks, using GSM and UMTS technologies, and more recently LTE, although in this case voice services over LTE (known as VoLTE services) are not yet provided. MVNOs provide some of the referred services, focusing their activity more on voice and data services, aimed in some cases at specific market segments.

[31] There is no legal definition for MVNO. However, on 09.02.2007, ANACOM approved the framework for the activity of MVNOs (available at Regulatory framework for the activity of MVNOs), which states as follows: "*There are many economic operations which can be included under the designation MVNO, which however have as a common denominator the fact that these operators do not use rights of use for frequencies and are consequently not provided with their own radio access network infrastructures, being thus required to support themselves on radio means supplied by network operators who hold the respective rights of use*."

More recently, in the scope of the Multiband Auction, and for the purpose of the Regulation of that Auction, it was deemed that an MVNO is "*a body that in its virtual mobile operation does not use rights of use for frequencies and consequently self-owned infrastructures associated to the radio access network, being supported on radio means provided by network operators who hold the respective rights of use. Different types of operations may be deemed to be MVNO operations, according to whether they use more or less self-owned infrastructures and systems*".

It is noted nowadays that there are in Portugal MVNO which could be considered “light” MVNO, while others could be deemed as “full” MVNO[32]. Without prejudice to their characteristics, all MVNO are able to negotiate interconnection and to obtain access to or interconnection with other companies providing electronic communications networks and services, under the conditions and in the terms set out in ECL[33].

The land mobile service in Portugal is currently provided at retail level by three mobile network operators, namely MEO – Serviços de Comunicações e Multimédia, S.A, NOS Comunicações, S.A. and Vodafone Portugal – Comunicações Pessoais, S.A.. There are also three mobile virtual operators, CTT - Correios de Portugal, S.A. (Phone ix brand) supported on the MEO mobile network, Mundio Mobile (Portugal) Limited, supported on the NOS mobile network, and Lycamobile Portugal, Lda, supported on the Vodafone mobile network.[34]

It is noted also that there are active resellers of mobile telephone services and/or short data traffic on the retail market.

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[32] In its understanding dated 09.02.2007, ANACOM refers as follows: “*A full MVNO holds, in addition to the particulars that characterize a light MVNO, several elements of the transmission system and network infrastructure, including switches. It may also issue its own SIM cards. A full MVNO fails only to hold the right of use for frequencies, and, as such, it does not have the radio access infrastructure elements (such as base stations or network controllers), in contrast with a MNO*”.

[33] In its understanding on MVNO, the following is stated as far as interconnection is concerned:

> “*30. Companies providing publicly available electronic communications networks and services are entitled[25] to negotiate interconnection with and obtain access to or interconnection with other providers of publicly available communications networks and services, under the conditions of and in accordance with ECL.*
>
> *31. On the other hand, the same law determines[26] that the terms and conditions of the interconnection offer shall be consistent with obligations imposed by ICP-ANACOM in this matter and that network operators have a right and, when requested by other companies, an obligation, to negotiate interconnection with each other for the purpose of the provision of publicly available electronic communications services[27].*
>
> *32. In this context, MVNOs (both light and full versions) may invoke the obligation to negotiate interconnection, and remaining mobile and fixed operators must ensure service interoperability under the law.*
>
> [25] *Pursuant to point a) of article 22 of ECL.*
>
> [26] *Article 64, paragraphs 1 and 2.*
>
> [27] *“Interconnection” defined by law as the physical and logical linking of public communications networks used by the same or a different undertaking in order to allow the users of one undertaking to communicate with users of the same or another undertaking, or to access services provided by another undertaking. Services may be provided by the parties involved or by other parties who have access to the network. Interconnection is a specific type of access implemented between public network operators*.”

[34] In addition, there are also four other operators registered as providers of the mobile virtual telephone service who are not operating at the moment: G9TELECOM, S.A., Media Capital, S.A., ACP – Comunicações Electrónicas, Unipessoal, Lda and Lycamobile Limited.

2.1. Characteristics of the mobile market

In general, active providers supply a very diversified range of offers, which are adapted to the various consumption profiles of MTS users.

Tariffs charged by mobile network operators are characterized by payment options and by the type of targeted users (for example, there are several offers aimed at young people). As such, there are pre-paid offers, which require an advance payment (top up) for the provision of services, in some cases the top-up of a monthly minimum amount; post-paid offers[35], where consumptions are paid after they have taken place; there are also hybrid tariff plans which combine several payment methods.

The Portuguese mobile communications market has traditionally been characterized by the large incidence of pre-paid tariffs. This payment method, which was first introduced by Portugal, made the purchase of mobile telephone services more appealing to the end-user, and was deemed as one of the main justifications for the high penetration rate of MTS in Portugal, as this method allows customers to top up according to their own needs, and as such to control their expenses more efficiently.

At the level of telephone services, over the last ten years, several commercial launches of innovative nature contributed, and still contribute, to the development of the market.

First, the emergence in 2005 of low-cost or no-frills products (some of which were marketed under their own brands) stands out, aimed at customers who favour the use of voice communications or SMS at low cost and who value the simplification of tariff systems (given that calls rates are not differentiated according to the destination networks).

Some years later (2007-2008), the so-called “on-net sub group” or “tribal” products began to stand out, which are pre-paid products with a tariff structure close to the one that existed before, that is, with a differentiation between calls to the same network and calls to other networks, and which, in addition to this element, further break down calls to the same network. As such, calls to customers with the same tariff/product are free, and calls within the same network, but to customers with other tariffs, are charged.

[35] So far MVNOs have provided pre-paid offers only.

More recently (2013-2014) new bundled offers became available, which include, in addition to mobile services, various other services such as the telephone service at a fixed location, cable or fibre optic television distribution service, fixed broadband Internet service, mobile broadband Internet service, and even, most recently, the aggregation of services of other sectors such as the inclusion of cinema tickets[36].

At the same time, the number of offers with high traffic volumes (calls and SMS) has increased.

A significant increase in the number of subscribers of triple/quadruple/quintuple play offers has been also registered (2.9 million subscribers by the end of 2014), which combine several services, such as the fixed telephone service (FTS), mobile telephone service (MTS), fixed broadband (FBB), mobile broadband (MBB) and pay-TV service (PTV)[37].

In this context, in 2014, the number of mobile stations associated to combined/hybrid plans and post-paid plans must be stressed, as this factor is responsible for the registered increase in the number of mobile stations/equipment. This increase is mainly due to the emergence of integrated offers and multiple play tariffs including MTS, which started to be launched in 2014. According to Marktest Telecommunications Barometer, in the 4th quarter of 2014, 35.4 of households with multiple play offers (packages) where provided with an offer integrating the mobile telephone service.

As a result of this evolution, the proportion of mobile stations associated to pre-paid tariffs has registered a downward trend since 2010, representing 57.2% of the total number of active mobile stations by the end of 2014 (Graph 1)[38]. Not only has this proportion been decreasing, but also, in absolute terms, the number of mobile stations that have subscribed pre-paid offers has registered a reduction since 2012, which was particularly significant in 2014.

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[36] One operator launched in 2014 a package which adds cinema tickets to the base offer of electronic communications services, including Television, Internet, Fixed Telephone Service and Mobile Telephone Service.

[37] 3 in 5 traditional households were provided with a package including 3 or more services (available at Bundles of services - electronic communications (at a fixed location) - 4th quarter 2014).

[38] Statistic information provided throughout this document corresponds to information made available by service providers. In some cases, it may have been subject to amendments, although slight ones, as a result of reviews or updates carried out by providers concerned in the period up to the date of publication of this document. All information may also be subject to amendments, in case any reviews or updates occur in the future.

Annual or quarterly data concern the end of the period (last day or last month), except in the case of revenues and traffic, which concern the total value of the period considered.

Graph 1 - Evolution of offers by type of tariff in Portugal

Source: ANACOM

The increase in the number of effective users of typical mobile broadband services (that is, video telephony, broadband data transmission, mobile TV, etc.) must also be stressed. The expansion in the use of these services is associated not only to greater Internet access on the mobile phone with the development of bundled offers, but also to the growing penetration of smart phones, which has generally taken place in all regions and for all socio-demographic sections. According to the report on the Portuguese telecommunications macro-sector, prepared by Altran (2014)[39], Smart phones and Tablets will be the two most used devices in the Portuguese market in the next four years.

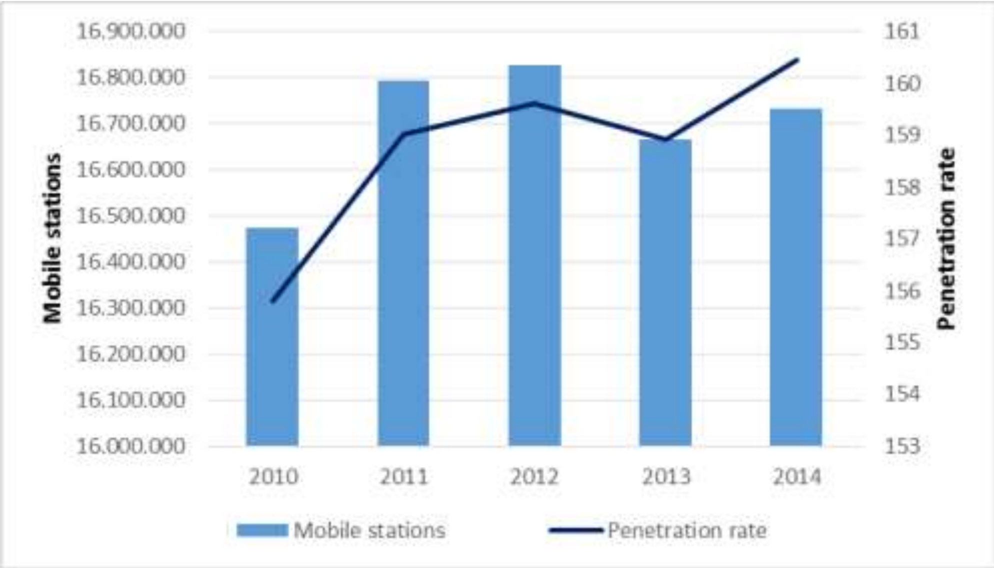
A comparison between the fixed sector and the mobile sector shows that the latter has a very significant weight in the voice market, by around 76% in total voice minutes originated in Portugal in 2014. As regards wholesale terminated traffic (fixed and mobile), and considering the increase of traffic terminated on mobile networks, it is likely that the weight of the two types of networks in the total of terminated traffic comes closer, therefore running counter to the historic prevalence of traffic terminated on fixed networks.

The level of penetration of mobile services in Portugal remains, as was observed in the last market analysis, at very high values, and according to data from 2014, the mobile service had

[39] Altran, "TEM Ecosystem: Situation and evolution of the Portuguese telecommunications macro-sector 2014 - 2017", 2014. Available at: http://www.altran.pt/fileadmin/medias/PT.altran.pt/documents/TEM_Portugal_Ecosystem.pdf

around 16.7 million active mobile stations[40] and a penetration rate exceeding 160.5 per 100 inhabitants (Graph 2), which compares favourably with EU average penetration rate of 131.6[41].

Graph 2 - Evolution of the number of mobile stations and penetration rate of the mobile terrestrial service



Source: ANACOM

Moreover, according to Marktest's BTC - Mobile Networks, in December 2014, 94.4% of persons residing in Portugal had a mobile phone.

Between 2012 and 2013, a decrease by around 162 thousand active mobile stations occurred, however in 2014 this number increase by 0.4% compared to 2013 and by 1.6% compared to 2010. However, notwithstanding the referred increase registered in 2014, the number of active mobile stations[42], effectively used, maintained the downward trend compared to previous years.

---

[40] On 07.02.2002, ANACOM approved the definition of subscriber which was associated to the number of cards covered by a contractual relationship established with one of the national MTS operators, who had been granted the right to originate or to receive traffic trough the respective networks.

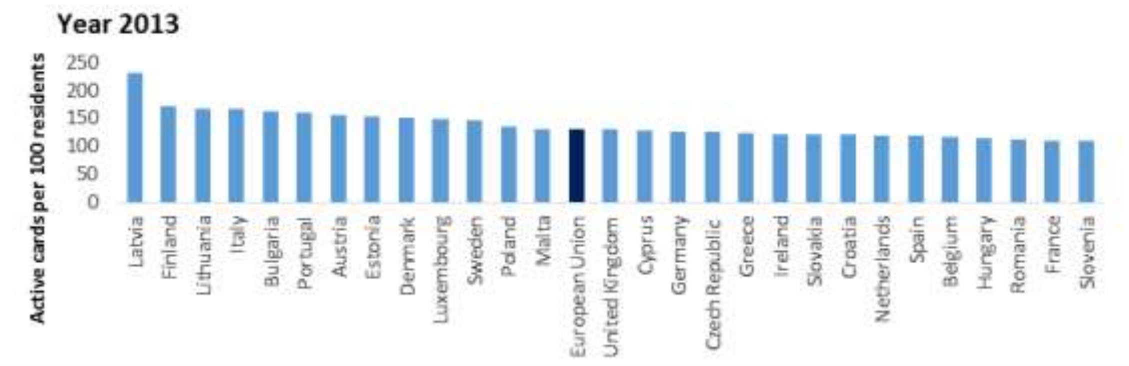
In 2009, and further to Determination of 08.07.2009, amended by determinations of 17.06.2010, 19.08.2010 and 30.08.2012, approval was given to statistical indicators of mobile services, having been defined the term "active mobile stations", as those through which the user of the equipment is able to use one of the services (that is, characterized by the right to originate or to receive voice calls or messages or to access a data transmission service) without having necessarily used it (that is, an "enabled" equipment in the registration system of the network).

[41] EC data, Digital Agenda 2014 concerning October 2013 for MTS.

[42] Effective use in the reporting period means all situations in which traffic occurs, both originated and terminated.

Nevertheless, in spite of this recent evolution of the number of mobile stations, as the graph below demonstrates (Graph 3), Portugal was in 2013 the 6th country of the European Union with the largest numbers of active SIM cards[43], well above the EU average.

Graph 3 - Active SIM cards, per Member State (28)



Source: European Commission, Digital Agenda Scoreboard

The next graph (Graph 4) shows the evolution of the number of active mobile stations per operating provider, over the last 5 years.

Graph 4 - Evolution of the number of active mobile stations per operator

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End of confidential information [ECI]

Source: ANACOM

Without prejudice to some fluctuations observed in the number of subscribers of mobile providers, the respective market shares showed some stability between 2010 and mid-2012.

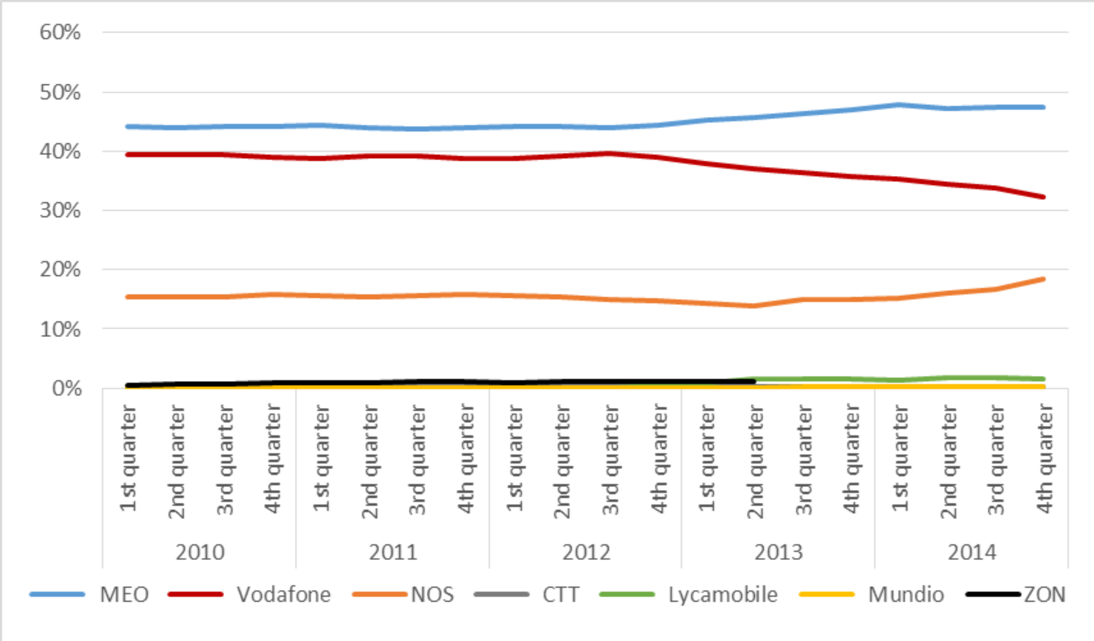
Between 2013 and 2014, greater fluctuations occurred, the recent growth of the share held by NOS having been reported (Graph 5). MEO's and NOS' shares increased in the referred period

[43] EU data available at http://goo.gl/kVtixF .

(MEO's share mainly in 2013, NOS' share in 2014), while Vodafone's share, which remained stable at around 40%, showed, since the 3rd quarter of 2012, a downward trend, reaching close to 30% by the end of 2014.

Market shares of the three operating MVNOs remain at a very low, but stable level, two providers registering shares below 1% and the third with a share below 2%.

Graph 5 - Evolution of market shares (Mobile Stations)



Source: ANACOM

At the level of the switching of providers, there has been some resistance to this change on the part of users of mobile services in the national mobile market. According to data of Marktest's Telecommunications Barometer, and although this trend appears to have softened, by December 2010 around 74% of mobile owners had never switched operator, and by February 2015, 67.8% of mobile owners continued to claim never having undergone such a change.

As far as grounds identified for switching operator are concerned, it must be taken into account that users identify today lower rates as the main reason, and in the second place the so-called "network effect" or club effect - the user prefers to be customer of the network used by most of its contacts - and in Portugal this effect has traditionally weighed heavily[44].

[44] According to information provided by Marktest's Telecommunications Barometer.

Over the years, operators in the mobile market have developed marketing strategies (such as promotions or loyalty programs with 12 or 24 month duration contracts) in order to establish and maintain a large client database. These strategies are frequently based on the large tariff differentiation between on-net and off-net tariffs, particularly providing benefits for larger providers, who are able to intensify the network effect or club effect (which in this scope is also known as tariff-mediated network effect), by creating a barrier to the switching to networks where there are not so many contacts and where, as such, the user has a lower level of utility (negative effect on call externalities[45]).

Many tariff plans launched in this scope involve on-net communications at very low rates (in some cases even free of charge). This practise tends to harm smaller mobile providers (in particular because, in order to counteract the tariff-mediated network effect, these providers are forced to adopt strategies that involve the reduction of rates of off-net communications, with an impact on the imbalance of wholesale call termination traffic) and also potential entrants (given that these practises lead to the creation and expansion of barriers to entry). This is also likely to harm providers of fixed telephone services, as patterns of telephone service consumption are distorted. Referred practises, which establish a large differentiation between on-net and off-net calls, where associated to above-cost termination rates, ultimately have a negative impact on final users of electronic communications services, by affecting the degree of competitiveness in the market.

However, following the recent introduction of offers with free calls to all networks (the on-net/off-net tariff differentiation being thus eliminated), namely bundled offers which integrate the mobile service, a significant increase of off-net traffic has been registered. Consequently, in case this trend is confirmed, tariff changes may contribute towards the reduction of the intensity of the so-called "network effect". According to Marktest's Telecommunications Barometer, in February 2015 around 17.4% of mobile phone users declared that their main reason for choosing an operator concerned the fact that their contacts were connected to the

[45] "Call externalities" is the concept used in academic literature to reflect the utility derived for consumers from calls received. Literature that analyses effects of the existence of call externalities includes:

Armstrong, M., and Wright, J., "Mobile Call Termination", mimeo, available at: http://else.econ.ucl.ac.uk/papers/uploaded/255.pdf; Calzada, J. and Valletti, T., "Network Competition and Entry Deterrance", Economic Journal, Vol. 118 (2008), pp. 1233-1244;

Harbord, D., and Pagnozzi, M., "On-Net/Off-Net Price Discrimination and 'Bill-and-Keep' vs. 'Cost-Based' Regulation of Mobile Termination Rates", MPRA Paper 14540, 2008;

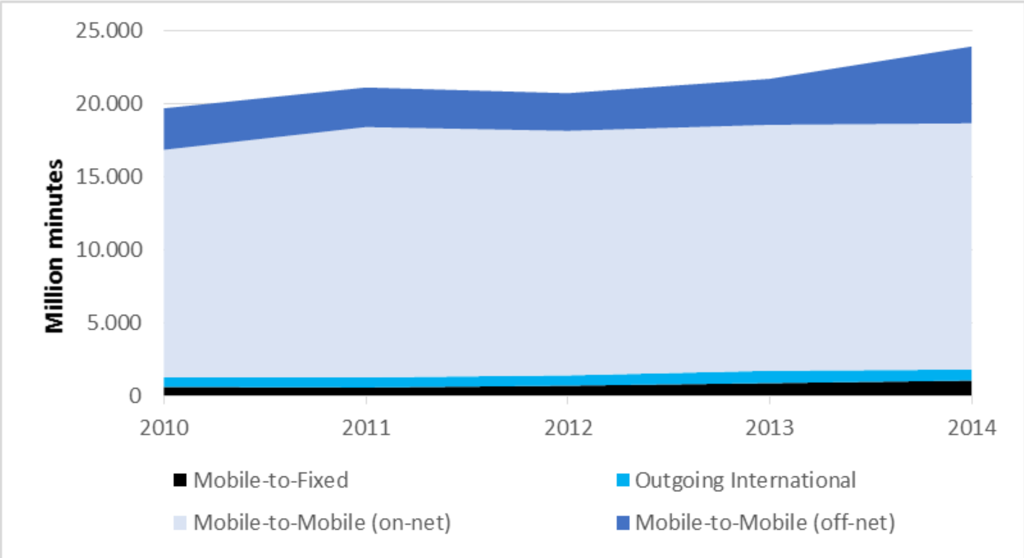
Hoernig, S., "On-net and Off-net Pricing on Asymmetric Telecommunications Networks", Information Economics and Policy, Vol. 19 (2007), pp. 171-188.

same network, while in December 2010, this value reached around 31%. Notwithstanding, bundled offers have also contributed toward the deterioration of situations of traffic imbalance, which affects wholesale financial flows between providers in the market.

2.2. Traffic of the mobile telephone service

The number of voice minutes originated from mobile providers amounted, in 2014, to around 24.4 billion, which clearly represents an increase, compared to 2010, by around 21% (Graph 6). In spite of this very positive evolution, there was a decline between 2011 and 2012 (which was favourably corrected in the following year).

Graph 6 - Evolution of the number of minutes originated on mobile providers per type of call



Source: ANACOM

The traffic increase which occurred in 2014 is mainly due to the emergence in 2013 of MTS offers integrated in packages along with other services, and to the fact that many of these offers include a very significant volume of free calls.

On-net traffic corresponded, in 2014, to 69% of total originated traffic, which represents a decrease by 8% compared to the situation by the end of 2010. The weight of this type of traffic decreased for all providers in general (Graph 7), being of particular importance in the case of larger providers. [BCI]

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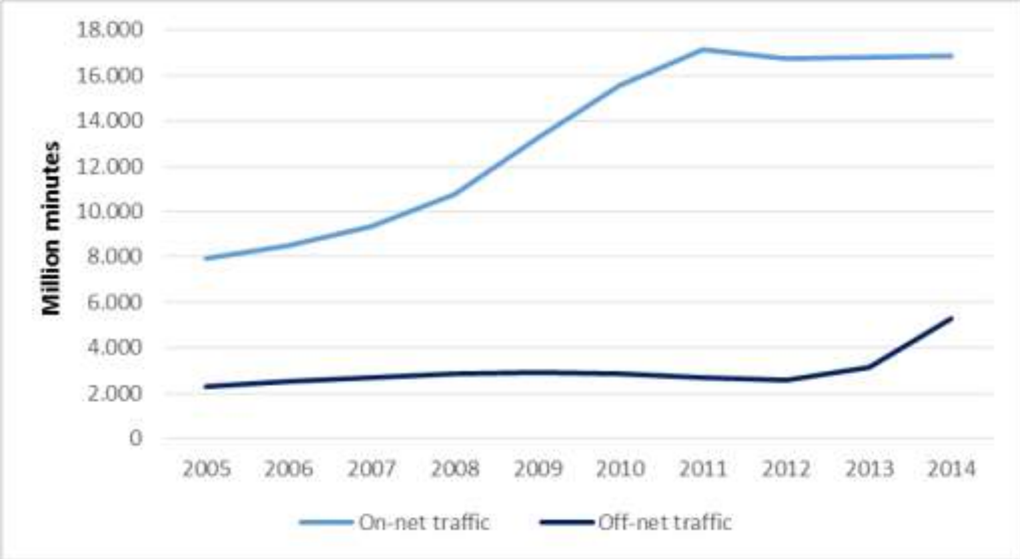
Graph 7 - Evolution of mobile-to-mobile originated traffic (on-net and off-net)

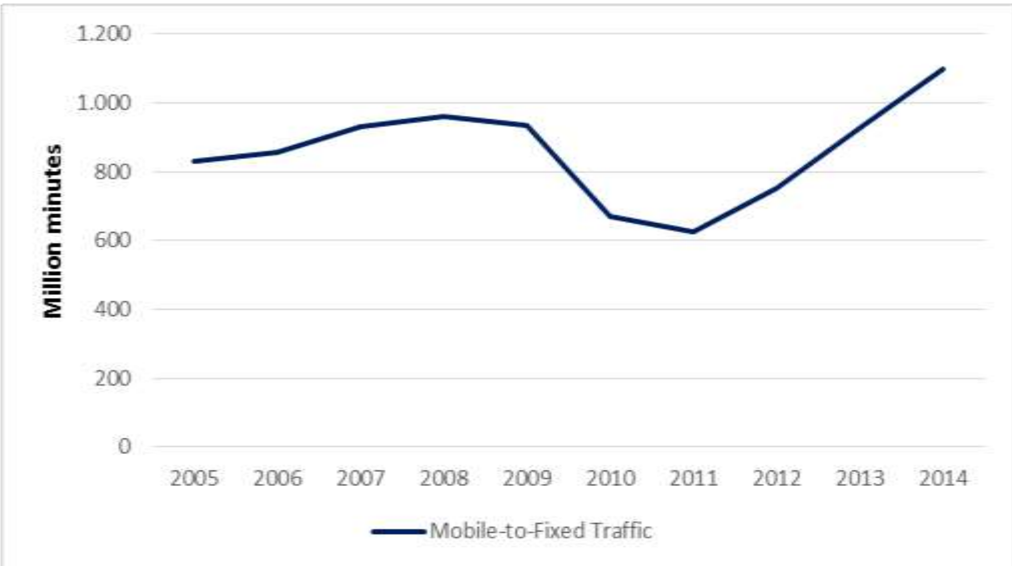


Source: ANACOM

The graph above shows also that off-net traffic registered an increase by 85% between 2010 and 2014, and was particularly strong in this last year, representing 31% of the total originated traffic.

Mobile-to-fixed originated traffic also presented an increase with positive changes by around 33% between 2005 and 2014 and by 64% between 2010 and 2014 (Graph 8).

Graph 8 - Evolution of mobile-to-fixed originated traffic



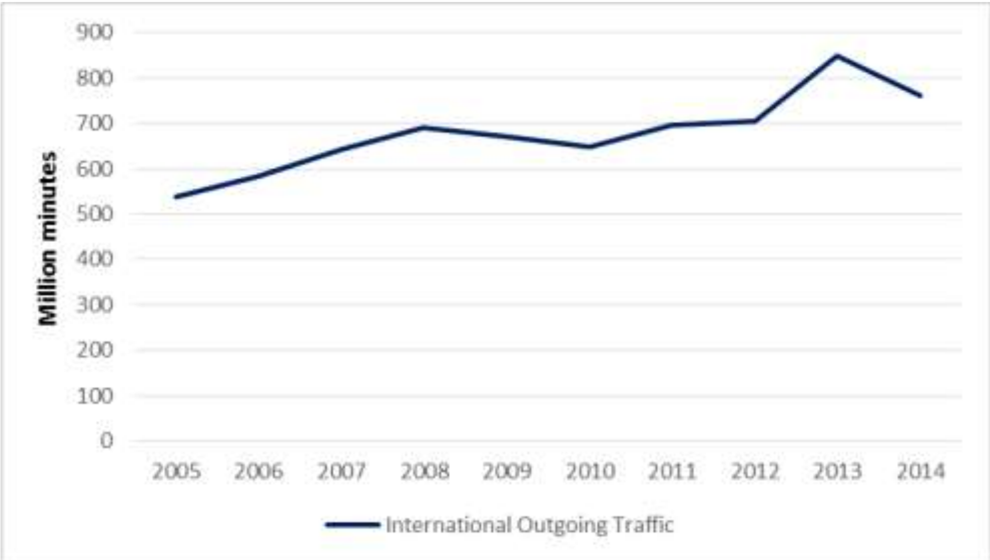
Source: ANACOM

This alteration in the structure of originated traffic could reflect the elimination, in several tariff offers, of price differences between on- and off-net calls, and the emergence of offers that include a high volume of free calls to all networks.

In particular, it is found that the increase at the level of mobile-to-fixed traffic, resulting especially from the growth in 2012 and 2013, reverses the downward trend identified in the last market analysis, possibly as a result of factors referred above, combined also with a slight increase of the penetration rate of the telephone service provided at a fixed location (which increased by 1.5 p.p between 2010 and 2014, to reach 43.9 per 100 residents).

As regards traffic with international termination, without prejudice to a decrease by 10% that occurred between 2013 and 2014 (which could be possibly associated to the use of substitutes for the telephone service, marketed by over-the-top services - OTTs), between 2010 and 2013 an increase by 31% was registered for this service. This evolution is due, for the most part, by traffic generated by MVNOs.

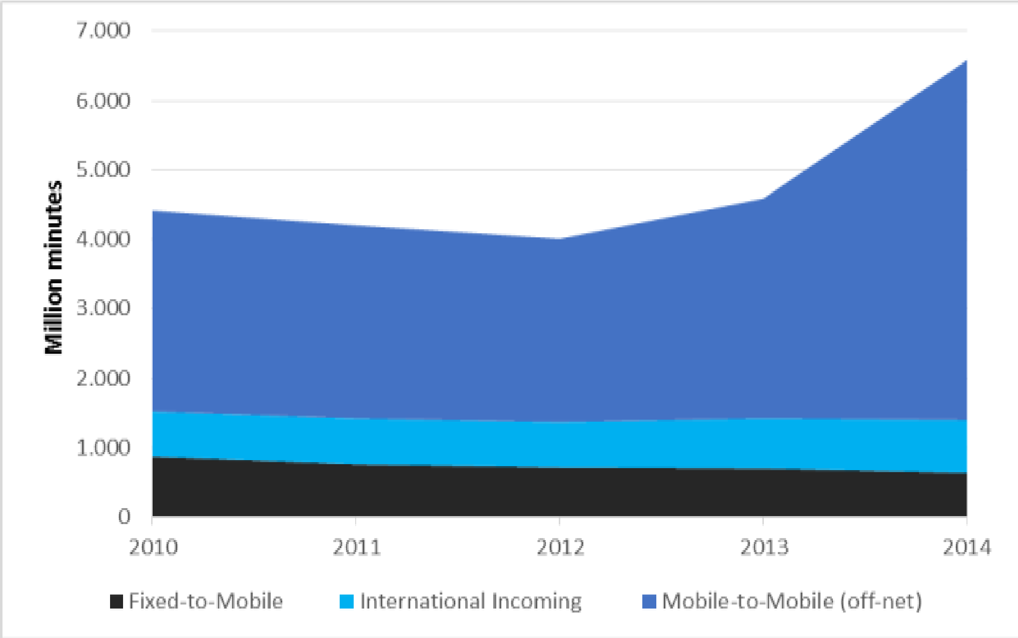
Graph 9 - Evolution of international outgoing traffic



Source: ANACOM

At the level of terminated traffic, around 6.8 billion (wholesale) minutes of calls terminated on active mobile providers (Graph 10) were registered in 2014.

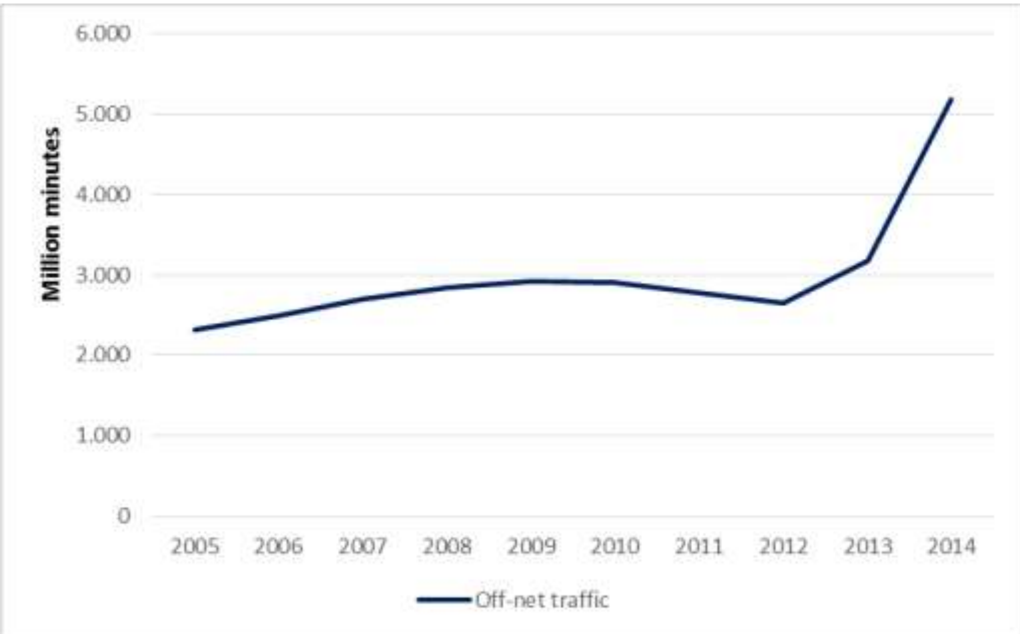
Graph 10 - Evolution of the number of minutes terminated on national mobile providers per type of call



Source: ANACOM

It may be observed that terminated off-net traffic shows a positive variation by 79% between 2010 and 2014, reversing the downward trend observed in 2011 and 2012 (Graph 11), reflecting an evolution close to originated off-net traffic.

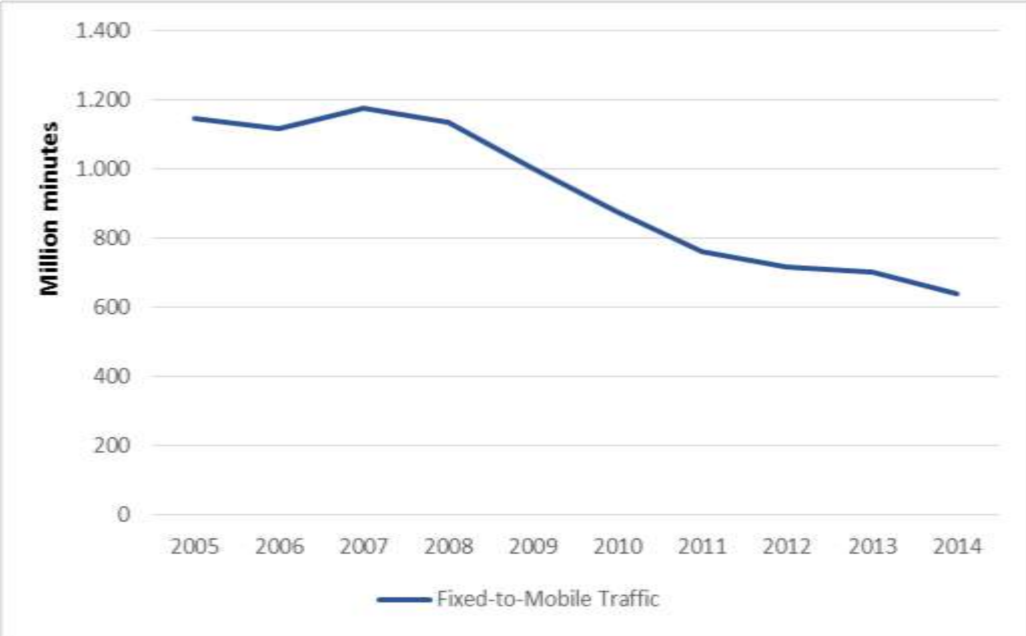
Graph 11 - Evolution of off-net mobile-to-mobile terminated traffic



Source: ANACOM

On its turn, fixed-to-mobile terminated traffic (Graph 12) registers, for the same period (2010-2014) a decrease by 27%, in a direction opposite to mobile-to-fixed originated traffic.

Graph 12 - Evolution of fixed-to-mobile traffic

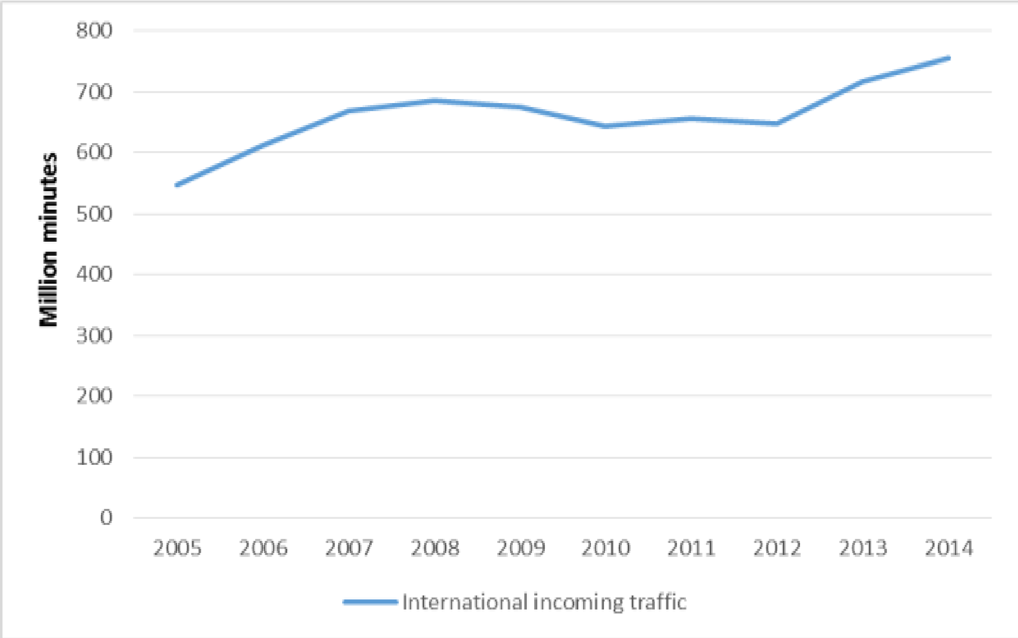


Source: ANACOM

The evolution of traffic from international destinations has not registered changes as significant as other types of traffic, however an increase by 7% between 2012 and 2014 (Graph 13) must be pointed out. Contrary to international outbound traffic, incoming traffic from other countries has maintained an upward trend in the last two years, for which the increase of Portuguese emigration[46] may have contributed.

[46] According to data from *Instituto Nacional de Estatística* (the National Statistics Institute), Annual Emigration Estimates, for the period from 2010 to 2013, permanent Portuguese emigration has increased by 126%.

Graph 13 - Evolution of international incoming traffic



Source: ANACOM

2.3. Traffic imbalance and on-net/off-net differentials

Although traffic increased at retail and wholesale levels (in this last case, at the level of mobile termination) over the last 4 years, not all active providers registered an equivalent evolution over time. While some registered a larger growth in 2010/2011, other showed a higher degree of traffic increase in 2013 or 2014.

The following graph illustrates the evolution of retail traffic for each of the providers on the market. Just like in the scope of the previous market analysis, MEO continues to show historically (from 2005 to 2014) a growing trend as far as originated traffic is concerned, showing the largest volume of retail traffic by the end of 2014 (Graph 14).

Graph 14 - Evolution of retail traffic

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Source: ANACOM

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As regards traffic evolution, the relevance of the launch of "on-net sub-group" or tribal tariffs must be highlighted, with a very significant impact for all providers on the market. This launch took place further to ANACOM's decision to decrease mobile network termination rates. The impact of these tariffs was very significant, bearing in mind that one year after they were in place, around 10% of mobile stations had subscribed them. Another consequence was obviously the increase of traffic, which was felt already in 2008, but mostly in 2009 and 2010.

In parallel, undifferentiated tariffs (with similar rates for on-net and off-net calls) have shown a clear loss of relevance, both in terms of traffic and of customers.

As regards differentiated tariffs ("on-net sub-group" or tribal), which represent offers with different rates for on-net and off-net calls, their main characteristic concerns the additional breakdown of calls within the same network, whereby calls to customers with the same tariff are free. According to ANACOM's 2010 market analysis, these offers were first launched by the smallest provider in the market (although its competitors reacted immediately by launching very similar offers), apparently in order to address the network effect felt in the market.

In fact, the offer of free calls within a same group was aimed at encouraging the increase of on-net traffic and at attracting customers of other providers. However, to that end, it was necessary to ensure that the rate of off-net calls remained sufficiently competitive to ensure that a customer who switched provider could continue to make calls to his contact network without bearing increased costs. The success of this type of tariffs for the three mobile network operators thus led to the increase of traffic, particularly of off-net traffic.

In the case of NOS, there was a clear benefit in terms of the increase of market share in 2008/2009, however in spite of this situation a significant increase of off-net traffic was also registered in this period, which deteriorated the imbalance of wholesale termination traffic against the largest providers on the market. This imbalance, associated to termination rates that in 2008/2009 still remained well above costs, created an important financial imbalance, placing this operator in a situation of competitive disadvantage.

ANACOM decided in 2010 to decrease termination rates so as to improve competition conditions for all market players. Following this intervention, new tariffs emerged on the market with undifferentiated rates for on-net and off-net prices and with low cost features, that is, at very low prices, compared to those in force so far. These tariffs, initially launched by an MVNO were replicated by other providers on the market.

Special mention can also be made, in 2011, to the general increase of "on-net sub-group" tariff rates, which led to the loss of competitiveness of these offers. In parallel, new pre-paid tariffs, with free calls for all on-net contacts, emerged.

In 2012, ANACOM acknowledged that termination rates still remained high, exceeding long run incremental costs and encouraging several competition distortions. As such, the Authority determined a new reduction of termination rates to values that, as from 31.12.2012, were determined on the basis of a benchmark of results of the "pure" LRIC cost model in several countries.

Further to this intervention, and having "pure" LRIC termination rates taken effect, new offers emerged on the market, many of which were integrated in packages that aggregated other services, such as the telephone service at a fixed location, pay-TV, (fixed and mobile) Internet access service, including free voice calls (both on-net and off-net), a monthly charge being charged for access to the various services that integrate the package.

Offers that were launched over time obviously had an impact on the level of revenues obtained by providers on the market. As regards price differentials between on-net and off-net calls, based on data for traffic revenues associated to each of these types of calls, it is found that, over the last five years, these differentials fell substantially, decreasing from average values of around 13 Euro cents per minute in 2010, to average values of around 2 Euro cents in 2014. The narrowing trend of the differential was particularly evident in 2013 and in 2014, as a result of the increase of bundled offers, which include free calls to all networks.

Traffic imbalance registered as from 2012/2013 a significant variation compared to previous years. On the one hand, Vodafone reinforced this imbalance to its advantage [BCI] CONFIDENTIAL INFORMATION [ECI] and, on the other hand, traffic imbalance [BCI] CONFIDENTIAL INFORMATION [ECI] started to harm MEO.

The very significant increase of traffic imbalance suffered by NOS, to the detriment of this provider, must also be highlighted (Graph 15) [BCI] CONFIDENTIAL INFORMATION [ECI].

Graph 15 - Evolution of imbalance in minutes

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[ECI]

*Note: 2013 data for NOS incorporate the effects of the merger between Optimus and the ZON Group.

Source: ANACOM

The aforesaid as regards the recent launch of tariff offers, specifically those included in bundles, and which frequently involve a high degree of free calls to all networks, may explain why variations were registered at the level of traffic imbalance. This situation generated a significant increase of off-net traffic, with a greater impact upon NOS, the operator with the smallest customer database. As such, just like in the previous market analysis, this operator remains in a situation of unfavourable imbalance.

The following graph (Graph 16) shows the imbalance suffered by NOS compared to MEO and Vodafone [BCI] CONFIDENTIAL INFORMATION [ECI].

Graph 16 - Evolution of imbalance suffered by NOS per operator

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[ECI]

Source: ANACOM

Although NOS recently reinforced its position on the market, in terms of shares of active mobile stations and also in terms of traffic, this evolution, as far as traffic is concerned, is for the most part based on the increase of off-net traffic, which entails a significant increase of the financial imbalance compared to other operators (Graph 17). This imbalance registered a decrease since 2010, aided by decisions to cut termination rates in 2010, and later in 2012.

Graph 17 - Evolution of financial imbalance suffered by NOS

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[ECI]

Source: ANACOM

Data presented, particularly those concerning shares, traffic and imbalance evolution suggest that tariff-mediated network effects are diluting, as a result of bundled offers launched by providers in the market which include free calls to all networks, and, consistently, a very significant decrease of price differentials between on-net and off-net calls is also taking place. In parallel, NOS has strengthened its position in the retail market.

This recent market evolution, involving an important traffic increase for all operators, would not have been possible in a context of high termination rates, and in this scope the introduction on 31.12.2012 of "pure" LRIC termination rates must be pointed out.

Notwithstanding, these same offers that have contributed to the expansion of traffic and supported the reduction of on-net and off-net differentials, diluting network effects, have also led to a very high degree of imbalance, to the detriment, in particular, of NOS.

3. Definition of the wholesale market for voice call termination on individual mobile networks

This chapter focused on the identification of the wholesale market for voice call termination on individual mobile networks. According to the EU regulatory framework applicable to electronic communications, which follows EU competition law, this market is defined through the intersection of two different dimensions: the product market and the geographic market.

The process of definition of the **product market**, which depends on national circumstances and which takes into account the Recommendation on relevant markets and the “Guidelines”, aims to identify all products and/or services which are sufficiently interchangeable or substitutable, in terms not only of their objective characteristics, by virtue of which they are particularly suitable for satisfying the needs of consumers, but also in terms of their prices or their intended use. This process of recognition begins by grouping together products or services that are used by consumers for the same purposes/end use, i.e., according to demand.

Products and services concerned will form part of the same relevant market where the behaviour of producers or suppliers of services involved are subject to the same kind of competitive constraints, i.e., on the supply side, particularly in terms of pricing.

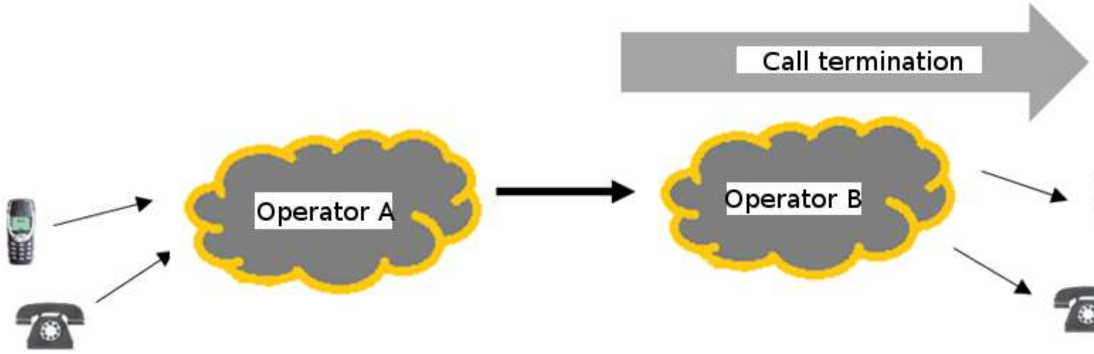
In this context, two main types of competition constraints are identified (i) demand-side; and (ii) supply-side substitution. These competition constraints may, in isolation or in conjunction, constitute a basis for the definition of a particular product market.

On its turn, the **relevant geographic market** comprises an area in which companies concerned are involved in the supply and demand of the relevant products or services, and where competition conditions are similar or sufficiently homogeneous in relation to neighbouring areas.

3.1. Wholesale market for voice call termination on individual mobile networks

The wholesale call termination service corresponds to the service whereby an operator terminates, on its own network, a call which is made to a terminal point of that network, which was carried by another operator with whom it has established an interconnection agreement. Termination is fixed or mobile according to the operator providing the termination service.

Figure 1 - Provision of the call termination service



Source: ANACOM

Call termination services, which are absolutely essential to the establishment of communications between mobile providers and between the latter and other market providers, are deemed by EC, which maintains them in the new list of relevant markets, to be the least replicable input for retail voice services[47].

Mobile termination is a wholesale service whereby each provider enables other providers - either fixed or mobile - to terminate calls from customers of the latter to a customer of the former.

The service of voice call termination on individual mobile networks may be provided by an operator with a self-owned network or by virtual mobile operators (MVNO), given that both are able to negotiate interconnection with other providers and to terminate calls received on the respective interconnection points. In the specific case of MVNOs, there may be situations where these providers earn no revenues for the provision of the call termination service on numbers concerned. This situation occurs where there is an agreement between the referred providers and third parties on whom their activity is supported, whereby revenues resulting from the provision of the call termination service on numbers of the provider supplying the retail service belong to the supporting provider. In these situations, it is deemed that the MVNO is not the provider of the referred voice call termination service.

[47] Cf. Explanatory Note accompanying Recommendation on Relevant Markets, section 4.1.3, paragraph 26, available at http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?action=display&doc_id=7056 .

3.2. Definition of the product market

The tariff system which has prevailed in Portugal, just as in most European countries, is based on the "calling party pays" principle, which means that the caller must pay the provider for the full cost of the call, the retail price being set by the provider. This means that the customer receiving the call is not billed for it.

Notwithstanding, the reception of calls has a cost, and rates associated to the call termination service supplied by the provider of the customer to whom the call is made are defined by that provider.

Note that the call termination service is made in a reciprocal way, to say that providers purchasing termination also sell it, thus financial transfers associated to the service doubly represent costs and revenues for providers.

EC points out[48] that the analysis of demand and supply substitutability shows that currently or in the foreseeable future no substitutes exist at wholesale level which might constrain termination pricing.

At wholesale level, providers are constrained by the choice made by their retail customers, as they cannot opt to terminate a call on a network other than the one chosen by the customer who originated the call. As such, at the level of demand substitutability, it is deemed that providers that purchase the termination service have no alternative but to get it from the mobile provider of the network to which the called final user belongs.

At the level of supply also it is deemed that substitutability does not exist, given that only the mobile provider of the customer receiving the calls, and which issued the respective SIM card, has access to this information, and may not be substituted by a hypothetical provider willing to supply the termination service.

Although in theory there could be constraints by virtue of the demand substitutability at retail level, given that the principle of "Calling Party Pays" is in force, in general the customer who originates the call is not able to influence the rate of the termination service and, on its turn, the final user who receives the call, who does not pay any user charge for receiving the call, is

[48] Cf. Explanatory Note accompanying Recommendation on Relevant Markets, section 4.1.3, paragraph 28.

naturally not very sensitive to the rate of the wholesale service, as it does not affect him/her directly, and as such he/she generally lacks incentives to push for the decrease of rates.

In former market analyses, it was deemed, in line with the position taken by EC[49], that the starting point for the definition of the product market is the market for each of the individual mobile networks.

It could be ultimately possible, in theory, to define a market restricted to each user (given that one call does not substitute another call), or, at the other extreme, to consider it a single national market for mobile services, including retail and wholesale termination services. However, these definitions are deemed not to be appropriate. On the one hand, it is not feasible for mobile providers to differentiate each user (or each call terminated on its network), with a specific rate, as this would be a pre-condition for the existence of a market for each user. On the other hand, although certain groups of users may exercise some buying power which in theory could support the consideration of a single mobile market (for example, closed groups where the proportion of inter-group calls is very high, which could threat to switch to another operator to enjoy lower on-net prices in case wholesale termination rates, and consequently call rates, increased), it can be observed that operators easily segment their customers in groups of users by providing them special offers (for example, a discount plan for a group of users). As such, the possibility of defining a large national market is rendered useless, given that this segmentation is performed so that, overall, providers remain unconstrained in setting the respective termination rates.

Moreover, retail calls as a whole are subject to different types of competitive pressure, and as such, on the demand side, there are no grounds to integrate them in a single wholesale and retail market.

Moreover, the definition of a single market for termination services would not be appropriate, given that on the supply-side there are technical restrictions which prevent providers from substituting one another in this provision; also, if termination rates were increased, companies would not be able to enter the market in order to provide the same termination service, as they lack access to data in the SIM card of customers on whom calls are terminated.

[49] Cf. 2007 Explanatory Note accompanying Recommendation on Relevant Markets, section 4.3, page 42, available at https://ec.europa.eu/digital-agenda/sites/digitalagenda/files/sec_2007_1483_2_0.pdf

As such, the former position according to which the size of the wholesale call termination market corresponds at the very least to each network remains, although mobile virtual operators hold even fewer network elements.

On the basis of the definition of a market of each network, the possibility of demand- and supply-side substitutability between termination services provided for various types of services, including voice, SMS and data services, between different types of calls, and different types of technology, must now be assessed. As such, it is now examined whether demand and supply of other services or technologies which could potentially be considered by consumers as substitutes, may have any influence in the demand or supply of voice call termination on mobile networks.

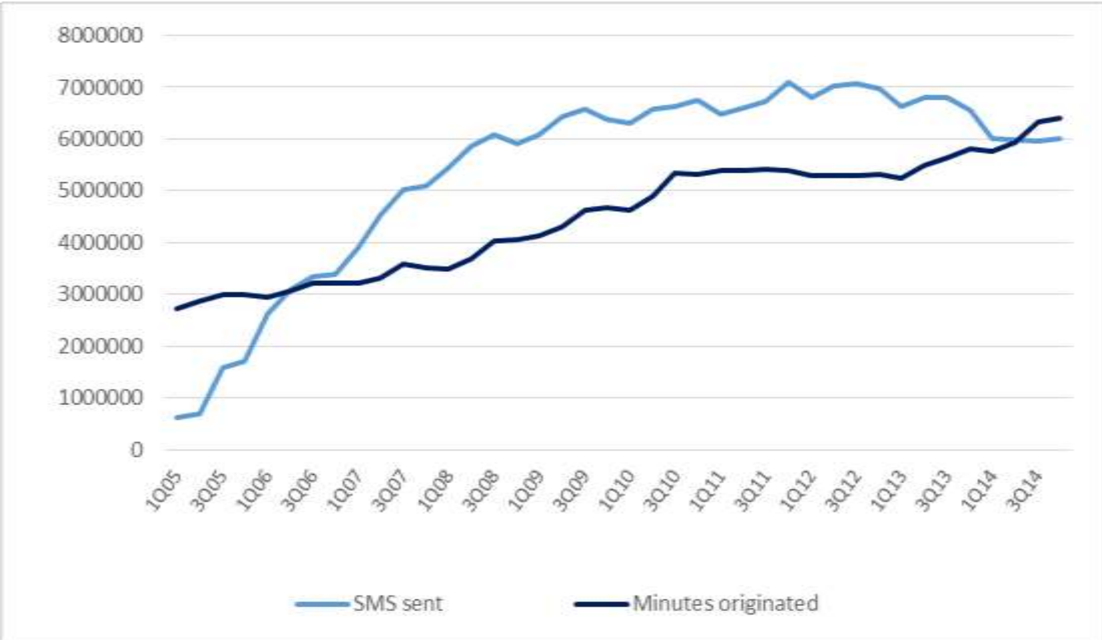
3.2.1. Voice call termination on mobile networks vs. data call termination (SMS) on mobile networks

ANACOM concluded in its previous analyses that data services (SMS), at retail level, and as a consequence, at wholesale level, do not exercise sufficient competition constraint on the setting of prices of voice call termination on mobile networks so as to justify its inclusion in the same market.

At retail level, voice and SMS services are not necessarily substitute products, given that, even if they are frequently marketed as a package, they are for the most part considered to be complementary services with different characteristics, on account of the nature and dimension of contents transferred and of the fact that SMS are sometimes sent with delay to addressees. Their use is different, tariff structures and charges are frequently different and they are even used in a different manner by different segments of the population.

The next graph (Graph 18) shows traffic evolution associated to voice calls and SMS originated from mobile providers, over the last 10 years. Over the years, both services have registered significant increase rates, however, in the case of SMS, this trend reversed as from 2012. Although this was not the case with voice traffic, there is no evidence that this could be the result of any substitutability between voice calls and SMS. The decrease of SMS could be the result of the competitive pressure exercised by instant messaging services supplied by providers (OTTs) other than mobile service providers.

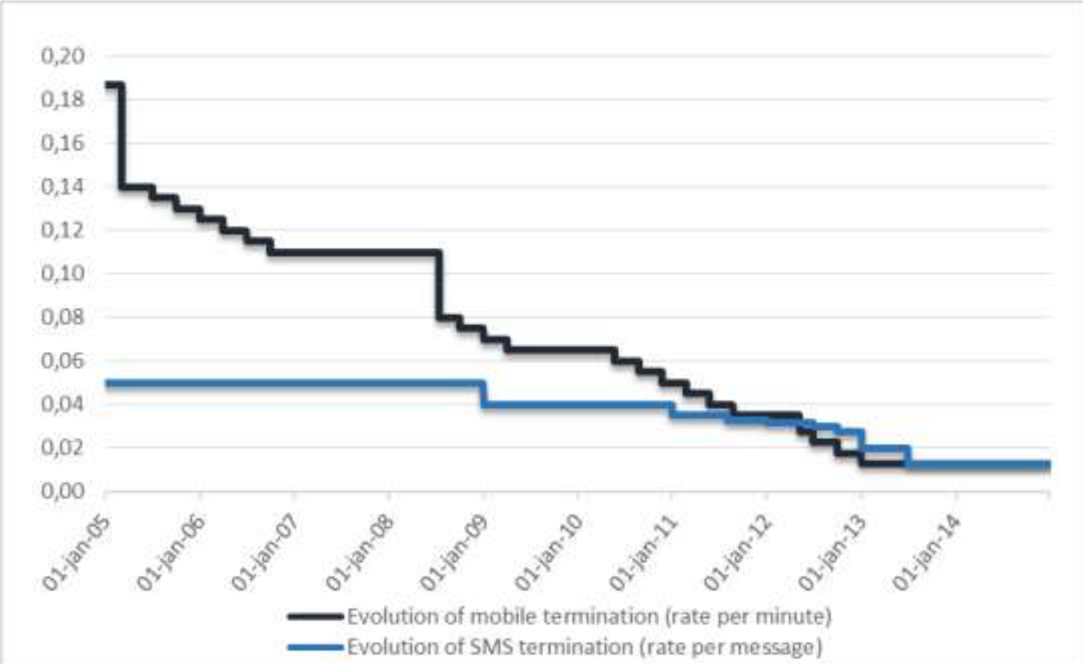
Graph 18 - Evolution of traffic according to minutes originated and SMS sent



Source: ANACOM

At wholesale level, rates applied to the two types of termination service showed a different evolution, as the following graph demonstrates (Graph 19). In the case of voice termination, the registered evolution was always dependant on regulatory intervention, which was not the case with SMS termination, which is not a regulated service, thus reductions which occurred depended on commercial negotiations between the various providers.

Graph 19 - Evolution of rates of mobile voice termination and SMS termination



Source: ANACOM

In the light of the above, and considering that in the perspective of demand, that is, final users, voice and SMS services are differentiated services, with different uses and at different rates, and that, in a supply perspective, all providers supply both services, both at retail and at wholesale level, and for this reason pricing applicable to voice call termination is not constrained by pricing applicable to SMS termination, ANACOM maintains its understanding that there is no substitutability between the service of voice call termination on mobile networks and the service of data call termination (SMS) on mobile networks.

3.2.2. Voice call termination on mobile networks vs. voice call termination on fixed networks

This section analyses whether the position according to which the mobile termination market constitutes a separate market from the market for termination on fixed networks is to be maintained.

Substitution of a call to a mobile number for a call to a fixed number is viable in those situations where the subscriber has both a fixed access and a mobile access, and is additionally able to access both services, which in general may only take place where he/she is at home. However, and even where this condition is fulfilled, factors that justify the different use given to these two services, fixed and mobile, still remain, namely the perception of the user of these two services and which results from the characteristics of terminals themselves, entailing in general different functionalities (a factor which has been declining) as well as from the mobility guaranteed by the mobile service. In addition, the mobile service is associated to a more personal use compared to the use of the telephone service provided at a fixed location.

There are also differences in terms of the quality of communications which the user perceives as associated to the fixed service and to the mobile service.

Moreover, the conditions for provision of the two services are in general different, involving different rates and payment methods that can differ.

Given the above, it is not deemed that voice calls to a fixed number (customers of providers of the telephone service at a fixed location) may replace in a relevant way voice calls to a mobile number, bearing in mind that, in this case, the intention to contact the other person directly and personally exists, regardless of his/her location. This is not necessarily viable with calls to the fixed network. In this context, it is deemed that call termination on mobile networks is not constrained by retail calls terminated on fixed networks.

On the other hand, the rate of mobile network termination is substantially higher than the rate of termination on the fixed network, and there is no evidence that this last rate exercises any significant pressure on the setting of mobile termination rates.

In terms of supply at wholesale level, it is deemed that, given the high entry barriers that characterize the mobile markets, resulting not only from limitations in available spectrum but also from investments required to develop a mobile network, it is unlikely that fixed network operators, further to a small increase in the rate of the call termination service on mobile networks, enter the market in order to provide a termination service that competes with the service already available.

In any event, it is noted that there are bodies who have entered the mobile market by negotiating access agreements as MVNO, while others that already operated on the fixed market purchased mobile operations via merger processes. Notwithstanding, where both fixed and mobile operations are maintained, the referred bodies also provide fixed and mobile wholesale termination services, under different conditions, namely in terms of rates.

In the light of the above, it is concluded that call termination on individual mobile networks and call termination on public individual telephone networks at a fixed location do not integrate the same relevant markets.

3.2.3. Voice call termination on mobile networks vs. on-net calls

It was concluded in the scope of former analyses that on-net calls do not exercise sufficient competitive constraint on mobile call termination so as to justify its inclusion in the same product market.

In order to assess whether voice call termination could be substituted for on-net calls, for which customers would be required to switch to the provider of the destination network or to have multiple SIM cards, it must be determined whether the latter constrain the setting of wholesale termination rates.

In this respect, it must be stressed that according to data of the Telecomunications Barometer - Marktest, in February 2015 each mobile phone owner held 1.2 active cards in average, a value that does not seem to be very significant, as it suggests that at least 80% has a single active card (this value may be even higher as some users may own more than 2 active cards).

Moreover, without prejudice to the high proportion of on-net calls, there is no evidence that these calls impose any constraint on the setting of termination rates. It is a fact that, over more than 10 years of regulatory intervention, mobile termination rates have remained almost always at levels corresponding to price ceilings set out by regulation.

In addition, in the case of customers who are price-sensitive when it comes to termination on their mobile networks, providers have supplied them with specific tariff options which allows them to make calls to a group of persons at a controlled rate or with tariffs with calls at the same rate for all networks, while providing different offers to customers who value other factors. This strategy enables providers not to feel pressure to reduce termination rates.

In view of the above considerations, it is deemed in fact that the substitution of mobile termination for on-net calls is not significant such as to constrain wholesale termination rates, thus the understanding according to which voice call termination on mobile markets and on-net retail calls do not integrate the same market remains unchanged.

3.2.4. Voice call termination on mobile networks of several 2G, 3G and 4G technologies

In the 2010 analysis, ANACOM concluded that there is a single market for voice call termination on the network of each provider, whereby the service provision is based on GSM and UMTS systems.

ANACOM takes the view that premises on which this conclusion was based are still valid. From a demand perspective, at retail level, the end-user is indifferent as to which technology or network is used to terminate the call. In fact, not only is he/she indifferent to the type of technology/network, but he/she may frequently not know that calls he/she makes may use different networks to connect to the caller. The called user (the one receiving the voice call) in general is also not aware of the technology used by its provider to terminate that calls.

In principle, there is no evidence that this situation will change with the implementation of new technologies or layers, in particular with the development of 4G, even if at this stage LTE voice services are not yet available.

On the supply side, there are no grounds leading to an assessment of possible competition constraints between the termination on 2nd and 3rd generation networks, given that services concerned are provided by the same operators.

In this context, ANACOM maintains its conclusion that call termination on mobile networks is independent of the type of network over which that provision is supported.

3.2.5. Communications over the Internet

In the light of technological evolution and the increasing supply of services that allow communications to be established via Internet-based apps, ANACOM takes the view that the extent to which referred apps may be integrated in the same market as traditional mobile voice calls must be weighted.

The development of terminals, namely smart phones, that allow access to higher Internet rates via mobile service, enable, from a demand point of view, the substitution at retail level of a voice call by an Internet communication.

In Portugal, according to Marktest's Telecommunications Barometer, a reasonable penetration of smart phones has been registered - in February 2015, 53.1% of telephone owners used them - but only around 17% of telephone owners use their equipment often to make voice communications using various apps.

This use is greater in the range of young users and has registered an upward trend, however it is not disseminated among the rest of the population and focuses mainly on international communications.

There are also some technical constrains that may condition a more extensive use of these apps, namely the need for compatible terminals on the part both of the customer originating the call and the one receiving the call, as well as the quality of service associated to some Internet-based voice services, which is irregular and in some cases not comparable to more traditional voice services.

Moreover, although in Portugal there are several available apps that allow Internet-based voice communications to be established, the recent evolution of mobile traffic does not indicate that relevant substitutability exists between referred services and retail mobile voice calls. As such, even in the presence of a small but transitory price increase of mobile voice calls, users would not likely substitute in a significant manner these calls for the referred apps.

Note that the European Commission itself considers, in its Recommendation on Relevant Markets, that these services are not substitutes for services provided by mobile operators -

"currently OTT services are not yet at a level in which they can be considered actual substitutes to the services provided by infrastructure operators"[50].

Without prejudice to the above, it is stressed that there are communications provided over the Internet that are terminated on public electronic communications networks, and as such they generate interconnection costs for providers who terminate them, particularly costs for the provision of the termination service. As the wholesale service provided does not differ from the one intended to terminate any other type of voice call, there seem to be no reasons why termination on mobile networks of Internet-originated communications should not integrate the same relevant market as termination of mobile communications.

3.2.6. Definition of the product market: conclusion

In light of the above, ICP-ANACOM concludes that the product market consists of wholesale services of voice call termination provided to third parties by each mobile network operator and by mobile virtual operators, covering termination on GSM and UMTS networks, regardless of the type of network or the body originating the call.

This definition includes termination of calls to numbers ported to the provider concerned, as well as termination on voicemail of the respective customers.

3.3 Definition of the geographic market

According to the Guidelines, "*the relevant geographic market comprises an area in which the undertakings concerned are involved in the supply and demand of the relevant products or services, in which area the conditions of competition are similar or sufficiently homogeneous and which can be distinguished from neighbouring areas in which the prevailing conditions of competition are appreciably different*".

[50] Cf. Explanatory Note accompanying the Recommendation on Relevant Markets, Section 3.2, page 17, available at http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?action=display&doc_id=7056 .

In former market analysis, the geographic market was defined according to two main criteria: the existence of legal and regulatory instruments, including restrictions associated with licensing/permits, pricing and service provision obligations, and the area covered by networks.

In this case, mobile providers operating in Portugal are not restricted as regards as geographic areas where the respective services are provided. On the other hand, offers made available at retail level involve uniform tariff conditions throughout all national territory. Moreover, at wholesale level, the termination service provided also presents uniform pricing, and competitive conditions are not differentiated according to geographic conditions where the offer is provided.

In the light of the above, and to the extent that the market product is constituted by wholesale services of voice call termination on each of the existing mobile networks, the determination of the geographic market coincides with the geographic coverage of each termination network.

3.4. Conclusion

Given the analysis conducted, it is deemed that, in Portugal, the size of wholesale markets of voice call termination on mobile networks corresponds to the network of the provider supplying the service and which involve the provision to third parties of the wholesale voice call termination service by mobile network operators and by mobile virtual operators, covering termination using 2G, 3G and 4G technologies of all voice calls, regardless of the type of network or body originating the call.

4. Markets susceptible to *ex ante* regulation

EC considers that markets identified for the purpose of *ex ante* regulation must meet three cumulative criteria:

- Barriers to entry and the development of competition: persistence of high entry barriers, whether structural, legal or regulatory;

- Dynamic aspects: the characteristics of the market are not such that it will tend in due time towards effective competition without the need for *ex ante* regulatory intervention. The application of this criterion involves an examination of the state of competition behind the barriers to entry;

- Relative effectiveness of competition law and additional *ex ante* regulation: insufficiency of competition law by itself to deal with the market failure.

Since the product market defined in the scope of the market for voice call termination on individual mobile networks corresponds to the relevant market recommended by EC and since, according to EC, the markets listed in the new Recommendation continue to be identified on the basis of the three cumulative criteria described above, it is considered that the market defined in this analysis procedure is relevant for the purpose of *ex ante* regulation, and for this reason, the existence of SMP therein will be assessed, without a prior examination of the three-criteria test[51].

5. Evaluation of SMP in markets for voice call termination on individual mobile networks

According to article 60, paragraph 1, of ECL (article 14 of Framework Directive), "*an undertaking shall be deemed to have significant market power if, either individually or jointly with others, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and consumers*."

[51] Cf. Explanatory Note accompanying the Recommendation on Relevant Markets, Section 2.3, page 11: "Given the analysis conducted by the Commission in the Explanatory Note of retail markets and their related wholesale markets, for the markets listed in the Recommendation, a presumption exists that the three criteria are met. Therefore, NRAs do not need to reconsider them when adopting a measure to address a market failure in one of the listed markets." available at

http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?action=display&doc_id=7056

Significant market power (SMP) may be held by only one company in the market (single dominance) or by more than one entity (joint dominance)[52]. Additionally, where an undertaking has SMP in a specific market, it may also be deemed to have SMP in a closely related market, where the links between the two markets are such as to allow the market power held in one market to be leveraged into the other market, thereby strengthening the market power of the undertaking (SMP leveraging).

In assessing SMP, it is important to conduct the analysis with the premise that that there is no current or potential regulation of SMP in the relevant market. This should be the procedure to be undertaken since the results of an assessment of SMP entails testing whether or not any regulatory intervention is required. Therefore, to assess SMP in this market, a hypothetical market must be assumed where no regulation of SMP (and no "threat" of regulation of SMP) exists.

5.1. Criteria for assessing SMP

According to the Guidelines, "*a dominant position is found by reference to a number of criteria and its assessment is based, (...), on a forward-looking market analysis based on existing market conditions*"[53].

In the guidelines, EC presents market shares as an indicator of market power, indicating that "*according to established case-law, very large market shares — in excess of 50 % — are in themselves, save in exceptional circumstances, evidence of the existence of a dominant position*"[54] [55].

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[52] ECL, article 60, paragraph 3: "The NRA may consider that two or more undertakings are in a joint dominant position, even in the absence of structural or other links between them, where they operate in a market which is characterised by a lack of effective competition and in which no single undertaking has significant market power."

[53] Cf. Guidelines, §75. Available at http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2002:165:0006:0031:EN:PDF

[54] Cf. Guidelines, §75. Available at http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2002:165:0006:0031:EN:PDF

[55] In the Commission's decision-making practice, concerns on situations of individual dominant position have been raised in general in the case of companies with market shares exceeding 40%, however there may be situations of dominant position even where market shares are lower or situations of companies with higher market shares that are not considered to be dominant companies.

Nevertheless, EC refers in the Guidelines[56] that the existence (or absence) of a dominant position cannot be established on the sole basis of large (or smaller) market shares, whereby the NRAs should make use of a combination of other criteria, among those referred in the same document.

5.2. Criteria used in the assessment of SMP in the markets of voice call termination on individual mobile networks

This analysis will focus exclusively on the existence of individual dominance, given that in markets with a single operator, collective dominance does not apply.

In this context, ANACOM considers that the main criteria to assess individual market power in the market for call termination on mobile networks are market shares, rates applied, barriers to entry in the market and countervailing buying power.

The analysis below takes into consideration the definition of company provided for in the Competition Act currently in force[57].

5.2.1. Market Shares

It followed from the definition of relevant markets that there is a single termination service provider in each market, thus all mobile telephone service operators in the market have a monopolistic position with respect to the supply of wholesale voice call termination service, and consequently a 100% market share.

In any event, in order to determine the size of each of these termination markets, the following graph (Graph 20) shows the evolution of minutes of mobile termination according to service provider.

Graph 20 - Evolution of mobile termination traffic per operator

[56] Cf. Guidelines, §78. Available at http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2002:165:0006:0031:EN:PDF

[57] Law No 19/2012, of 8 May.

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*Note: 2013 data for NOS incorporate the effects of the merger between Optimus and the ZON Group.

Source: ANACOM

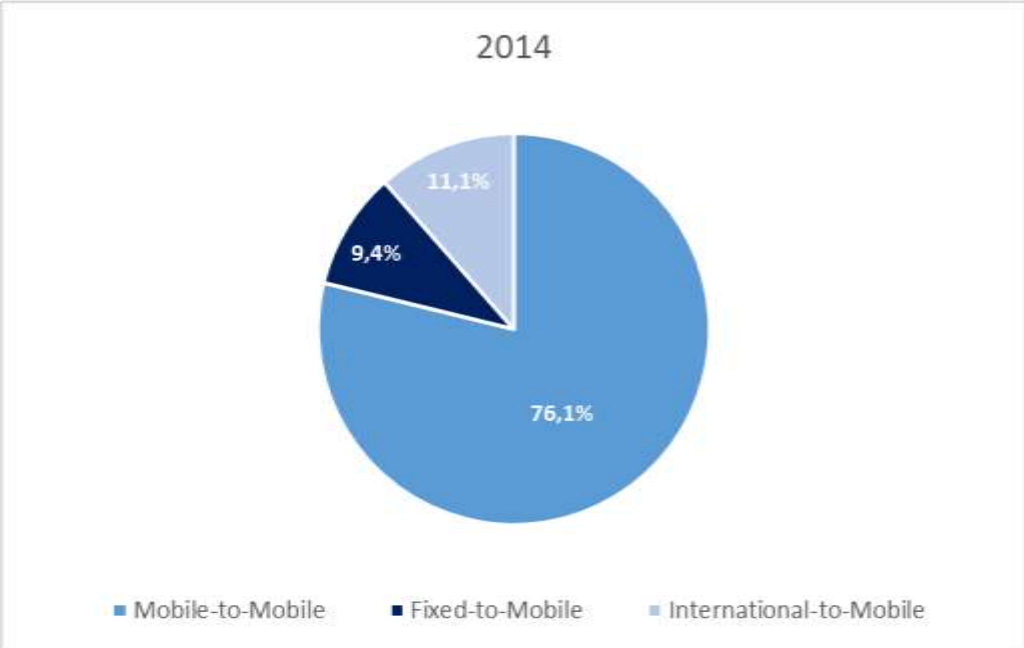
Between 2010 and 2012, mobile termination traffic showed some stagnation, however as from 2013, a sharp and general increase occurred for all providers of this termination traffic, which is deemed to be a consequence of the integration of the mobile telephone service in bundled offers, and of the fact that many of such offers included free mobile calls to all networks.

This evolution associated to the reduction of termination rates imposed by ANACOM in 2010 and 2012, contributed in the period between 2010 and 2013 to a decrease of termination revenues, and as such, of costs incurred by purchasers of the service, fixed and mobile providers.

In view of the increase of termination traffic registered as from 2013, revenues of the services and, consequently, overall costs of purchasers of the service, rose again.

In terms of composition of termination traffic, the following graph (Graph 21) shows that the most significant proportion corresponds to terminated traffic from mobile networks.

Graph 21 - Structure of mobile termination traffic per type of termination, 2014



Source: ANACOM

Although it is considered that such significant market shares (100%) are in themselves a strong indication of significant market power, this does not necessarily mean, as EC itself acknowledges[58], that all operators hold significant market power. The degree of possible countervailing buying power and other factors that may limit that market power, which are analysed below, must also be assessed.

5.2.2. Barriers to entry in the market

Relevant markets that were defined correspond to the market of voice call termination on each individual mobile network. As such, only the provider that controls the network elements required for interconnection purposes is able to provide termination of calls to its own customers. Therefore, given that at the moment there are no technical solutions to allow a

[58] In this context, EC refers in the Explanatory Note that: "While a 100% market share provides a very strong presumption of SMP, in accordance with competition law principles, a finding that there is no SMP may occur if there is sufficient countervailing buyer power, which would render any non-transitory price increase unprofitable." and that: "(…) the fact that each operator is a monopolist on its own network does not automatically mean that it has significant market power, and that the extent to which countervailing buyer power effectively constrains the ability of terminating operators to charge excessive termination charges has to be assessed on a case-by-case basis in the context of the SMP assessment" (page 32).

termination service provided by one operator to be substituted for the termination service of another operator, an absolute structural barrier thus exists, which prevents a potential entry of another operator in the market, so as to constrain termination rates.

5.2.3. Evolution of termination rates

Given the competition problems that affect final consumers and operators in the market, as well as in neighbouring markets, ANACOM took the view in its 2010 analysis that its intervention was required, and that it was crucial to impose, among other measures, a reduction of mobile termination rates to put an end to existing distortions. This decision follows from the conclusion that, in the absence of sector regulation, operators of the voice call termination markets continued to have incentives to act, to a large extent, independently of their competitors, customers and consumers.

As the cost methodology required for the determination of mobile termination rates was not yet available, ANACOM clarified that it would resort to benchmarking to determine a new rate downward movement, and thus to bring rates closer into line with best European practises.

The 2010 price control decision thus established a glide-path, between 24.05.2010 and 24.08.2011, determining quarterly reductions by 0.5 Euro cents (€c) per minute in the price ceiling of the wholesale mobile termination service, to reach 3.5 €c per minute as from 24.08.2011.

In that same determination, of 18.05.2010, ANACOM referred in its operative part that the Authority would review this decision in 2011, taking into account results of the mobile termination cost model, on the basis of the "pure" LRIC cost methodology (pure BU-LRIC) which at the moment was already underway.

In this context, and further to the development of the model, ANACOM adopted in 2012, and in line with EC Recommendation on Termination, of 07.05.2009, a "pure" LRIC cost methodology and determined that as from 07.05.2012 price ceilings for voice call termination on mobile networks to be applied by the three mobile operators with SMP would be 2.77€c per minute on 07.05.2012, 2.27€c per minute on 30.06.2012, 1.77€ €c per minute on 30.09.2012 and 1.27€c per minute on 31.12.2012, thus reducing by more than half termination rates adopted in Portugal compared to the value in force in 2011 (3.5€c). The price ceiling applied in 31.12.2012 was already set on the basis of results of the "pure" LRIC model.

It is noted that, more than 3 years later, since the 2012 Price Control Decision, there has been no voluntary decrease of termination rates, which in this period remained always in the maximum limit set out in the determination.

This situation was already the case before 2012, given that in years before that date no reduction of termination rates were registered other than those imposed by regulatory pressure. This fact strengthens the presumption of SMP of providers in the market, adding to the fact that these providers are monopolistic in the provision of the wholesale call termination service.

5.2.4. Countervailing buying power

The countervailing power of a buyer depends on its ability, in the case of an increase of prices, to switch its provider, to significantly reduce its consumption or even to cease the use of the service, thus constraining the setting of mobile termination rates on the part of the service provider.

Without prejudice, and in addition to the fact that the wholesale mobile termination service is provided in a monopoly regime, the ability of a provider/buyer to exercise pressure so as to constrain termination rates of another provider will always be minimized by the need to meet its own customers' expectations that he/she will be able to make calls to all destinations.

The mobile telephone service is mainly characterized by the fact that it allows users, who value the fact that they can always be reached and are able to contact other users whenever necessary, to be provided with mobility.

Customers of wholesale mobile termination services include operators of fixed telephone services, international (fixed and mobile) operators and operators competing in the national retail mobile market, their countervailing buying power being analysed in separate below.

5.2.4.1. Countervailing power of fixed providers

MEO would in principle be the provider with the largest operation at a fixed location, that is, with the largest customer database, as well as the provider better placed to hold some countervailing power on mobile providers. However, this provider has also its own mobile operation, and as such, any pressure on suppliers of the call termination service would only be exercised on other providers and not on its own operation. Likewise, other mobile providers, at least the larger ones (excluding MVNOs), also have fixed operations, thus as providers at a fixed location, they would only have an interest in exercising any pressure as purchasers of the call termination service as far as offers made by third party operators are concerned.

Without prejudice, it must be noted that the bargaining power exercised by fixed providers so as to constrain the setting of wholesale mobile termination rates could ultimately entail the refusal to terminate calls on the mobile operator providing the call termination service or, in the alternative, the threat to deny termination on the mobile operator or to increase its own termination rates so as to constrain mobile operators.

However, as referred above, any operator, regardless of its customer database, endeavours or is even required to guarantee a general access of its customers to all customers of other operators, being also required to ensure interoperability of services, thus its capacity to exercise in a credible way any of the above-mentioned possible threats remains subdued. In addition, given the existence of regulation in the scope of markets of fixed termination, which imposes regulated termination price ceilings, these providers are not able to threaten in a credible way the increase of its own termination rates. Therefore, it may be concluded that these providers do not have sufficient countervailing power so as to decrease termination rates of mobile networks.

In any case, it is stressed that the interest in exercising pressure to decrease mobile termination rates will be lower for fixed providers who simultaneously have mobile and fixed operations of a significant size, given that, contrary to fixed providers who do not have any mobile operation, such decrease of prices would not necessarily be to their benefit. As such, although a degree of bargaining power could be exercised by purchasers, the most interested bodies in exercising this power would be providers with no mobile operations, who are also the smallest providers on the market, thus their capacity to exercise competitive pressure as purchasers of mobile termination services is also be lower.

Anyway, there is no record, over the years, of any situation whereby mobile termination rates decreased as a result of pressure exercised by fixed providers, notwithstanding their frequent criticism of the differential between the two types of termination.

We could also contemplate a situation whereby national or international operators exercised pressure on mobile operators by increasing retail rates to calls terminated on their networks. However, this strategy would only be successful if all operators acted in concert to raise their retail prices at the level of all tariffs, otherwise, the customer would easily opt for switching operator.

In conclusion, it is deemed that, in the absence of regulation, the countervailing power of purchasers is insufficient to constrain the behaviour of providers of wholesale mobile termination services, or to limit their capacity to act to an appreciable extent independently of its customers, competitors and consumers.

Therefore, this conclusion fails to counter the presumption that providers on the wholesale market for mobile call termination have significant market power as a result of holding 100% market share.

5.2.4.2. Countervailing power of mobile providers

Competition at the level of retail markets has involved the definition of tariff structures that place high emphasis on lower on-net rates than those practised off-line, in order to exploit network effects and thus create a wider customer database that makes more appealing the decision to remain in that network. This strengthens the competitive capacity of larger providers to the detriment of smaller ones.

In this context, traffic imbalance is reinforced and, taking into account that, as referred earlier, the call termination service is made in a reciprocal manner, whereby providers that purchase termination also sell the same service to other providers that compete in the same retail markets, there are usually situations where interests diverge as to the level at which termination rates should be set.

These situations make it hard, in the scope of a purely commercial negotiation, to reach low and cost-oriented rates, which in general are only of interest to smaller operators.

It is noted, moreover, that the reduction of termination rates in Portugal has always occurred as a result of regulatory pressure and not on the basis of the negotiation of interconnection agreements between operators, leading to the conclusion that mobile operators do not have sufficient bargaining power to drive down termination rates.

As mentioned above as regards the countervailing power of fixed providers as purchasers of the mobile call termination service, this conclusion fails also to counter the presumption that providers on wholesale market of mobile call termination have significant market power as a result of holding 100% market share.

5.3. Forward-looking analysis

ANACOM considers that all the factors which justify the designation of companies that operate in the wholesale market for voice call termination on individual mobile markets as companies with SMP will remain in place over the short/medium term, until the next assessment of SMP, and there is no evidence that there may be any changes in termination markets that may have a significant impact on the existing dynamics.

5.4. SMP assessment: Conclusion

In the light of the above, ANACOM considers that all providers of voice call termination on individual mobile networks have SMP on this market. These providers are both mobile operators with a self-owned network and virtual mobile operators (MVNO)

This conclusion is supported on the fact that each provider holds a 100% share, as it has a monopolistic position with respect to the provision of call termination on its own mobile network, the fact that high barriers to entry remain, the evidence that termination rates only decrease further to regulatory intervention and the absence of significant countervailing power on the part of other providers to limit the capacity of mobile providers to act independently of them. As such, it is deemed that these operators have conditions and incentives, in the absence of *ex ante* regulation, to act to a large extent independently of competitors and customers and to practise excessive termination rates, thereby increasing its revenues and costs of competitors.

Some of the providers that supply mobile services in the retail market, and who have numbering resources for this purpose, may in fact not earn at wholesale level any wholesale termination revenues from provision of the call termination service. This situation occurs where there is an agreement between the referred providers (MVNO) and third parties over whose networks their activity is supported, whereby revenues that arise from the provision of call termination on numbers of the provider that supplies the retail service belong to the supporting provider.

However, it is deemed that providing mobile communication services and holding the corresponding numbering resources grant the provider the power to act and to control call termination to those numbers, at the level of termination rates that are applied, regardless of the type of contract concluded with the operator of the supporting network, which in fact may even be amended over time or subsequently replaced for a provision fully supported on a self-owned network.

Accordingly, active providers identified as having SMP on the market under consideration are as follows:

- CTT - Correios de Portugal, S.A.
- Lycamobile Portugal, Lda.[59]
- MEO – Serviços de Comunicações e Multimédia, S.A.
- Mundio Mobile (Portugal) Limited
- NOS Comunicações, S.A.
- Vodafone Portugal – Comunicações Pessoais, S.A.

Without prejudice to the need for new market analyses focusing on providers of mobile communications services (network operators or MVNO) who start operation after this decision is approved, ANACOM will in principle consider, in case it is required to intervene before the referred analyses are carried out, under the dispute settlement procedure provided for in articles 10 to 12 of ECL, namely as regards the provision of wholesale voice call termination, including wholesale rates of mobile voice termination charged by providers themselves, that

[59] In this case. Lycamobile Portugal, Lda. or Lycamobile Limited, which is qualified for the provision of the mobile telephone service as from March 2015, in case the latter replaces the former in the provision of this service, namely where the transfer of associated numbering resources takes place.

obligations imposed in this analysis constitute the appropriate reference for decisions to be adopted in this context as far as new entrants are concerned.

6. Characterization of competition problems identified in relevant markets

Following an initial intervention in 2005 under the current regulatory framework, ANACOM concluded in 2008 that available data pointed to the existence of a market failure associated to price discrimination as a foreclosure strategy, namely taking into account that the following factors had been found: i) weight of traffic from tariffs with on-net/off-net discrimination, ii) differentials between average on-net and off-net rates were particularly significant in the case of larger operators, iii) the reduction in the market share of the then Sonaecom, between 2005 and 2008, iv) the “contact network” was indicated by customers as the main reason for choosing a mobile operator; v) traffic imbalance still was very unfavourable for smaller operators.

It was thus deemed relevant to continue to intervene so as to establish competition conditions in the market, guaranteeing a level playing field for all companies in the market, for the benefit of consumers in general. For this purpose, ANACOM set a glide-path to decrease termination rates.

In 2010, ANACOM intervened once more, having concluded that the market was still characterized by competitive distortions, having pointed to those that existed between fixed and mobile operators, and at the level of the mobile market, the practise of differentiating on-net and off-net retail rates to promote network effects.

In 2012, having taken the view that the behaviour of mobile operators on the wholesale market had not changed, in the sense that operators had not introduced additional cuts to termination rates apart from those determined by ANACOM, and taking into account that the structural problem concerning discrimination practises between on-net and off-net rates, which intensify network effects and distort competition, still remained, ANACOM deemed it necessary to continue to regulate termination, particularly by imposing an important reduction in rates concerned, which on that occasion were already set out on the basis of results of the "pure" LRIC cost model.

Previous market analyses identified a group of potential competition concerns that can arise in a scenario of absence of regulation.

Competitive distortions that existed in the mobile market in Portugal, identified for the first time in 2005 in the scope of the market analysis carried out at the time, originate from the high differentiation between on-net/off-net retail rates, which contribute, associated to above-cost termination rates, to reinforce network effects (known as price-mediated network effects), making smaller networks less attractive and affecting their competitive capacity. Above-cost termination rates are on their own responsible for competitive distortions, as they are able to affect the relations between providers of fixed and mobile markets, distorting patterns of traffic consumption, to the detriment of fixed providers.

The fact that there are providers with significant market power in these markets and that the referred competition concerns remain, justified, since 2005 up till now, the regulation of termination rates.

In the scope of the present analysis, it must be assessed to what extent referred problems remain and, in this framework, to what extent it is justified to maintain that regulation and to determine a review of price ceilings set in 2012, on the basis of results of the duly updated "pure" LRIC cost model, in order to maintain such price ceilings at sufficiently low levels to avoid competition distortions, thus contributing to a framework of static and dynamic efficiency.

In this context, an aspect concerning the specificity of the mobile termination service must be stressed. This service could be considered to be included in a two-sided market, that is, a market where parties are brought together in a single platform, in this case purchasers and seller of the call termination service, where relevant network externalities exist.

As such, the call termination service represents a common platform where a provider brings together customers of other providers when the latter make calls and their own customers as receivers of such calls. Both parties have a positive externality. There is a benefit for the calling party (the customer of another network), which is the possibility of reaching the receiver and, at the same time, usefulness for the called party (the customer of the network providing the termination service), as it is able to receive the communication. Given the nature of the service, that generates benefits for both parties, costs associated to call termination do not necessarily need to be recovered on the basis only of the respective wholesale price.

Problems which lie behind these markets particularly involve refusals of access and/or negotiation to obtain voice call termination services, and the implementation of tariff strategies of high on-net/off-net differentiation, which are based on termination rates that are not in line with costs, thus creating relevant financial imbalances associated to traffic imbalances. This impacts the development of competition in downstream markets, clearly harming various players and consumers in general. Distortions between mobile and fixed markets also occur, to the detriment of the latter, which must be urgently addressed.

Without prejudice to the explicit reference in this chapter to competition problems that justify *ex ante* regulatory intervention in these markets, throughout the analysis in following section references will be made where appropriate to specific competition problems that are deemed to be relevant to the weighing up of possible obligations to be applied.

6.1. Refusal (or delay) to negotiate and/or grant access

The refusal to negotiate and/or grant access can cover situations of outright refusal as well as situations where the service is provided under unjustified or unreasonable conditions. In both cases, it is a behaviour adopted by undertakings seeking to leverage their market power in certain wholesale markets to benefit their position in the retail markets, so as to harm possible or potential competitors.

The interconnection service is a vital input for any provider on the market - either mobile or fixed - in order to ensure the viability of its retail offer, since it is the sole means of guaranteeing that its customers are able to contact and to be reached by customers of other operators.

This difficulty in obtaining access becomes even greater where it affects smaller providers, given that their customer database is very short and, as such, interconnection with other networks is even more essential. In this context, the refusal to negotiate and/or grant access prevents the entry of new operators in mobile retail markets, and as such, it restricts free competition.

6.2. Distortions caused by excessive termination rates

ANACOM considers that, without regulation, mobile providers would have incentives and also the capacity to set above-cost mobile termination rates. As already referred in this analysis, mobile providers in Portugal, in the last few years, have only decreased termination rates as a result of regulatory imposition and never on their own initiative.

The establishment of excessive termination rates would lead mobile providers to earn excessive profit from the provision of this service by directly overcharging other providers, and, indirectly, customers of other providers. Considering that the termination rate is one of the components of the marginal cost that each provider bears per each minute of calls to customers of other networks, this means that excessive termination rates will necessarily affect retail prices of off-net voice calls made by final consumers.

Some economic analysis of effects of regulatory policies on two-sided market rates conclude that, in certain contexts, the reduction of rates in a given market may lead to alterations in rates of another. In this context, a mobile termination rate reduction policy could lead to the increase of retail prices, resulting in an effect referred to in the literature as the “waterbed” effect.

Some providers claimed in the past that this effect existed in the national market, losses in revenues of mobile termination being compensated with the increase of revenues from retail services. In this context, it has been claimed also that higher termination rates will allow the transfer of additional revenues thus obtained to final customers, particularly through terminal equipment subsidization or discounts in prices.

However, the evolution of the national market does not enable the conclusion to be drawn that a “waterbed” effect exists, without prejudice to some one-off price rises, which have been generally justified by providers on the basis of inflation changes and the reduction of cross-subsidization.

6.2.1. Distortions in consumer choice and static economic efficiency

One of the most relevant distortions in these markets is generally known as "tariff-mediated network externality"[60], which is reflected in the change in customer traffic patterns, resulting from excessive rates of off-net calls, to the detriment both of other providers and ultimately of the final consumer.

These distortions occur in the retail mobile market as a result of the high differentiation in rates of on-net and off-net calls, on the basis of above-cost termination rates. This situation distorts the consumption pattern of mobile calls, given that customers tend to prefer to make on-net calls, however this choice does not truly reflect marginal costs of services concerned, generating static inefficiency.

Nevertheless, in the last two years, mobile termination rates in Portugal have already been set according to "pure" LRIC results, thus these distortions tend to gradually decrease, which is in fact already apparent from the gradual reduction of on-net/off-net differentials. Notwithstanding, it is essential to guarantee that termination rates remain at levels at which the described situations are prevented, that is, at sufficiently low levels that allow static inefficiencies to be avoided.

These distortions also have an impact on fixed markets, as they affect consumption patterns of customers of the fixed telephone service, due to high rates of fixed-to-mobile calls. Given that termination rates are set above costs, revenues obtained by mobile providers with fixed-to-mobile call termination allows them to subsidize their own business, namely their on-net calls, inducing an excessive use of mobile services, subsidized by above-cost termination, to the detriment of fixed services.

In case relative rates do not reflect real differences in marginal costs of the two services, consumer choice is distorted and static inefficiency is generated, which would remain in any event, regardless of what took place in mobile markets.

In any case, rates of both termination services have already been set at levels that are consistent with the "pure" LRIC model, and it is relevant that they remain at these levels further to the review and update of the cost model, so that further inefficiencies are avoided.

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[60] For example, in "Competition in Telecommunications (Munich Lectures in Economics)", Laffont, J.J., and Tirole, J., MIT Press, 2001.

6.2.2. Competition distortions in mobile markets

Without prejudice to identified distortions at the level of static efficiency, the large tariff differentiation between on-net and off-net calls, which is the result of above-cost termination rates, also creates distortions at the level of dynamic efficiency. First of all, because the average cost of communications of smaller operators, given the difference of market shares at retail level, will be higher, as a result of the heavier weight of off-net calls, the costs of which exceed those of termination on its own network.

In the presence of on-net and off-net tariff differentiation, when users are faced with the decision to chose a provider, they opt for the one that allows a higher proportion of on-net calls to be made, meaning a provider with the largest number of customers, all other things being equal. In addition, these decisions are enhanced by strategies put in place by providers, especially the larger ones, whereby a high degree of tariff differentiation is maintained between on-net and off-net calls so as to reinforce existing network externalities.

Referred strategies have a negative impact on smaller providers, whose competitive capacity is affected, given the difficulty in attracting and maintaining customers. This effort to attract customers frequently forces the reduction of off-net prices so that the choice for a larger or a smaller provider becomes indifferent to customers. However, this rate reduction, or the reduction of on-net and off-net differentials, results in a traffic imbalance, to the detriment of the smaller provider, as it encourages an increase of off-net calls originating therefrom, and at lower prices than the other way around, which, associated to above-cost termination rates, creates important financial imbalances suffered by smaller operators.

It follows from the above that smaller providers are thus affected twice by differentiation strategies combined with termination rates exceeding costs, not only because they have a lower competitive capacity, but because the approach that could lead to the solution to the problem involves the increase of the traffic imbalance.

This type of strategies also has impact on the entry of other mobile providers in the market, whereby the attractiveness of the business is reduced.

Additionally, not only does this create a very strong competition disadvantage for smaller providers or for new entrants, but in the long run it could also have a negative effect on consumers, constraining their choices, given that the degree of competitiveness in the market is affected.

The described situation has been obvious in the national case, as was explained in previous analyses and as the present analysis also confirms.

Reductions of termination rates imposed by the regulatory authority over the last few years aimed to address not only the problem of excessive wholesale prices, which on its own generates inefficiencies and distortions between fixed and mobile markets, but also to promote a level playing field in the mobile market, thereby enabling all providers on the market to benefit from the same competition conditions. In this context, it is stressed that further to the reduction of termination rates, over the years, new products were frequently launched, the recent offers of mobile services integrated in packages and with undifferentiated on-net and off-net prices standing out, in many cases with free calls for all networks, which demonstrate the importance of maintaining the regulation of termination rates, and of very low rates.

This analysis makes it possible to conclude that competition conditions in the voice call termination market have not changed substantially since the last market analysis, although at retail level some changes occurred that point toward the mitigation of network effects associated to a reduction of on-net/off-net differentials. Notwithstanding, as the various providers stand in different positions in the market, the referred changes, concerning a very substantial increase of traffic, especially of off-net traffic, have a very significant impact on traffic imbalance, to the detriment of some providers (see section 2.3, especially Graph 16 and Graph 17). In this context, it is deemed that market failures still remain, impairing smaller providers, although such failures are being opposed to. It is fundamental, to ensure that they are removed, that market regulation, especially termination rate regulation, is maintained.

6.2.3. Competition distortions between fixed and mobile markets

In the absence of regulation, mobile providers, as wholesale providers of the call termination service, will always have an incentive to set above-cost termination rates, placing a burden on fixed providers that terminate traffic on their networks, and indirectly on their customers, obtaining excessive income from that provision.

As such, as referred earlier, the practise of above-cost termination rates, in the scope of relations between fixed and mobile providers, has contributed to generate static inefficiencies, through the change of consumption patterns of fixed-to-mobile calls. Additionally, this practise also promotes competition distortions between fixed and mobile markets, affecting the competition capacity of the former, especially in a scenario of integrated fixed-mobile operations. In this context, it is relevant that all major providers of mobile services also compete at retail level in the market for fixed services, while there are fixed providers who do not have any mobile operation.

In the presence of regulation of fixed termination rates, which have been set at present and on an equal basis in compliance with the principle of cost-orientation of prices, it is necessary to ensure that mobile termination must also remain regulated, so as to avoid that mobile providers are able to set above-cost rates, that are considerably higher than what would be justified compared to rates practised by fixed providers for termination on the respective networks, taking advantage of the differential of wholesale rates to lower rates of their own retail prices, in particular of on-net calls, thus generating an artificial fixed-mobile substitution. In a retail market where bundled offers have multiplied, subsidization of providers with mobile operations by those who only have fixed operations entails an important competition advantage for the former.

This situation of subsidization of mobile providers by fixed providers was particularly clear in Portugal for several years, whereby annual values of net fixed-to-mobile transfers amounted to several tens of millions of Euros in 2010, but have been gradually decreasing with the establishment of termination price ceilings at the level of long run incremental costs of an efficient operator, to reach around 7 million Euros in 2014.

Given that mobile termination rates have already been set at the level of “pure” LRIC costs, it is important to guarantee that the cost model used to support price ceilings to be set remains up-to-date, so as to ensure that rates may effectively correspond to costs of the provision of the service. In this context, the update of mobile termination rates is deemed to be a crucial measure to enable the rebalance of competition conditions among referred markets.

6.3. Other distortions

Although with a lower weight, discrimination practices, at the level of rates or quality of services, or the lack of information on interconnection, are also able to distort competition, harming in particular smaller providers and hampering new entries on the market, and for this reason they also justify the imposition of preventive measures on providers with SMP.

6.4. Conclusion

In the light of the above, it may be concluded that in a scenario of absence of regulation, competition problems identified above have impact not only on the allocation of resources, that is, at the level of static efficiency, but they also have a negative effect at the level of competition in downstream markets, affecting dynamic efficiency. Difficulties that may emerge at the level of access, in terms of the provision of the call termination service, and in particular distortions caused by excessive pricing, which entail a necessarily less efficient price structure, both at retail and at wholesale level, cause competition distortions and affect negatively both providers that are present in the fixed market, and smaller providers acting on the mobile market, and, indirectly, also final consumers.

Without prejudice to the fact that more recent retail market data suggest that tariff-mediated network effects are decreasing, this situation is supported by a very significant increase of off-net traffic which, in spite of contributing to the reduction of network effects, generates significant traffic imbalances, and consequently financial imbalances.

In the context of the regulatory intervention on termination, the position of the European Commission, laid down in its Recommendation on Termination, must be stressed. In the Explanatory Note[61] accompanying the referred Recommendation, the following is referred: "Above-cost termination rates can give rise to competitive distortions between operators with asymmetric market shares and traffic flows. Termination rates that are set above an efficient level of cost result in higher off-net wholesale and retail prices. As smaller typically have a large proportion of off-net calls, this leads to significant payments to their larger competitors and hampers their ability to compete with on-net/off-net retail offers of large incumbents. This

[61] Available at http://ec.europa.eu/smartregulation/impact/ia_carried_out/docs/ia_2009/sec_2009_0600_en.pdf .

can reinforce the network effects of larger networks and increase barriers to smaller operators entering and expanding within markets."[62]

As far as distortions between fixed and mobile markets are concerned, the same Explanatory note stresses the following: "While mobile termination rates are on a downward trend as a result of regulatory intervention in the EU, regulators have tended to implement glide-paths with a more gradual rate of reduction and in 2007 mobile termination rates were still on average almost nine times the equivalent fixed rate. This results in substantial transfers and an indirect subsidy from fixed operators and their customers to mobile networks and services. This may in turn be contributing to inefficiently low usage of fixed networks in some Member States and could prove to be a barrier to important innovations and investments in the fixed sector such as fibre roll-out and delivery of next generation networks and bundled/convergent services."

In accordance with the analysis carried out, it is deemed that identified problems justify the need for *ex ante* regulatory intervention, with the imposition or maintenance of measures, especially the continued imposition of termination rates at the level of an efficient operator.

7. Imposition of obligation on markets for voice call termination on individual mobile networks

In the previous sections, the wholesale market for voice call termination on individual mobile networks was identified and analyzed, having been concluded that all providers of the referred wholesale call termination market have SMP in the respective markets.

In markets where SMP is considered to exist, ANACOM is bound to impose one or more regulatory obligations or to maintain or amend such obligations where they already exist. In this context, it is relevant that market failures are corrected through measures imposed

[62] In page 18 of the Explanatory Note, the Commission adds: "It has been further indicated in recent economic literature that in the presence of call externalities mobile networks have strong incentives to implement on-net/off-net price differentials due to (…) their strategic incentives to reduce the number of calls that subscribers on rival networks receive, reducing the attractiveness of rival networks, and hence their ability to compete. (…) According to some of this literature, termination charges which are above the marginal cost of termination result in strategically-induced network effects which may be detrimental to smaller networks."

directly at its source, a principle which is in fact laid down in the regulatory framework itself [cfr. point b) of paragraph 1 of article 85 of ECL], whereby priority is given to the imposition of obligations on wholesale markets to the detriment of downstream retail markets.

In overall terms, when imposing, amending and withdrawing obligations, ANACOM takes certain principles into consideration which result from the application of ECL, documents issued by the European Commission and ERG/BEREC, as well as, obviously, regulatory principles and objectives established by this Regulatory Authority.

It is deemed appropriate that these principles are made known to the market and taken into consideration before any obligation is imposed (amended or withdrawn) on the market.

7.1. Principles to be considered when imposing, amending and withdrawing obligations

In order to minimise or remove competition concerns that exist in a given market, ANACOM must impose on companies with SMP, in implementation of paragraph 2 of article 66 of ECL, the obligations which it deems most appropriate, ensuring that these obligations fulfil certain requirements, including that they:

- Are appropriate to the nature of the competition problem identified at the stage of SMP assessment, and are proportional and justified in the light of regulatory objectives set forth in article 5 of ECL (article 55, paragraph 3 a) of ECL);
- Are objectively justified in respect of the networks, services or infrastructures to which they refer (article 55, paragraph 3 b) of ECL);
- Do not result in undue discrimination in respect of any entity (article 55, paragraph 3 c) of ECL);
- Are transparent in regard to their purpose (article 55, paragraph 3 d) of ECL).

Consequently, it is incumbent on ANACOM, in strict compliance with the national regulatory framework and Community Directives, to adopt a proportional and duly justified intervention, imposing the minimum obligations required to overcome the identified competition concerns and that contribute effectively to the development of competition.

ANACOM's ultimate regulatory objective is to promote competition in the provision of electronic communications networks, electronic communications services and associated facilities and services, to contribute to the development of the internal market of EU and to promote the interests of citizens (ECL, article 5). In this scope, ANACOM must ensure that users derive maximum benefit in terms of choice, price and quality, guarantee that there is no distortion or restriction of competition in the electronic communications sector, and encourage efficient infrastructure investment and promote innovation.

For this purpose, under articles 67 to 76 of ECL, obligations that can be imposed on bodies with SMP in identified relevant markets are:

- Access to and use of specific network elements and associated facilities;
- Transparency in relation to the publication of information, including reference offers;
- Non-discrimination in relation to the provision of access and interconnection and in the respective provision of services and information;
- Price control;
- Cost accounting;
- Accounting separation in respect of specific activities related to access and interconnection.

Where the NRA concludes that obligations imposed under articles 67 to 76 have failed to achieve effective competition and that there are important and persisting competition problems or market failures identified in relation to the wholesale provision of certain access product markets, the Authority may, as an exceptional measure, in accordance with paragraph 4 of article 66, impose on vertically integrated companies an obligation for functional separation [cfr. paragraph 1 b) of article 66 and article 76-A].

In the definition of obligations, particularly as regards the obligation for price control and cost accounting in wholesale call termination markets, EC Recommendation on Termination is taken into consideration. This Recommendation seeks to address significant differences in the way how Member States regulate voice call termination rates and price control, namely as regards the variety of adopted cost methodologies, aiming to remove asymmetries of termination rates charged by the various operators and to reduce these rates so as to eliminate competition distortions promoted by above-cost prices.

In the analysis and definition of the obligations to be imposed (or withdrawn) account shall also be taken, as already set out above, of principles established in the ERG Common Position on this matter, presented in the document "Revised ERG Common Position on the approach to appropriate remedies in the ECNS regulatory framework", May 2006.

Based on competition concerns identified above, and bearing in mind the regulatory obligations that are currently in force, which were imposed under the previous market analysis, ANACOM identifies below the obligations that must be maintained, amended or withdrawn, as well as new obligations to be imposed, where appropriate.

7.2. Regulatory obligations currently in force on the termination market and analysis of future obligations to be imposed on companies with SMP

As stated above, on 18 May 2010, ANACOM's Management Board approved a final decision on the analysis of the wholesale market for voice call termination on individual mobile networks, having this Authority reached the conclusion that each operator had SMP on the wholesale market for call termination on its own network, and that it was appropriate, proportional and justified to impose on all companies with SMP the obligations described in Table 1 hereto, and which are concisely listed below:

- To respond to reasonable requests for access (article 72 of ECL)
- Not to discriminate in the offer of access and interconnection, and in the respective provision of information (article 70 of ECL)
- Transparency in the publication of information (article 67 of ECL)
- Price control and cost accounting (articles 74, 75 and 76 of the ECL)

- Accounting separation (article 71 of ECL)

Later, on 30.04.2012, ANACOM adopted a decision specifically on Price Control, which not only adopted a cost model for mobile termination, but also determined a new decrease of termination rates, based on the results of a cost model supported on the “pure” LRIC methodology, in compliance with EC Recommendation on Termination. This new decision led to the establishment, as from 07.05.2012, of price ceilings for voice call termination on mobile networks, to be applied by the three operators with SMP, regardless of the origin of calls, the evolution of which, as demonstrated in Table 3, would culminate on 31 December 2012 with the termination rate of 0.0127 cents per minute, a value which already reflects the results of the “pure” LRIC cost model.

As such, taking into account the principles invoked above, with a particular focus on whether measures to be applied are appropriate for dealing with or for mitigating competition concerns to be addressed, the following sections analyse regulatory obligation currently in force, so as to assess whether they should be maintained, amended or withdrawn.

7.2.1. Obligation to respond to reasonable requests for access (article 72 of ECL)

ANACOM maintained in the 2010 Decision on Market Analysis the obligation to respond to reasonable requests for access[63], thus ensuring that in these markets situations where negotiations and or access are denied without an objective justification do not occur.

In the absence of this obligation, operators with SMP would have the ability and possibly the incentive to deny or to hinder access for call termination, which would harm potential competitors on downstream markets and, consequently, users in general in terms of the interoperability of services.

Taking into account that the interconnection service is an indispensable condition for any operator - both mobile or fixed - to ensure that the provision of its retail services is viable, access denial would be very harmful both for current and potential competitors, and would significantly affect the degree of competition in retail markets, with a negative impact on final consumers.

[63] In compliance with paragraph 1 of article 72 of ECL.

As such, given that it is essential for market operators and for new entrants to terminate calls on other networks, it is deemed that the imposition of an obligation to respond to reasonable requests for access is necessary to ensure the development of an effective and sustainable competition in relevant downstream markets and to guarantee maximum benefit for consumers.

In this context, it is also essential for new entrants to make access to their customers viable, ensuring that the termination service is provided so that customers receive voice calls from other providers.

In case ANACOM, in the exercise of its powers, finds that it is necessary and appropriate to impose specific conditions with respect to the implementation of this obligation, the Authority is entitled to do so, in a separate decision, which would naturally be the subject of the applicable consultation procedure.

In the light of the above, it is deemed that it is objectively justified to maintain the obligation to respond to reasonable requests for access on all operators designated as having SMP in this market, under fair and reasonable conditions. This obligation is considered to be non-discriminatory, proportional and transparent, as it is applicable to all providers with SMP, it is reasonable and appropriate in this respect, and it is adequately described.

Moreover, since this is an obligation which has been in force for many years, its technical and economic feasibility is already established and no questions remain regarding any risks in terms of the investment made for the provision of access, whereby its imposition is perfectly feasible and entails no additional cost compared to those already borne by active providers.

Conclusion

As referred above, ANACOM takes the view that the obligation to respond to reasonable requests for access and to allow network access under fair and reasonable conditions, imposed on all providers designated as having SMP in these markets, must be maintained.

It is considered that this obligation fulfils regulatory objectives defined in article 5 of ECL and meets conditions defined in paragraph 3 of article 55 of the same statutory instrument, given that its imposition: is justified in the light of the harmful impact on competition that would result from the absence of this obligation or from its removal; it is not discriminatory, as it is applied on all operators with SMP, being deemed essential that all operators provide call termination services; it is proportional, as it is required to ensure competition in downstream markets; however, unreasonable requests are not required to be met, thus it is the least restrictive obligation that may be imposed to address the network access problem; and it is transparent, given that the purposes of the proposed measure have been identified, and that it is clear that the Authority seeks to encourage competition and to prevent behaviours that may affect the entry and stay in the market of providers who may potentially compete in downstream markets with bodies providing the termination service and that have the capacity to harm final users.

7.2.2. Non-discrimination in the offer of access and interconnection, and in the respective provision of information (article 70 of ECL)

In the scope of the 2010 Decision on Market Analysis, ANACOM imposed the obligation not to discriminate in the offer of access and interconnection, and in the respective provision of information, considering that operators with SMP in the markets for voice call termination on individual mobile networks should not discriminate between different purchasers of services for voice call termination on mobile networks which are in comparable circumstances.

The non-discrimination obligation aims to limit the incentive for companies providing the wholesale service to leverage their wholesale termination market power to neighbouring markets, imposing discriminatory conditions on other companies, not only at the level of wholesale rates charged (which are only regulated in terms of price ceilings) but also, for example, by providing certain competitors with services of a lower quality.

In the light of the above, it is deemed that the non-discrimination obligation should be maintained in the provision of wholesale call termination services for all operators with SMP in markets for voice call termination on individual mobile networks, as it restricts the capacity of mobile operators to harm competition in downstream markets, both mobile and fixed, while also ensuring greater certainty and predictability in terms of the functioning of the market.

As referred in the previous analysis, this obligation should be interpreted so that the rates of call termination on mobile network should be identical regardless of the origin of the call and irrespective of the operator delivering it to the operator with SMP, taking into account that the service provided is the same. Termination rates must also be identical irrespective of the buyers of the service. Taking into account chapter 7.2.4.5. as regards termination of calls from outside of the European Economic Area (EEA), such calls are not covered by this obligation.

As far as this obligation is concerned, it must be stressed that it does not prevent the provider of the call termination service from requiring from providers purchasing the service that voice calls that are delivered identify in some way the origin of the call or the caller.

This obligation also implies that termination of calls delivered by an operator on whom the call was not originated (transit traffic) must not be refused or hampered through the imposition of specific procedures or practises. This obligation requires only that traffic delivered via transit is accepted, and providers of the call termination service are not constrained in the way how they deliver traffic belonging to them to third party operators, being able to choose between direct or transit interconnection as they see fit.

The non-discrimination operation meets the regulatory objectives defined in article 5 of ECL, by promoting competition and by ensuring maximum benefit for consumers.

It also fulfils conditions defined in article 55 of the same statutory instrument, as it is a non-discriminatory, proportional and justified measure, which is equally applied on all operators with SMP, it ensures that purchasers of services concerned who are in equivalent circumstances are not discriminated, thus guaranteeing that all providers of retail telephone services and, consequently, consumers, are not penalised by virtue of possible discriminatory practises. The obligation is also transparent since the problems which it is intended to solve and the objectives to be achieved are identified.

Conclusion

ANACOM takes the view that the non-discrimination obligation continues to be appropriate and relevant to promote competition and to ensure maximum benefit for consumers, and as such, it should remain in the time horizon of the present analysis, applying to all operators with SMP on markets for voice call termination on individual mobile markets, except for calls originated outside the EEA.

It is noted that this obligation, which is already in force today, besides being a non-discriminatory, proportional, justified and transparent measure, as explained above, is not a burdensome requirement for operators. For all these reasons, it is deemed to be appropriate as to its intended purpose, namely to avoid the creation of competition distortions in downstream markets.

7.2.3. Transparency in the publication of information (article 67 of ECL)

The 2010 Decision on Market Analysis maintained the obligation for transparency in the publication of information, which implied that operators with SMP on these markets were required to send to ANACOM a copy of all interconnection agreements that were concluded or were amended, within 10 working days, as well as the prior publication of rates of voice call termination on the respective mobile networks.

In the markets for voice call termination, the imposition of a transparency obligation aims to monitor any anticompetitive behaviour, in particular behaviours that may compromise compliance with the obligation of non-discrimination in the provision of access and interconnection.

It is deemed that, in case the transparency obligation was withdrawn, the possibility of detecting discriminatory behaviours, both by the Regulatory Authority and by customers of the termination service, would be significantly affected, which could undermine the effectiveness of the non-discrimination obligation and also of the price control obligation.

ANACOM takes the view, in accordance with previous Decisions on Market Analysis, that there are no grounds for imposing on the wholesale market for voice call termination on mobile networks a reference offer setting out the terms and conditions governing the provision of the termination service. It is deemed that the imposition of this additional measure would not be proportionate, and costs emerging from its application, both for operators and for the Regulatory Authority, would outweigh any benefits resulting from its application.

Nevertheless, operators with SMP must provide purchasers of voice call termination on mobile networks, upon request, with all the information and specifications required for interconnection, including alterations with significant impact whenever its implementation is planned.

ANACOM takes also the position that the obligation to publish rates of voice call termination on the respective networks, as well as any alterations thereof, within a reasonable time in advance, should be maintained. The period of this notice may be defined by ANACOM at a later data, where appropriate. In addition, ANACOM considers that a copy of all interconnection agreements in force must be submitted, and any amendments introduced to existing agreements or the conclusion of new agreements must be notified to ANACOM within 10 working days.

ANACOM believes that the proposed obligation for transparency, which applies to all operators, is in line with the regulatory objectives set out in article 5 of ECL and is justified by the need to make all operators aware of terms and conditions for the purchase of the wholesale termination service, thus being essential to ensure certainty and predictability of negotiations and to speed up implementation of interconnection among operators. It is not discriminatory as it applies to all operators with SMP, as all operators require information concerned to interconnect speedily and efficiently. It is also proportional as it does not impose a significant burden on operators with SMP, given that only a copy of interconnection agreements and a simple disclosure of information on rates is required, and it is transparent with relation to the intended purposes.

Moreover, as this is an obligation which was already in force, it is completely feasible, and its imposition will not represent any extra costs. This obligation provides also a guarantee of stability and predictability of the market, promoting competition and, thus, deriving benefits to final consumers.

Conclusion

ANACOM takes the view that the need to maintain the obligation of transparency in the publication of information, in the same lines as those defined in the Decision of 2010, is justified. This means that all operators with SMP on these relevant markets are required to submit to this Regulatory Authority, within 30 days from the notification of the decision on these markets, a copy of all interconnection agreements in force, and following that deadline, agreements that are concluded or amended must be notified to ANACOM within 10 working days. In the case of amendments to agreements in force, those that involve "formal additions" to existing contracts must be notified.

The prior publication of rates of services of voice call termination on the respective mobile networks is also required. The deadline for publication may be established by ANACOM, should this become necessary. Taking account of the content of chapter 7.2.4.5., it is deemed that this obligation for publication of termination rates does not apply as regards termination of calls from outside the European Economic Area (EEA), however these calls are subject to other determinations that integrate this decision.

In addition, operators with SMP must make available to interconnection applicants, in due time and upon request, all information and technical specifications required for interconnection, including changes with significant impact, whenever its implementation is planned.

7.2.4. Price control (article 74 of ECL)

As referred in previous chapters, the provision of the voice call termination service is not subject to competition pressures such as to prevent a monopolistic provider, in a hypothetical scenario of lack of regulation, from setting wholesale rates at levels high enough to constrain competition in retail downstream markets, to the clear detriment of consumers and with consequences at the level of social welfare.

As a result, ANACOM considers that competition distortions that are promoted by above-cost termination rates, with impact on mobile markets as well as on neighbouring markets, such as fixed markets, may only be corrected via regulatory intervention, namely through the regulation of termination rates.

It is noted that already in the scope of previous decisions on these markets, ANACOM felt that the obligations to respond to reasonable requests for access, non-discrimination and transparency, although fundamental, were not sufficient to ensure the mitigation of market power exercised by the mobile operators, particularly in terms of termination pricing. The imposition of a price control obligation was thus considered to be essential, based on the principle of the cost orientation of prices, in order to guarantee efficient pricing, so as to correct distortions of competition identified at the time, and promoting efficiency so as to uphold the interests of consumers.

The price control obligation was implemented in order to guarantee that rates (price ceilings) established by the Regulatory Authority were based on results of a cost model that was developed for that purpose, supported on the EC Recommendation on Termination.

In this context, ANACOM determined in 2012 price ceilings for wholesale termination, based on the "pure" LRIC cost model, which is deemed to be the most appropriate method for calculating the cost of mobile termination. Bearing in mind competition conditions existing in Portugal and taking the utmost account of EC Recommendation on Termination[64], the Regulatory Authority determined that as from 07.05.2012 price ceilings for voice call termination on mobile networks to be applied by the three mobile operators with SMP would be 2.77€c per minute on 07.05.2012, 2.27€c per minute on 30.06.2012, 1.77€ €c per minute on 30.09.2012 and 1.27€c per minute on 31.12.2012, thus reducing by more than half termination rates adopted in Portugal compared to the value in force in 2011 (3.5€c).

In the light of problems identified in these markets, and recalling that prices of mobile termination have only decreased further to regulatory intervention, ANACOM considers that it is essential to maintain the established obligation for price control, embedded in the cost-orientation of prices, and implemented through results of a cost model of long-run incremental costs, taking into account costs of an efficient operator.

Taking into account the cross-cutting nature of problems identified, it is deemed also that rates must be applied symmetrically, that is, with the same ceiling for all providers of mobile services.

In view of the above considerations, it is considered that the price control obligation is justified, it provides an adequate response for problems aimed to be addressed, it is also proportional and non-discriminatory, and it applies in a transparent manner to all market

[64] Commission Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU (2009/396/EC) available at

http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:124:0067:0074:EN:PDF providers to the extent that they are providers with SMP. It is also a measure that meets regulatory objectives laid down in article 5 of ECL, namely those related to the promotion of competition, thereby ensuring in this scope that no obstacles or distortions emerge, and to the protection of citizens' interests.

7.2.4.1. The "pure" LRIC option

The service of voice call termination on mobile networks, as referred earlier, is framed in a logic of a two-sided market, generating benefits for both parties involved in the provision - whoever makes the call and whoever receives it -, although only one of the parties is burdened.

As such, and taking into account existing competition distortions, at the level of mobile markets and between mobile and fixed markets, associated to the existence of above-cost termination rates, it is deemed that the rate of call termination on mobile networks should be based exclusively on long run incremental costs arising from its provision, thus the recovery of common costs should not take place.

It is noted that distortions affecting competition dynamics justify the reduction of prices as advocated, contributing towards the rebalance of competition conditions in downstream markets of wholesale markets of call termination on mobile networks, with impact on national consumers.

In the scope of the establishment of termination rates, whereas it is appropriate to take models of long run incremental costs into consideration, at current costs of an efficient operator, using state of the art technologies, namely next generation networks, it should be weighted whether the most adequate cost methodology is the one supported on models of the LRAIC "+" type or on the "pure" LRIC type.

The "pure" LRIC option, which takes account only of incremental costs directly concerning the offer of the termination service, is the one, as dealt with extensively in the 2012 decision on price control, to which we now resume, that comes closest to the goal of granting greater efficiency to this relevant market, thus maximizing benefits for users and avoiding cross-subsidization between providers and between different markets via the exploitation of excessive margins in the termination service, also associated to traffic imbalances. As such, it is also the method that ensures fewer barriers to entry of new companies and which provides better competition conditions for all market players, avoiding competition distortions between providers of different sizes and/or imbalances of financial flows.

In a perspective of static efficiency, taking into account a termination rate based on a "pure" LRIC cost model implies lower distortion of the structure of rates of voice calls which will thus tend to reflect real inherent marginal costs. It is also, for this reason, the option that less distorts marginal choices of consumers and the respective total amount of consumed minutes. In this context, it is deemed that the recovery of common costs, for example, through the fixed component of tariff structures known as two-part tariffs, causes fewer distortions than the recovery of common costs through the linear burdening of the wholesale termination rate, which directly affects the composition of the marginal cost of off-net calls.

In this respect, it should be noted that markets concerned have been characterized historically by high on-net/off-net differentials, which, where associated to above-cost termination rates, promote existing network effects, with a negative impact on the attractiveness of smaller networks and consequently on the competitive dynamics of downstream markets.

In this context, it should be pointed out that benefits derived for larger operators do not result from a real difference in productive efficiency, but from a competition distortion that, via above-cost termination rates associated to the referred tariff differentiation, twists traffic patterns of retail calls, increasing the number of on-net calls and reducing the number of off-net calls. In addition, referred distortions also have impact in terms of traffic imbalance, generating significant financial imbalances that affect in particular smaller providers.

In the light of identified distortions affecting dynamic efficiency, termination pricing at the level of marginal costs, in particular the "pure" LRIC option, is also the option that best fosters competition, both among mobile providers of different sizes and between fixed and mobile providers.

At the level of the mobile market, the most appropriate option is the one that brings rates of off-net calls closer to their marginal costs. The inclusion of additional costs which are not directly attributable to the termination service, such as the case of common costs, would place an unjustified burden of such calls, harming providers who are most dependent on them, and entailing cross-subsidization between providers, to the detriment of former providers.

The reduction of termination rates resulting from the application of the “pure” LRIC cost methodology enables the creation of sustainability conditions for offers with low off-net calls rates or with free calls.

In particular, it will contribute for the reinforcement of the competitive capacity of smaller providers, namely in situations where they may be affected by traffic imbalance with relevant financial impact.

In the scope of relations between fixed and mobile markets, the “pure” LRIC option is also the one that ensures that a lower distortion occurs, rebalancing competition conditions among providers with and without mobile operations, given that, by avoiding that a part of costs of access to mobile networks is borne by calls from fixed networks, it guarantees that rates of termination in fixed networks and in mobile networks are brought closer.

It must also be noted that, although the application of the “pure” LRIC cost methodology does not allow the recovery of common costs, contrary to other methodologies, such as the LRAIC “+” method, ANACOM believes that this is without prejudice to the principle of cost-orientation of prices to which this obligation is subject. In compliance with the EC Recommendation on Termination, referred costs must be recovered in the scope of services other than call termination[65]. As such, while the wholesale call termination market is a monopolistic market, downstream retail markets are not, thus rates of services provided therein are subject to competitive pressure, and referred costs must be recovered in that scope.

In a context where “pure” LRIC termination pricing enables the reinforcement of the competition capacity of smaller providers on the mobile market and the correction of imbalances between the fixed and mobile sectors, and as there is no evidence of adverse effects, it is considered that the referred methodology will bring benefits for consumers in general, including those with the lowest level of consumption. Nevertheless, the possibility of introducing adjustments in certain offers is not excluded. However, as there is a high degree of segmentation in the market, and as the “pure” LRIC termination pricing contributes towards the increase of competition, it is considered that the referred methodology will bring benefits

[65] “(…) *Given the two-sided nature of call termination, not all related termination costs must necessarily be recovered from the wholesale charge levied on the originating operator. Even if wholesale termination rates were set at zero, terminating operators would still have the ability to recover their costs from non-regulated retail services*.”

for consumers in general, including those with the lowest level of consumption. Note in particular that consumers who exclusively use the telephone service at a fixed location, corresponding to consumers with a lower income, may derive an immediate benefit from the setting of very low mobile termination rates.

7.2.4.2. EC Recommendation on Termination

In addition to what was referred on the applicability of the “pure” LRIC cost methodology, it must be added that, as referred earlier, this is also the methodology deemed by EC in its Recommendation on Termination to be the methodology that must be adopted in the scope of the setting of termination rates.

The Recommendation establishes that Regulatory Authorities must ensure that, as from 31.12.2012, termination rates are set at the level of efficient costs based on the application of the bottom-up (BU) model, using the LRIC cost model to calculate long run incremental and forward-looking costs of an operator using to the most efficient technology in the relevant time horizon.

Its main goal focuses on the harmonization of the application of cost accounting principles in wholesale (fixed and mobile) termination markets, in order to foster efficiency and sustainable competition, as well as to maximize benefits for consumers in terms of rates and offers of services. Another explicit goal is the removal of competition distortions between fixed and mobile markets.

The calculation of the incremental cost associated to the provision of the call termination service excludes common costs incurred by operators in the scope of their activities, as well as any other types of increments associated to the recovery of costs that are not related to the termination traffic, namely costs of investments in the network for the purpose of coverage expansion.

Notwithstanding the fact that this document is a recommendation, it must be taken nonetheless into the utmost account, under Community directives and transposing national law, and for this reason any deviation from it must be objectively justified to EC itself, on the basis of specific national circumstances, which as far as the national market is concerned, have not been identified.

In any case, parameters of the model which in Portugal implements this methodology incorporate national specificities, without prejudice to considerations of efficiency, and take account of available market data.

As regards the applicability of the “pure” LRIC cost methodology provided for in the EC Recommendation on Termination, attention must be drawn to certain recent statements of the European Commission, which have been supported by BEREC[66], and which have been included in recommendations approved further to several notifications on mobile and fixed termination from the German Regulatory Authority, which chose not to adopt a “pure” LRIC cost methodology, leading to several letters in which EC raises serious concerns.

While several recommendations have been issued by EC, one of the most recent, dated 23 March 2015[67], on a draft decision of the German Regulatory Authority on mobile termination, refers as follows[68]:

> “(50) In particular, given the specific characteristics of mobile call termination markets in general and the associated competitive and distributional concerns in particular, the Commission stresses that the objectives of promoting efficiency and sustainable competition, maximising consumer benefits and contributing to the development of the internal market would be best achieved by a cost-orientation remedy based on a pure BU-LRIC methodology.
>
> (51) In addition, mobile termination rates set at an efficient level on the basis of a pure BU-LRIC methodology contribute best to ensuring a level playing field among operators by eliminating competitive distortions between fixed and mobile networks in the

[66] Vide BEREC Opinions, available at http://berec.europa.eu/eng/document_register/subject_matter/berec/opinions/

[67] Note that arguments put forward by EC for the opening of Stage 2 was endorsed, as in similar previous processes, by BEREC: http://berec.europa.eu/eng/document_register/subject_matter/berec/opinions/4855-berec-opinion-on-phase-iiinvestigation-pursuant-to-article-7a-of-directive-200221ec-as-amended-by-directive-2009140eccasesde20141666-1667-wholesale-voice-call-termination-on-individual-mobile-networks-market-2-in-germany

[68] Available at https://ec.europa.eu/digital-agenda/en/news/european-commission-demands-german-regulator-amends-its-mobile-termination-rates-line-eus

provision of termination services and between operators with asymmetric market shares.

(52) Moreover, high termination rates tend to lead to high retail prices for originating calls and correspondingly lower usage rates thus decreasing consumer welfare. As a result, a cost-orientation remedy based on a pure BU-LRIC methodology best promotes competition by ensuring that all users derive maximum benefits in terms of choice, price and quality in line with Article 8 (2) of the Framework Directive. In addition it best meets the requirements of 13 (2) of the Access Directive, which states that any pricing methodology chosen must serve to promote efficiency and sustainable competition and maximise consumer benefits."

7.2.4.3. Benchmark of "pure" LRIC rates

Further to ANACOM's decision of 2012 on the specification of the price control obligation in wholesale markets of voice call termination on individual mobile networks, Portugal became one of the few countries to apply wholesale mobile termination rates based on a "pure" LRIC model, and consequently to apply one of the lowest rates among the European countries. Note that the rate applied in Portugal was in force as from 31 December 2012, deadline established in the EC Recommendation on Termination for the setting of symmetrical termination rates based on costs of an efficient operator, using a "pure" LRIC model.

In January 2013, in addition to Portugal, only Belgium, Denmark and France practised "pure" LRIC rates. Data from BEREC[69] show that by that date Portugal was the 5th country with the lowest termination rates, among the 34 countries considered.

Nowadays, most Regulatory Authorities (of the 28 MS only 8 have still not applied "pure" LRIC rates) have already notified EC of their markets for voice call termination on individual mobile networks, the respective rates having been defined on the basis of "pure" LRIC[70].

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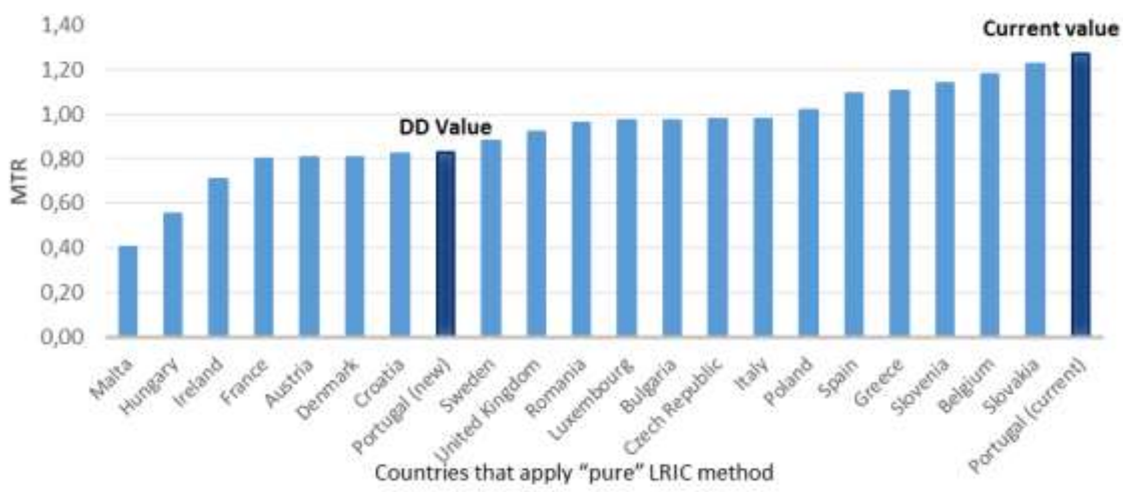
[69] Available at http://berec.europa.eu/eng/document_register/subject_matter/berec/reports/1279-termination-rates-benchmark-snapshot-as-of-july-2012-integrated-report-on-mobile-termination-rates-ampsms-termination-rates

[70] The analysis of the most recent information provided by BEREC, dated July 2014, already shows that the rate of national wholesale mobile termination exceeded the average rate charged in Europe (weighted average), due to the fact that more (most) countries are now applying "pure" LRIC rates.

Note that, in 2015, more countries notified new "pure" LRIC rates, such as the case of notifications from the UK[71], Hungary[72] and Croatia[73].

The graph below presents Portugal's position in the European context of countries that have already notified "pure" LRIC rates for mobile termination, showing rates practised in 2015. Portugal is the country with the most expensive "pure" LRIC rate in the group of these countries (Graph 22).

Graph 22 - "Pure" LRIC rates in EU countries



Note: Hungary (value to be applied in April 2015); Ireland (value set out in a draft decision not yet notified to EC); UK (value notified to EC to come into force on May 2015, in 2016 the value will fall to around 0.70 Euro cents).

Source: Notifications of Regulatory Authorities to EC/BEREC

The reduction of mobile termination rates that will result from the review of the cost model will allow Portugal to be placed once more on a more favourable position, becoming the 8th EU country with the lowest mobile termination rates, that is, a middle-ranking country, which is deemed to be in line with the country' size, terrain, population density, level of urbanisation and degree of use of mobile services.

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71 Available at https://circabc.europa.eu/sd/a/087643ab-d3ef-446d-a4e7-038bafba0283/MCT_EC_notification_form%20NONConfidential_final.pdf

72 Available at

https://circabc.europa.eu/sd/a/0ceba5f8-4fc8-471d-bac1-2e0e38bff22f/HU-2015-1705%20ADOPTED_EN.pdf

73 Available at

https://circabc.europa.eu/sd/a/816b7caf-65d4-452f-b671-eb962a8edee0/HR-2015-1709%20Adopted_EN.pdf

7.2.4.4. Rates to be applied

The definition of new rates of termination on mobile networks is supported on the review of the "pure" LRIC cost model, the results of which are included in a separate document, which has also been submitted to public consultation and prior hearing of stakeholders.

In this context, the price ceiling that may be charged by mobile providers with SMP in Portugal on markets of voice call termination on individual mobile networks for the provision of the referred wholesale voice call termination service is set at 0.83 Euro cents per minute, regardless of the origin of the call, on the basis of per-second billing throughout the call.

In addition, in order to promote regulatory certainty, namely by regulating prices for a period which will likely correspond to the period during which this market analysis will remain in force, allowing it to be taken into account in business and investment plans of providers, ANACOM takes the view that the price ceiling of the wholesale mobile termination service for the next two financial years, that is, 2016 and 2017, must be identified at this point, updated on the basis of inflation data (existing and foreseen), in accordance with the 2015 Decision on specification of the price control obligation.

The price ceiling set for 2015 shall take effect ten working days after the approval of the final decision on this process, and price ceilings for 2016 and 2017 shall take effect on 1 July 2016 and 1 July 2017, respectively. This determination does not apply to termination of calls originated outside the EEA.

In order to make above-mentioned price update operational, ANACOM shall notify operators with SMP in these markets, by the end of the 1st third of the year, the resulting update for 2016 and 2017, and shall make this information available also at its website.

7.2.4.5. Termination of calls originated outside the European Economic Area (EEA)

Without prejudice to the position taken on the need for rates to be applied on the basis of a "pure" LRIC cost model, ANACOM acknowledges that there may be relevant differences between commercial relations established between a provider and other national providers or providers of a Community country, or even outside EU, but part of EEA (that is, Norway, Iceland and Lichtenstein), who are subject to a common regulatory framework , and who, in the light of the application of the Recommendation on Termination, already are, or soon will be, bound to the application of “pure” LRIC rates, and commercial relations established with providers from countries outside EEA.

In a context where national providers are required to establish commercial relations with providers who exercise their activity in an environment subject to a different regulatory approach involving less demanding obligations, or where termination services provided by these third party providers may not even be regulated, the fact that national providers are subject to charge termination price ceilings that are oriented towards costs of an efficient operator (“pure” LRIC rates) may reduce in some way their business capacity.

In fact, national providers may be required to pay providers from outside EEA termination rates that are significantly higher than those in force in Portugal, which aggravated by possible traffic asymmetries between national providers and providers from outside EEA, could overburden providers operating in Portugal.

This price asymmetry would ultimately be to the detriment of national consumers, given that retail rates would reflect the increased value of wholesale termination rates that national providers would have to bear to terminate calls in countries outside EEA, contrary to consumers of those countries, who would benefit from the fact that their providers paid “pure” LRIC termination rates.

In addition, ANACOM considers that regulation objectives associated to the promotion of competition, consumer protection and strengthening of the internal market are not met through the regulation of termination rates of traffic originated outside the EEA, in fact these objectives could be harmed if such termination rates were regulated. It is noted also that this regulation will have no impact on fixed termination rates in countries concerned. As such, ANACOM believes that the price control obligation must not cover calls originated by operators outside the EEA.

As such, calls delivered to national providers from countries outside the EEA shall not be subject to the price control obligation, and consequently neither subject to the non-discrimination obligation nor to the requirement for prior publication of rates of termination for this type of calls. Without prejudice, the obligation to respond to reasonable requests for access imposed on operators with SMP on these markets, and other provisions concerning the transparency obligation, remains.

It is noted that at Community level this practise is already applied, both at the level of fixed termination markets[74] and of mobile termination markets, being stressed, in this regards, the most recent notifications from the French[75], Croatian[76] and Hungarian[77] Regulatory Authorities, that for similar reasons to those pointed out by ANACOM, also decided the apply in a different fashion the price control obligation according to whether calls are originated within the EEA, these decisions not having been opposed by EC.

In this context, ANACOM considers that nothing prevents the provider of the call termination service from requiring providers that purchase that service to identify in some way the origin of the call or the caller of voice calls that are delivered to it, for example through the caller ID (calling party number in the case of SS7) or through any other means, namely any of those identified in ITU Recommendation on International calling party number delivery, non-identified traffic being subject not to benefit from a regulated rate.

7.2.4.6. Conclusion

In the light of the above analysis, ANACOM determines that all providers with SMP on markets of voice call termination on individual mobile markets are subject to a principle control obligation based on the principle of cost orientation of prices, in the scope of the provision of wholesale mobile call termination services, regardless of whether calls are originated on fixed or mobile national networks, or on providers operating on the EEA.

ANACOM further concludes that the application of a “pure” LRIC value is, in terms of dynamic efficiency, the most appropriate option, as it limits the leverage that larger providers are able to exercise on downstream markets by using the excessive revenues that result from above-cost termination rates. It is also the option that better favours static efficiency, as it implies a lower distortion of the price structure of voice calls, the intention being that rates of off-net

[74] EC acknowledged, in its letter of comments to the Czech Republic on the notification of its market for fixed termination and on the decision to exclude calls terminated on its country but originated outside the EEA, that in the fact the Recommendation on Termination applies, in principle, only to wholesale fixed termination services concerning calls originated in countries belonging to the EEA (available at https://circabc.europa.eu/sd/a/63a12efc-b25e-4569-85eb-24ed4adc3ebc/CZ-2014-1581%20ADOPTED_EN.pdf)

[75] Available at https://circabc.europa.eu/sd/a/14067c62-4468-492a-9c4d-4ce7b2df0329/FR-2014-1668-1669-1670%20ADOPTED_EN%20FOR%20PUBLICATION%280%29.pdf

[76] HR/2015/1709.

[77] HU/2015/1705.

calls reflect real marginal costs that are inherent to them. In this scenario, marginal choices of consumers and the respective traffic patterns are not subject to distortions such as those that would result from the inclusion of more incremental costs than those that arise from the provision of the services, such as common costs.

This is also the most consistent option with EC Recommendation on Termination, and in the light of what was explained above, there are no objective reasons why Portugal should depart from recommendations set out, given that, on the contrary, it is necessary to pursue the determination of termination rates based on “pure” LRIC method, so as to remove distortions that still exist on the mobile market and between the fixed and mobile market and to preclude the emergence of new distortions.

On the other hand, the adoption of a methodology identical to that followed by the vast majority of Member States of the EU, based on “pure” LRIC costs, contributes towards preventing distortions within the internal market, and benefits consumers and providers of EU countries.

It is noted that current mobile termination rates already reflect the results of the “pure” LRIC cost model implemented in 2012; however, this model requires an update, so as to guarantee its adequacy, namely to reflect technological evolutions and the most recent market developments.

In the context of this review, covered in a separate document to be adopted together with this market analysis, it is stressed that the setting of a termination rate at the level that corresponds to the incremental costs of the service provided by an efficient operator will allow the reinforcement of competition conditions, enabling all providers to deal with tariff-mediated network effects, and to launch in a sustained way innovative products and new tariff structures. The setting of “pure” LRIC rates will also contribute to rebalance competition conditions between fixed and mobile markets that are downstream of wholesale termination markets.

In the scope of the review of termination rates, it should be highlighted that termination rates charged in Portugal are currently not in line those applied at European level, in the context of countries that set “pure” LRIC rates.

In the light of the above, as regards compliance with conditions laid down in article 55 of ECL, it is considered that the price control obligation supported on the development of the "pure" LRIC model appropriately responds to the identified problems, it is justified, proportional and non-discriminatory, bearing in mind that it is deemed essential that all providers with SMP are subject to it, so as to remove incentives to the application of above-cost termination rates, and that it is necessary to promote greater competition in downstream markets, with benefits for customers in general.

On the other hand, the application of a "pure" LRIC model is likely to have a relatively low impact on the group of companies with SMP, such impact being estimated to be lower than 1% of their operational revenues, and even lower as far as EBITDA is concerned, and as such perfectly affordable. As such, a glide-path is deemed not to be justified, which in any case would contradict EC Recommendation on Termination[78].

7.2.5. Accounting separation and cost accounting (articles 71 and 74 of ECL)

ANACOM imposed in its 2010 Decision of Market Analysis the obligation for accounting separation, including the obligation to report financial information, given that it enabled the verification of compliance with the obligations of non-discrimination and transparency and that it was also important in terms of the implementation of the cost accounting system. On its turn, the cost accounting obligation was imposed, associated to the price control obligation, so as to guarantee the demonstration of costs associated to the provision of the service.

It is noted that referred obligations were imposed in a context where wholesale termination rates were regulated on the basis of the principle of cost-orientation of prices.

In a context where the rate charged for the wholesale service of voice call termination on mobile networks is based on long-run incremental costs ("pure" LRIC), which are determined by a cost model developed by the Regulatory Authority, and where cost systems of active

[78] In its letter of comments to the notification from the British Regulatory Authority on relevant markets for voice call termination on mobile markets, available at https://circabc.europa.eu/sd/a/1df21fd7-f46e-436e-bb01-85909947b9ed/UK-2015-1706%20Adopted_EN.pdf, EC takes a very critical position as regards the adoption of a glide-path after the "pure" LRIC value is in force, having referred as follows: "The Recommendation, however, does not make provision for any 'adjustment periods' when the models are updated to reflect variations in underlying costs and technological progress, once the efficient rates have been implemented in the market. Delaying the adaptation of rates to reductions in underlying costs does not allow efficiency gains to be passed on to operators purchasing termination services and ultimately consumers."

providers are not necessarily based on the same cost method, the accounting separation and cost accounting obligations could represent a high burden for the referred providers, which lack appropriate justification.

It is stressed that at Community level, several countries do not impose this obligation, such as Austria, Croatia, Denmark, Estonia and the UK (at a draft decision stage), which, just like Portugal, impose “pure” LRIC prices.

In the light of the above, and without prejudice to the usefulness of information on costs, in the interest even of providers themselves, namely in the scope of the calibration of the cost model, it is deemed that justification for the maintenance of the accounting separation and cost accounting obligations is not to be found and that it would be a disproportionate burden in the current context. As such, ANACOM takes the view that they should be removed.

Without prejudice, it is noted that MEO is required to ensure the existence of a cost accounting system to fulfil the accounting separation obligation imposed in the scope of other markets.

Moreover, the possibility of all providers in the market being requested to provide cost information, as well as other information deemed to be necessary, is hereby safeguarded, in the context of future updates of the cost model or of specific and duly justified investigation processes. Providers thus maintain the obligation to respond to these information requests, to the extent of elements that are available to them.

7.2.6. Obligations to be imposed on operators with SMP - Conclusion

ANACOM considers that mobile providers with significant market power on wholesale markets for voice call termination on individual mobile networks must be subject, as specified in previous points of this section, to the following obligations:

- To respond to reasonable requests for access (article 72 of ECL)
- Not to discriminate in the offer of access and interconnection, and in the respective provision of information (article 70 of ECL)

- Transparency in the publication of information (article 67 of ECL)

- Price control (article 74 of ECL)

According to the analysis carried out, obligations previously imposed concerning accounting separation and cost accounting cease to be applicable.

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Annex I

List of acronyms and abbreviations

ECL	Electronic Communications Law
FBB	Fixed Broadband
FTS	Fixed Telephone Service
GSM	Global System for Mobile Communications
IP	Internet Protocol
LRIC	Long Run Incremental Costs
LTE	Long-Term Evolution
MBB	Mobile Broadband
MMS	Multimedia Messaging Service
MTS	Mobile Telephone Service
MVNO	Mobile Virtual Network Operator
OTT	Over-The-Top services
PTV	Pay Television service
SMP	Significant Market Power
SMS	Short Message Service
UMTS	3rd generation Universal Mobile Telecommunication System
VoIP	Voice over Internet Protocol
VoLTE	Voice over LTE

Annex II

List of other bodies/organizations

AdC	Autoridade de Concorrência (the Competition Authority)
ANACOM	Autoridade Nacional de Comunicações (the Portuguese National Regulatory Authority for Communications)
BEREC	Body of European Regulators for Electronic Communications
EC	European Commission
EEA	European Economic Area
ERG	European Regulators Group
EU	European Union
NRA	National Regulatory Authority

Annex III

List of operators

CABOVISÃO	Cabovisão - Televisão por Cabo, S.A.
CTT	CTT - Correios de Portugal, S.A.
GRUPO PT	Grupo Portugal Telecom
LYCAMOBILE	Lycamobile Portugal, Lda.
MEO	Serviços de Comunicações e Multimédia, S.A.
MUNDIO	Mundio Mobile (Portugal) Limited
NOS	NOS – Comunicações, S.A.
ONITELECOM	OniTelecom – Infocomunicações, S. A.
OPTIMUS	Optimus – Telecomunicações, S. A.
PTC	PT Comunicações, S. A.
TMN	Telecomunicações Móveis Nacionais, S. A.
VODAFONE	Vodafone Portugal – Comunicações Pessoais, S.A.
ZON	Multimédia ZON Multimédia – Serviços de Telecomunicações e Multimédia, SGPS, S. A.