

**RETAIL MARKETS FOR ACCESS TO THE PUBLIC TELEPHONE NETWORK
AT A FIXED LOCATION AND MARKETS OF TELEPHONE SERVICES
PROVIDED AT A FIXED LOCATION**

**– Definition of relevant markets, assessments of SMP and imposition,
maintenance, amendment or withdrawal of regulatory obligations –**

– Decision –

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1. INTRODUCTION

1.1. Conclusions of the last market analysis

By determination of 8 July 2004¹, the Management Board of ICP - Autoridade Nacional das Comunicações (ICP - ANACOM) approved the definition of low speed switched fixed service markets and the corresponding significant market power (SMP) assessment, including the following markets: (i) narrowband access to the public telephone network at a fixed location for residential and non-residential customers; (ii) publicly available telephone services provided at a fixed location for residential and non-residential customers.

In this scope, the analysis undertaken by ICP - ANACOM found, as regards each of the referred markets, as follows:

- Markets for narrowband access to the public telephone network at a fixed location for residential and non-residential customers

Two markets were considered to exist, the market for narrowband access for residential customers, and a second market, for narrowband access for non-residential customers, both of a national scope.

Companies of the Portugal Telecom Group (PT Group)² were found to have SMP in these markets.

Determination of 14 December 2004³ approved obligations to be imposed on the referred market, as outlined in the table below.

¹ <http://www.anacom.pt/render.jsp?categoryId=227146>

² At that time, companies concerned included PT Comunicações S.A. (PTC), PT Prime - Soluções Empresariais de Telecomunicações e Sistemas, S.A. (which in the meantime was integrated into PTC) and TMN – Telecomunicações Móveis Nacionais, S.A. (TMN), which changed later its name to MEO – Serviços de Comunicações e Multimédia, S.A. (MEO).

³ <http://www.anacom.pt/render.jsp?contentId=410374>

Table 1 – Obligations imposed on the PT Group, as the operator with SMP in markets for narrowband access to the public telephone network at a fixed location for residential and non-residential customers

OBLIGATIONS	Retail market for access to the public telephone network at a fixed location - residential customers	Retail market for access to the public telephone network at a fixed location - non-residential customers
To ensure transparency through the publication of tariffs, quality of service and other offer conditions	▪ Applicable	▪ Applicable
Not to show undue preference to specific end-users	▪ Applicable	▪ Applicable
To ensure cost-orientation of prices	▪ Applicable	▪ Applicable
To maintain a cost accounting system	▪ Applicable	▪ Applicable
To provide for accounting separation	▪ Applicable	▪ Applicable
To maintain price affordability	▪ Applicable (price-cap)	▪ Not applicable
To publish a subscriber line resale offer (SLRO) reference proposal	▪ Applicable	▪ Applicable
To implement carrier selection and pre-selection	▪ Applicable	▪ Applicable

Source: Determination of ICP-ANACOM of 14.12.2004

- Markets of publicly available telephone services provided at a fixed location for residential and non-residential customers

Relevant markets were deemed to include: (i) publicly available local and national telephone services provided at a fixed location to residential customers; (ii) publicly available international telephone services provided at a fixed location to residential customers; (iii) publicly available local and national telephone services provided at a fixed location to non-residential customers; (iv) publicly available international telephone services provided at a fixed location to non-residential customers; and (v) publicly available non-geographic telephone services provided at fixed location, all of a national scope.

Companies of the PT Group were found to have SMP in these markets.

Determination of 14 December 2004 approved obligations to be imposed on the referred markets, as outlined in the table below.

Table 1 – Obligations imposed on the PT Group, as the operator with SMP in markets of publicly available telephone services provided at a fixed location for residential and non-residential customers

OBLIGATIONS	Market of local and/or national telephone services - residential customers	Market of local and/or national telephone services - non-residential customers	Market of international telephone services - residential customers	Market of international telephone services - non-residential customers	Market of non-geographic call services
To ensure transparency through the publication of tariffs, quality of service and other offer conditions	▪ Applicable	▪ Applicable	▪ Applicable	▪ Applicable	▪ Applicable
Not to show undue preference to specific end-users	▪ Applicable	▪ Applicable	▪ Applicable	▪ Applicable	▪ Applicable
To ensure cost-orientation of prices	▪ Applicable	▪ Applicable	▪ Applicable	▪ Applicable	▪ Not applicable
To maintain a cost accounting system	▪ Applicable	▪ Applicable	▪ Applicable	▪ Applicable	▪ Applicable
To provide for accounting separation	▪ Applicable	▪ Applicable	▪ Applicable	▪ Applicable	▪ Applicable
To maintain price affordability	▪ Applicable (price-cap)	▪ Applicable	▪ Not applicable	▪ Not applicable	▪ Not applicable
Management of the National Numbering Plan in compliance with determinations issued by ICP-ANACOM	▪ Not applicable	▪ Not applicable	▪ Not applicable	▪ Not applicable	▪ Applicable

Source: Determination of ICP-ANACOM of 17.12.2004

2. REGULATORY FRAMEWORK

2.1. European Commission Recommendation on relevant markets

On 17 December 2007, the European Commission (EC) published a reviewed Recommendation on relevant markets - Recommendation 2007/879/EC⁴, which replaced Commission Recommendation 2003/311/EC⁵, on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC⁶ of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services (hereinafter Recommendation).

⁴ Published in the Official Journal of the European Union (OJEU) of 28 December 2007:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:344:0065:0069:pt:PDF>.

⁵ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:114:0045:0049:PT:PDF>

⁶ Available at: <http://www.anacom.pt/render.jsp?contentId=963124>.

The current recommendation provides for seven relevant markets⁷, one at retail level⁸ and the other six at wholesale level⁹.

Just like the former version of the Recommendation, the reviewed version is accompanied by a “Explanatory Note” in which the Commission attempts to explain the definition of new markets¹⁰.

Further to this review, one of the markets under discussion (markets 1 and 2 of the “former Recommendation”) is defined by EC as follows:

- Market 1: Access to the public telephone network at a fixed location for residential and non-residential customers.

Other markets under consideration - retail markets of publicly available telephone services provided at a fixed location (markets 3 to 6 of the “former Recommendation”) are no longer susceptible to *ex ante* regulation, according to the current version of the Recommendation.

The review of this Recommendation is currently under way, having been recently published a report on “Future electronic communications markets subject to *ex ante* regulation”¹¹, commissioned by EC with a view to preparing the referred review, containing the suggestion that current market 1 be removed from the list of relevant markets susceptible to *ex ante* regulation. Nevertheless, no decision has yet been taken on this subject, and as such this market still integrates the list of relevant markets, and may continue to integrate it, given that the mentioned report consists only of a study commissioned by EC and may not necessarily express this body’s views.

It should be noted that the European Regulatory Group (ERG), which is now known as Body of European Regulators for Electronic Communications (BEREC)¹², has already addressed the issue of the list of relevant markets, having stated as follows, in reply to the public consultation launched

⁷ Strictly speaking, there are more than seven relevant markets for the purpose of the definition and analysis identified by EC, as markets for call termination on individual public telephone networks, either mobile or fixed, are defined at the level of each telephone network, and as such at least as many relevant markets as individual public telephone networks may exist.

⁸ Market 1: Access to the public telephone network at a fixed location for residential and non-residential customers.

⁹ As follows:

- Market 2: Call origination on the public telephone network provided at a fixed location;
- Market 3: Call termination on individual public telephone networks provided at a fixed location;
- Market 4: Wholesale network infrastructure access at a fixed location;
- Market 5: Wholesale broadband access;
- Market 6: Wholesale terminating segments of leased lines; and
- Market 7: Voice call termination on individual mobile networks.

¹⁰ EC “Explanatory Note” (SEC(2007) 1483 final, available at https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/sec_2007_1483_2_0.pdf.

¹¹ Available at http://ec.europa.eu/information_society/newsroom/cf/dae/itemdetail.cfm?item_id=12285

¹² Body of European Regulators for Electronic Communications.

by EC on the Recommendation review¹³: *“Regarding the list of relevant markets, BEREC has identified current market 1 as a potential candidate to be excluded from the list if there is a clarification that associated relevant obligations concerning wholesale line rental and carrier selection and carrier pre selection, if necessary, can be imposed at wholesale level.”*

More recently, in the opinion issued on the draft reviewed Recommendation, BEREC stated as follows¹⁴:

“BEREC agrees with the long term trends in these markets identified by the European Commission. However, wholesale line rental and call origination will continue to be important drivers of competition in downstream retail markets in the short to medium term in the majority of Member States and it is premature to remove Markets 1 and 2 from the list of markets susceptible to ex ante regulation. While BEREC welcomes the acknowledgement by the European Commission that Market 2 will remain susceptible to ex ante regulation for another review period in some Member States, it requests that the European Commission mirrors this acknowledgment with respect to Market 1 and includes a transitional period. (...)

BEREC argues that competitive conditions in a good number of Member States justify the continuation of WLR and CS/CPS regulation. (...)

BEREC notes that even in cases where competition on the retail market has reached a satisfactory level, this is, in most cases, due to the availability of regulated offers on wholesale markets such as wholesale call origination that still plays a significant role in the development of competition in the retail markets, since some operators still rely on the wholesale inputs of the SMP operator to enhance their coverage of the national territory and thus compete in more similar conditions with larger operators. In a large majority of countries, PSTN is operated by the incumbent operator. A significant number of NRAs therefore fear that removing the regulatory obligations imposed under Market 2 would leave the incumbent operator with significant market power in Market 1, without incentives not to abuse this market power (applying market foreclosure or higher pricing strategies), as alternative operators would no longer be able to compete with the same underlying offers”.

¹³ Available at http://bereg.europa.eu/eng/document_register/subject_matter/bereg/opinions/1218-berecs-response-to-the-european-commission8217s-questionnaire-for-the-public-consultation-on-the-revision-of-the-recommendation-on-relevant-markets.

¹⁴ Available at http://bereg.europa.eu/eng/document_register/subject_matter/bereg/download/0/4438-berecs-opinion-on-the-commission-recomme_0.pdf

2.2. Market analysis procedure

Law No. 5/2004¹⁵, of 10 February, as amended and republished by Law No. 51/2011¹⁶, of 13 September (hereinafter Electronic Communications Law - ECL), established the legal regime governing electronic communications networks and services and associated services, defining the assignments of the National Regulatory Authority (NRA) in this field.

Under article 18 of ECL, it is incumbent on the NRA, ICP - ANACOM, to define and analyse relevant markets, to identify companies with SMP and to determine suitable measures in respect of companies providing electronic communications networks and services.

This procedure takes place according to the following stages (articles 55 to 61 of ECL)¹⁷:

- Definition of relevant markets (article 58 of ECL)

The NRA is charged with defining the relevant markets of products and services within the electronic communications sector, including the relevant geographic markets, in accordance with the principles of competition law.

In the course of the definition of relevant markets, the NRA, having regard to national circumstances, must take due account of the Recommendation as well as of Guidelines issued by the European Commission on the analysis and assessment of significant market power under the Community regulatory framework for electronic communications networks and services¹⁸ (hereinafter referred to as the 'Guidelines').

- Analysis of relevant markets (article 59 of ECL)

It is incumbent on the NRA to analyse relevant markets defined pursuant to the preceding point, taking the Guidelines into account.

The market analysis procedure aims to determine whether or not a relevant market is effectively competitive. No effective competition exists where companies with SMP are identified¹⁹.

¹⁵ <http://www.dre.pt/pdf1s/2004/02/034A00/07880821.pdf>.

¹⁶ <http://www.anacom.pt/render.jsp?contentId=1097032>.

¹⁷ Cf. Framework Directive, articles 7 and 14 to 16.

¹⁸ Available at: <http://www.anacom.pt/render.jsp?contentId=965114>

¹⁹ 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."

A company is deemed to have SMP where, either individually or together with other entities²⁰, 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.

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

Where ICP - ANACOM finds a market to be effectively competitive, it must not impose any specific regulatory obligation, and where such obligations exist, they must be withdrawn.

Where ICP - ANACOM determines that a relevant market is not effectively competitive, it must impose on companies with SMP on that market the appropriate specific regulatory obligations or maintain or amend such obligations where they already exist (article 59).

Obligations imposed (cfr. paragraph 3 of article 55):

- Must be adjusted to the identified problem, proportional and justified in the light of regulatory objectives laid down in article 5 of ECL;
- Must be objectively justifiable as regards networks, services or infrastructures concerned;
- May not originate an undue discrimination as regards any entity;
- Must be transparent relatively to the intended purposes.

In this context, this document embodies the draft decision taken by ICP - ANACOM on the definition of the market for access to the public telephone network provided at a fixed location, the assessment of the need to maintain *ex ante* regulation on the referred market and the analysis of the need to impose, maintain, amend or withdraw regulatory obligations.

This document embodies also ICP - ANACOM's draft decision on retail markets of publicly available telephone services provided at a fixed location, which are currently regulated but which no longer integrate the list of markets susceptible to *ex ante* regulation.

²⁰ Note that, according to the judgement of the European Court of Justice, of 12 July 1984, Hydrotherm, “the term ‘undertaking’ must be understood as designating an economic unit for the purpose of the subject-matter of the agreement in question even if in law that economic unit consists of several persons, natural or legal”.

According to 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.”

In a Community perspective, grounds (three criteria test) for not integrating retail markets of publicly available telephone services provided at a fixed location in the list of markets susceptible to *ex ante* regulation are as follows:

- Absence of high and non-transitory barriers to entry, whether of a structural, legal or regulatory nature: according to EC, wholesale obligations regarding carrier selection or pre-selection significantly decrease barriers to entry in retail markets of publicly available telephone services provided at a fixed location. This fact, according to EC, becomes all the more clear with the entry on a large scale of alternative operators in Europe, which led to a significant decrease of market shares of incumbents.
- A market structure which tends towards effective competition within the relevant time horizon: the entry in the market of fixed traffic operators whose activity is based on carrier selection or pre-selection and on subscriber line resale offer (SLRO), together with IP telephony traffic services in Member States with a significant broadband penetration, imply that generally at Community level, retail markets of publicly available telephone services provided at a fixed location tend towards effective competition.
- The sufficiency of competition law alone to adequately address the market failure(s) concerned: potential competition restrictions may arise as a result, for example, for example, of strangled margin strategies by incumbents. However, where these practises represent an abuse of dominant position, competition law is provided with the appropriate tools to remedy these potential market failures.

Without prejudice to the fact that retail markets of publicly available telephone services provided at a fixed location are not considered, in a Community perspective, to be susceptible to *ex ante* regulation, NRAs are still entitled to identify markets that are not in the list of the recommendation whenever such markets show characteristics that justify the imposition of *ex ante* regulation.

As such, bearing in mind that markets under consideration are currently subject to regulation, the need to maintain, amend or withdraw such regulation must be assessed.

Retail markets of publicly available telephone services provided at a fixed location identified by EC in the 203 Recommendation, and which are dealt with in the present analysis, are as follows:

- Publicly available local and/or national telephone services provided at a fixed location for residential customers;
- Publicly available international telephone services provided at a fixed location for residential customers;

- Publicly available local and/or national telephone services provided at a fixed location for non-residential customers;
- Publicly available international telephone services provided at a fixed location for non-residential customers;

In addition, this analysis will focus also on the market of publicly available non-geographic call services provided at fixed location.

This market analysis takes the utmost account of positions taken by EC and by BEREC. More specifically, the analysis of competition takes into consideration principles defined in ERG's 'Guidance on the application of the three criteria test'²¹. On the other hand, the analysis and definition of obligations to be imposed (or withdrawn) also takes account of principles set out in the Common Position of ERG on the approach to appropriate remedies in the ECNS regulatory framework²².

As regards the imposition of *ex ante* regulatory obligations, it must be stressed that EC Recommendation on relevant markets provides that regulatory obligations may only be imposed at retail level where NRAs consider that measures applied at wholesale market level do not lead to an effective competition and to compliance with public interest objectives.

This analysis is thus mainly targeted at identifying whether there is effective competition in narrowband retail markets, so as to weigh the need for the imposition of obligations in those markets or in the respective upstream wholesale markets. In fact, in EC's Explanatory note, it is mentioned that market definition is not an end in itself but a means required to reach a certain end. Market definition is thus a necessary tool to assess whether users of a certain product or service are protected by an effective competition or, in the contrary, whether the imposition of *ex ante* regulation is required to ensure it.

According to the methodology adopted in the Recommendation, the starting point for the identification of relevant wholesale markets is the characterization of related retail markets, their geographic scope and competitive constraints to which they are subject, both on the demand-side and supply-side, from a forward-looking perspective.

As such, in a first stage, related retail markets are defined and it is analysed whether such markets present competition failures that justify maintaining or imposing regulatory obligations, or whether it is enough to impose obligations on related wholesale markets, being subsequently defined relevant

²¹ The document (ERG(08)21- ERG Report on Guidance on the application of the three criteria test) is available at: http://www.irg.eu/streaming/erg_08_21_erg_rep_3crit_test_final_080604.pdf?contentId=545221&field=ATTACHED_FILE.

²² Revised ERG Common Position on the approach to appropriate remedies in the ECNS regulatory framework, available at <http://www.irg.eu/template20.jsp?categoryId=260348&contentId=542919>.

wholesale markets of the same dimension - product market and geographic markets - and assessed whether SMP exists on these markets. Lastly, the document focuses on regulatory obligations to be imposed on companies holding SMP on wholesale markets concerned or, in the absence of SMP, on how to withdraw any obligations formerly imposed.

This market analysis was submitted to the general consultation procedure laid down in article 8 of ECL, as well as to the prior hearing of interested parties, in accordance with articles 100 and 101 of the Administrative Procedure Code, in both cases for a period of 30 working days, and an opinion on this draft decision was likewise sought from Autoridade da Concorrência (AdC - Portuguese Competition Authority), in accordance with article 61 of ECL.

By communication received on 11.02.2014, AdC issued its opinion, having declared to generally agree with ICP - ANACOM's DD. AdC specifically refers not to oppose the definition of relevant product and geographic markets, and refers that the withdrawal of obligations currently imposed on analysed retail markets is appropriate insofar as carrier selection and pre-selection obligations and the provision of a subscriber line resale offer (SLRO) are imposed on the wholesale market for call origination on the public telephone network at a fixed location.

In the scope of the consultation procedure and the hearing of interested parties, ICP - ANACOM received 4 responses, which include a response from a consumer association.

Having comments been analysed, the report on ICP - ANACOM's draft decision (DD) was drawn up, consisting of a summary of contributions received and the Regulatory Authority's views on the subject. The report is deemed to be an integral part of this final decision.

By determination of 4 July 2014, ICP - ANACOM approved the referred prior hearing and public consultation report, as well as a draft final decision on retail markets for access to the public telephone network at a fixed location and markets of telephone services provided at a fixed location.

On the same date, approval was granted also to the notification of the draft decision to EC, BEREC and NRAs of other Member States, pursuant to and for the purpose of paragraph 1 of article 57 of ECL, which took place on the same date.

On 4 August 2014, EC submitted a communication, under article 7, paragraph 3, of Directive 2002/21/EC, through letter C(2014)5698 final, addressing both "*the market for access to the public telephone network at a fixed location for residential and non-residential customers, former markets for retail fixed voice telephone services and market for non-geographic numbers in Portugal*" (Case PT/2014/1638) and the "*market for wholesale fixed call origination in Portugal*" (Case PT/2014/1639), as both had been notified on the same date.

EC does not make any specific comments on the draft decision on the market for access to the public telephone network at a fixed location for residential and non-residential customers, former markets for retail fixed voice telephone services and market for non-geographic numbers.

3. RETAIL MARKET FOR ACCESS TO THE PUBLIC TELEPHONE NETWORK AT A FIXED LOCATION

By the end of the first quarter of 2014, there were in Portugal 27 active providers of telephone, VoIP and public pay-phone services, which are identified in the table below.

Table 2 – Active providers of telephone, VoIP and public pay-phone services by the end of the first quarter of 2014

3GNTW - Tecnologias de informação, Lda.
Amazing Life, Unipessoal, Lda
AR Telecom - Acessos e Redes de Telecomunicações, S.A.
Cabovisão - Televisão por Cabo, S.A.
Choudhary - Comércio de Equipamentos de Telecomunicações, Lda
COLT Technology Services, Unipessoal, Lda.
CLARA.NET PORTUGAL - Telecomunicações, S.A.
G9 SA - Telecomunicações, S.A.
Let's Call - Comunicações, Lda
Moneycall - Serviços de Telecomunicações, Lda
Nacacomunik - Serviços de Telecomunicações, Lda
ONITELECOM - Infocomunicações, S.A.
Optimus – Comunicações, S.A. (1)
Orange Business Portugal, S.A.
Palco da Vida - Telecomunicações Unipessoal, Lda
PT Comunicações, S.A.
REFER Telecom - Serviços de Telecomunicações, S.A.
TMN – Telecomunicações Móveis S.A. (2)
Ultraserve - Consultoria e Apoio Empresarial, Lda
UNITELDATA - Telecomunicações, S.A.
VODAFONE PORTUGAL - Comunicações Pessoais, S.A.
Voipunify Telecom, Lda
Voxbone, SA
Wisevector - Telecomunicações, Lda
ZON TV Cabo Açoreana, S.A.
ZON TV Cabo Madeirense, S.A.
ZON TV Cabo Portugal, S.A. (1)

Source: ICP-ANACOM

Note: This table includes FTS providers, providers of public pay-phones and VoIP (and nomadic VoIP) providers, regardless of whether the service is provided on the basis of self-owned infrastructures.

- (1) In 2013, OPTIMUS - SGPS, S.A. merged into ZON Multimédia - Serviços de Telecomunicações e Multimédia, SGPS, S.A., which changed its corporate name to ZON OPTIMUS, SGPS, S.A.; in 2014, but following the first quarter of the year, the merger by acquisition of ZON TV Cabo Portugal, S.A. (ZON) into Optimus Comunicações, S.A. (Optimus) was registered, having the new company been renamed NOS Comunicações, S.A. (NOS).
- (2) In 2014, TMN changed its name to MEO – Serviços de Comunicações e Multimédia, S.A. (MEO).

These operators provide the following types of access:

- Pairs of copper wires - this means of support is used chiefly by PTC, the historical operator, and currently guarantees a wider geographic and population coverage;
- Coaxial cable - cable made up of a central copper wire, which is surrounded by a belt of twisted copper wires, and separated from it by insulator material. This type of cable is dedicated to the transport of electric signals of higher frequencies than those delivered by a simple pair of metallic wires. This is one of the main items of Community Antenna Television (CATV) networks;
- Fixed wireless access (FWA) technology - access technology that enables operators to supply customers with a direct connection to their telecommunications network via a fixed wireless connection between their premises and the operator's local switch;
- Optical fibre - physical means of transmission (generally a cable with several pairs of fibreglass) where information is conveyed as light pulses. This is a broadband means of support which is able to provide capacity for the transmission of large amounts of information over great distance with low distortion, when associated to an appropriate equipment;
- Radio relay system - transmission system where electromagnetic waves are propagated into the atmosphere, whereby satellite dishes are used;
- GSM/UMTS frequencies - using homezone products, it is possible to provide access to the public telephone network from a fixed location using mobile telephone networks, namely technologies such as Global System for Mobile Communications (GSM), General Packet Radio Service (GPRS) and Universal Mobile Telecommunications System (UMTS). Mobile terminals receive and make calls within a defined geographic area, which roughly corresponds to the customer's address.

Having regard to the principle of technological neutrality, and insofar as there are no substantial differences between features of services provided by the various technologies, these several types of access must be included in the relevant market. However, giving the different characteristics inherent to the technologies in which access services are based (specifically, on account of their

significant development, as far as homezone offers and offers based on coaxial cable and optical fibre are concerned), it is pertinent to analyse these services at supply-side and demand-side substitutability relatively to the “traditional” fixed service (copper pair-based), an issue which shall be dealt with in a specific section of this document.

Tables below show the number of accesses that existed by the end of the first quarter of 2014, according to the type of support and type of access²³.

Table 3 – Number of accesses to the telephone service at a fixed location according to the type of support (non-equivalent accesses)

Accesses	1st quarter 2014
Number of accesses installed at the request of customers	4.072.985
Self-owned infrastructure	3.903.763
Third party infrastructure	169.222
Self-owned pool	61.116
Number of public pay-phones	21.861

Source: ICP-ANACOM

²³ All statistic information presented in this document took the following into consideration:

- 1) ZON integrates, as from 24 November 2008, companies of the ParfiteL Group (Bragatel, Pluricanal Leiria and Pluricanal Santarém) as well as of TV Tel. For the purpose of statistical processing, in this analysis, ICP - ANACOM considered aggregated data as from the beginning of 2009.
- 2) Tele2 was only acquired by Sonaecom by mid-2007. For the purpose of statistical processing, in this analysis, ICP - ANACOM considered aggregated data as from July 2007.

Statistical information conveyed throughout this document corresponds to information provided by service providers for the first quarter of 2014. Information now provided was collected from service providers, and may have been amended, although slightly, as a result of reviews or updates made by providers concerned in the period up to the publication of this document. All information is also subject to changes in case any reviews or updates take place in the future.

Annual or quarterly data concern the end of the period (last day or last month), except as regards revenues and traffic, which refer to the whole period considered.

Table 4 – Total number of main accesses equivalent to the fixed telephone service (equivalent accesses)

	2007	2008	2009	2010	2011	2012	2013	1Q 2014
Total main accesses	4.213.013	4.159.459	4.328.295	4.486.211	4.542.561	4.558.075	4.529.794	4.535.586
Analogue accesses	2.968.139	2.718.598	2.559.289	2.453.811	2.333.776	2.182.745	2.068.274	2.026.862
Basic ISDN accesses	505.894	483.556	435.454	396.910	351.864	308.068	275.368	264.916
Primary ISDN accesses	308.569	294.323	285.627	267.474	288.030	269.400	254.280	250.814
Split ISDN accesses	3.885	769	684	547	3.079	2.912	2.641	3.976
Other digital accesses (1)	47.068	54.849	58.997	57.462	4.122	3.303	2.556	2.322
Accesses related to Internet Voice Service (VoIP) /VoB	14.570	207.736	563.921	868.336	1.103.788	1.335.479	1.488.608	1.549.079
GSM/ GPRS/ UMTS/ CDMA	364.888	399.628	424.323	441.671	457.902	456.168	438.067	437.617

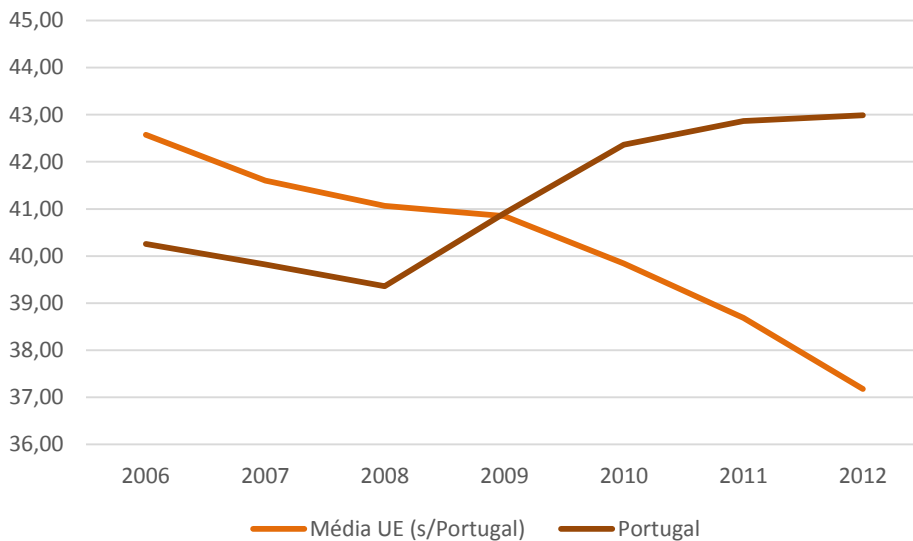
(1) – includes in particular FWA accesses.

Notes: 1) the “number of equivalent digital accesses” corresponds to the sum of the number of lines engaged by the fixed telephone service supported in each installed digital access. In the case of ISDN accesses, there are two equivalent accesses for each basic ISDN access and 30 equivalent accesses for each primary ISDN access. Split accesses are part of primary ISDN accesses.

Source: ICP-ANACOM

The penetration rate of the fixed telephone service (FTS) in Portugal has increased over recent years, contrary to the European experience, as can be seen from the chart below. As developed in chapters 3.4.1.1.1 and 3.4.2.1, this growth is mainly a result of the offer of accesses for the provision of VoIP services, which are usually integrated in bundled services primarily made available by alternative operators.

Chart 1 – Evolution of FTS penetration rate in Portugal and in EU28 average

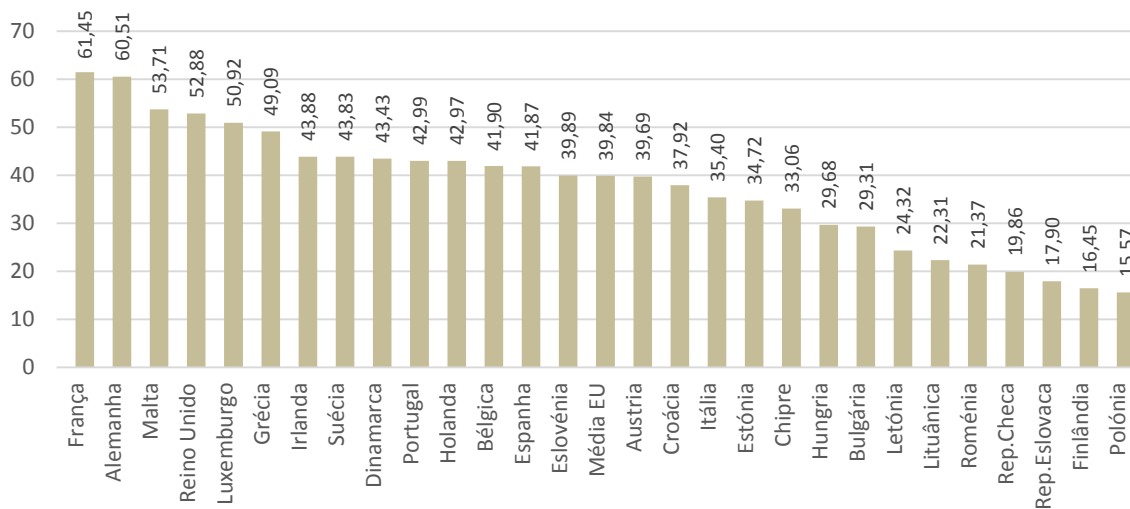


EU average (without Portugal)

Source: ITU

Having regard in particular to 2012, the service penetration rate in Portugal was the 10th highest in the EU28 context, exceeding the respective average by 8%.

Chart 2 – EU28 FTS penetration rate in 2012



France / Germany / Malta / United Kingdom / Luxembourg / Greece / Ireland / Sweden / Denmark / Portugal / The Netherlands / Belgium / Spain / Slovenia / EU average / Austria / Croatia / Italy / Estonia / Cyprus / Hungary / Bulgaria / Latvia / Lithuania / Romania / Czech Republic / Slovak Republic / Finland / Poland

Source: ITU

3.1. Definition of the product market

Under the Community regulatory framework applicable to electronic communications, which complies with Community competition law, relevant markets are defined by crossing of two different dimensions: the product market and the geographic market.

The process of product market definition consists in identifying all products/services that are sufficiently interchangeable or substitutable, not only in terms 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 use²⁴.

The exercise of defining the relevant product or service market commences by grouping together products or services that are used by consumers for the same purposes/end use, that is²⁵, according to demand.

These products and services are part of the same relevant market where the behaviour of the producers or service providers are subject to the same type of competitive constraints, that is, on the supply side, namely, as far as the price-setting is concerned.

In this context, there are two main competitive constraints: (i) demand-side substitution; and (ii) supply-side substitution²⁶.

These competitive constraints, alternatively or together, may represent grounds for defining the same product market.

One possible way of assessing the existence of any demand and supply-side substitutability is to apply the so-called “hypothetical monopolist test” (SSNIP test – small but significant non-transitory increase in price)²⁷.

²⁴ Cf. Guidelines §44. As referred in the Explanatory Note of the European Commission, SEC(2007) 1483 final, the Recommendation should be considered in conjunction with the Guidelines for market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services.

²⁵ Cf. Guidelines §44.

²⁶ Cf. Guidelines §38. A third source of competitive constraint on operator’s behaviour exists, namely potential competition - this possibility will be taken into consideration where relevant.

²⁷ Cf. Guidelines §40-43.

The relevant geographic market comprises the area in which companies concerned are involved in the supply and demand of relevant products or services, in which area the conditions of competition are similar or sufficiently homogeneous relatively to neighbouring areas²⁸.

The definition of the geographic market assumes the use of the same methodology for the definition of the product market, namely the hypothetical monopolist test, which enables the identification of competitive constraints on the demand and supply-side substitutability.

Next, it is discussed whether:

- (i) Publicly available telephone services at a fixed location;
- (ii) Broadband access;
- (iii) The leased line service;
- (iv) Mobile access through mobile networks;
- (v) Access at a fixed location through GSM/UMTS frequencies;
- (vi) Basic and primary ISDN accesses and
- (vii) Access services provided to residential, non-residential and large corporate customers,

are part of the market for access to the public telephone network at a fixed location, using for the purpose the tools described above.

3.1.1 Service of access to the public telephone network at a fixed location vs. Publicly available telephone services at a fixed location

Access services and publicly available telephone services at a fixed location have traditionally been made available as bundled products, and this may result from the fact that operators have acknowledged the benefits that arise from the joint consumption of both services.

On this matter, the Commission indicates that services under consideration may be identified in separate markets, taking into account that:

“Telephone services are usually supplied as overall packages of access and usage. Various options and packages may be available to end-users depending on their typical usage or calling

²⁸ Cf. Guidelines §56.

patterns²⁹. Although many end-users appear to prefer to purchase both access and outgoing calls from the same undertaking, many others choose alternative undertakings to the one providing access (and the receipt of calls) in order to make some or all of their outgoing calls. An undertaking that attempted to raise the price of outgoing calls above the competitive level would face the prospect of end-users substituting alternative service providers. End-users can relatively easily choose alternative undertakings by means of short access codes, (carrier selection via contractual or pre-paid means) or by means of carrier pre-selection.

Whilst undertakings that provide access compete on the market for outgoing calls, it does not appear to be the case that undertakings supplying outgoing calls via carrier selection or pre selection would systematically enter the access market in response to a small but significant non-transitory increase in the price of access. Therefore, it is possible to identify separate retail markets for access and outgoing calls.”³⁰

In fact, and in substance, these services are different. Access consists in the installation and maintenance of a line from the customer’s premises to a point of entry in an electronic communications switched public network. On the other hand, the telephone service consists in the connection between two or more parties over a transmission channel, allowing the emission, exchange and reception of information (signals or messages) within a network and between several networks, according to a series of predefined rules and the awareness of involved entities.

Taking into consideration the physical and technical features of services under consideration, it can be observed, on first examination, that there is a relationship of complementarity and not substitution between the two services. On the demand-side, it is accepted that there is a significant proportion of customers whose demand for the access service is structurally different than the demand for telephone services. For example, there may be customers who are reluctant to make calls, regardless of the associated price, but who highly value access for the possibility of being contacted. As such, features of access services and of publicly available telephone services at a fixed location lead to the conclusion that they aim at fulfilling different needs, and therefore do not constitute a substitute for each other.

Given that access and telephone services are complementary, and that they are generally sold and consumed in bundles, there could be grounds for a joint analysis of these services. However, it is stressed that the indirect access service allows customers to choose different providers for access and for the provision of telephone services. As the Commission mentions, in most cases the individual services (access and calls) in the bundle are not good demand-side substitutes for each

²⁹ The question of whether metered and un-metered (flat-rate) access to Internet are in the same or separate markets is considered in section 4.2.2.

³⁰ According to page 23 of EC’s Explanatory Note.

other. Nevertheless, they may be considered to be part of the same retail market where the demand for individual parts of the bundle is not significant.

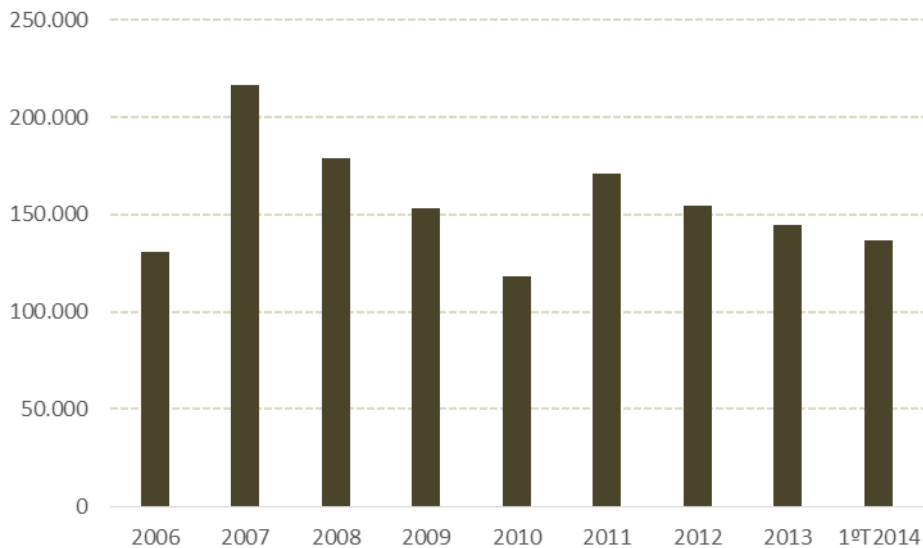
Within the framework of the application of the hypothetical monopolist test, if given a small but significant non-transitory increase in price of the service bundle there is evidence that a significant number of customers would disregard the bundle and opt for separate services, it could then be concluded that individual elements of the service bundle would constitute relevant markets *per se*.

It is deemed that, in the current Portuguese scenario, the availability of indirect access and of commercial offers for each of the individual services allows customers, faced with a small but significant non-transitory increase in price of the service bundle, to migrate to services provided individually. Without prejudice to the reduction of the use of indirect access verified in the last few years - by the end of 2013, the proportion of customers with indirect accesses was around 3% and traffic for this type of access represented around 1 to 2% of total traffic registered by all operators - it is noted that just the fact that this possibility exists conceptually allows, on the demand-side, that individual items of the bundle are taken into consideration individually, and are acquired jointly only where the overall price compensates for the sum of prices considered separately.

As regards the possibility of entry of indirect access operators in the market for access to the public communication network at a fixed location, it was referred in the last market analysis that they could decide to enter the market within a reasonable time horizon. It was highlighted however, that the construction of an access network would imply significant investments, in some cases sunk investments, over a relatively long period of time, and the use of wholesale offers could in some way address this difficulty. This conclusion remains equally true as specifically regards operators whose commercial activity is exclusively based on indirect access.

In fact, the Reference Unbundling Offer (RUO) could allow the supply of telephone services over an analogue access by new operators of public telecommunications networks. However, although technically possible, this option had not been used much as a market entry strategy up to the date of the previous analysis, the number of accesses by the end of 2004 amounting only to 352. After the last analysis, an increase in the initial number of accesses based on RUO was registered, and the number of accesses has now undergone a degree of stabilisation, amounting to about 140 thousand by the end of the first quarter of 2014, as may be seen from the chart below.

Chart 3 – Evolution of FTS accesses based on local loop unbundling



Source: ICP-ANACOM

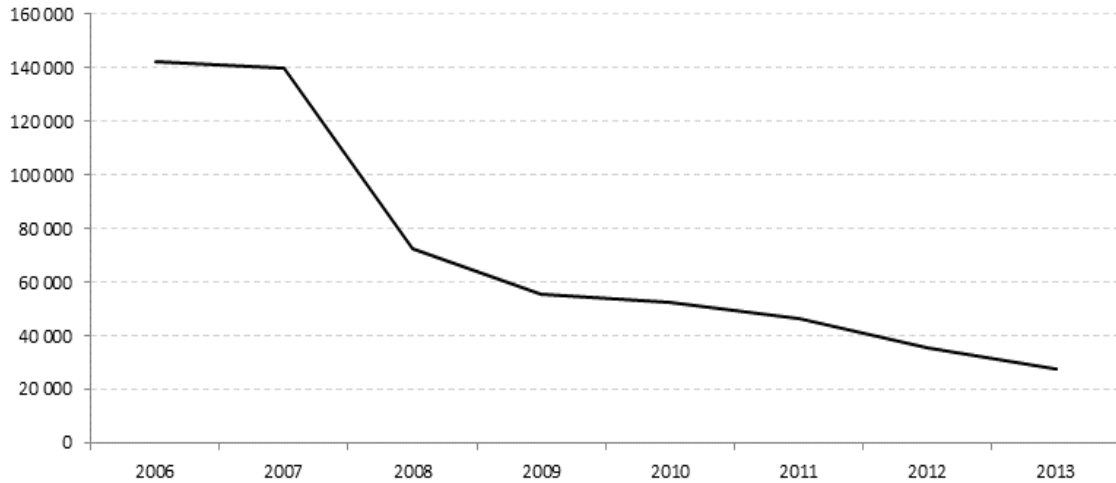
The most significant change relatively to the last analysis was the introduction of SLRO³¹, further to determination of 14.12.2004, on the imposition of obligations to operators with SMP in narrowband retail markets. SLRO enables telephone service operators to provide access, and does not require large investments. Based on this wholesale offer, after a small but significant non-transitory increase in the price of access, operators that previously only provided telephone services were also able to provide access to the public telephone service from a fixed location.

The number of accesses with active SLRO remained stable between 2006 and 2007, although a more detailed analysis, with monthly breakdown, showed a significant initial increase in the first months, a tendency that started to reverse by the end of 2007 and which remains until today, as the chart below indicates³².

³¹ The SLRO consists in a wholesale offer, at a specific price, of the right to bill PTC's telephone line (operator designated with SMP), which allows legally qualified companies to make available their own retail offers, that integrate the resale of the line and telephone traffic services.

³² Note that the number of accesses of the PT Group with active SLRO in the total number of accesses with active SLRO is not significant, and never exceeded 5%, value reached in 2011. By the end of 2013, the PT Group did not have any accesses with active SLRO. The reduction in 2012 of the number of accesses with active SLRO was a result, not only of the decline in the provision of the telephone service at a fixed location in the indirect access modality, but also of the integration in that same year of PT Prime - Soluções Empresariais de Telecomunicações e Sistemas, S.A (PT Prime) in the PT Group, which led to a reduction of the number of companies benefiting from this offer, from five to four, and to the deactivation of SLRO in all of PT Prime's accesses.

Chart 4 - Information presented by PTC on analogue accesses and ISDN accesses with active SLRO (not equivalent), including activations by companies of the PT Group



Source: PTC

In the light of the above, there seems to be some degree of substitutability between telephone services and access services on the supply-side, given that, in general, operators that provide telephone services are also able to provide access, after a small but significant non-transitory increase in the price of access, mainly due to the possibility of using local loops or SLRO. Moreover, there are several operators with self-owned infrastructure who provide both access and services.

However, on the demand-side, the different characteristics inherent to the access service and to telephone services, as well as the existence of some demand supported on indirect access, suggest that the two services should not be included in the same market.

In conclusion, it is considered that the two services under consideration do not integrate the same market, and in any case it is highlighted that conclusions reached in this analysis would not differ in case access and services were to integrate the same product market, namely as regards the assessment of the competitive nature of the market and conclusions on the need for *ex ante* regulation.

3.1.2 Narrowband access services vs. Broadband access services

Nowadays, in addition to the copper network providing narrowband accesses, there are other infrastructures that allow access to the public telephone network at a fixed location.

The European Commission refers as follows³³:

³³ According to the European Commission's Explanatory Note, SEC(2007) 1483 final, page 20.

“Access (to the public telephone network at a fixed location)(...) may be supplied by several possible means in respect of the undertaking providing the service and the technology that is used. The most common technology currently employed is via traditional telephone networks using metallic twisted pairs. Alternatives include cable TV networks offering telephone service (...)”

In the case of Portugal, alternative access infrastructures include optical fibre, coaxial cable, hybrid cable (HFC - Hybrid fibre coaxial) and copper itself, that through the use of ADSL technology allows the provision of the broadband internet service. In general, commercial offers based on these infrastructures allow the user to make telephone calls over data networks such as the Internet, whereby an analogue signal is converted into a set of digital signals, as IP addressing packages (VoIP technology), which are able to be conveyed through an Internet connection (preferably broadband).

The increase of broadband accesses for Internet use, together with the establishment of increasingly stable protocols at the level of standardisation, favour the development of applications supporting video and voice interactive services, such as VoIP. As such, VoIP service has registered an increasing demand from final users.

VoIP technology may be used under the three following forms of use:

- Fixed, where the use is made at the same location or address;
- Nomadic, where the use may take place in more than one location of the country, or even abroad; and
- Mobile, in which case it is possible to maintain a moving voice session throughout the national country.

It is also important to distinguish two possible settings for the provision of IP-based voice service:

- Voice over Internet (VoI). Under this setting, voice data packages are transmitted over public Internet, and as a rule are conveyed through computer to computer connections. VoI traffic, in this case, presents a quality that is not different from other applications supported on the Internet, which generally operate on a “best efforts” basis. Moreover, interoperability with other telephone services or applications may not be ensured. Examples of applications such as these include Sapo Messenger, Skype and Google Voice.
- Voice over broadband (VoB). Under this setting, it is possible to receive and make calls to and from numbers of the national numbering plan (NNP), and for this purpose the use of a gateway for connection between the IP network and the public telephone network is required.

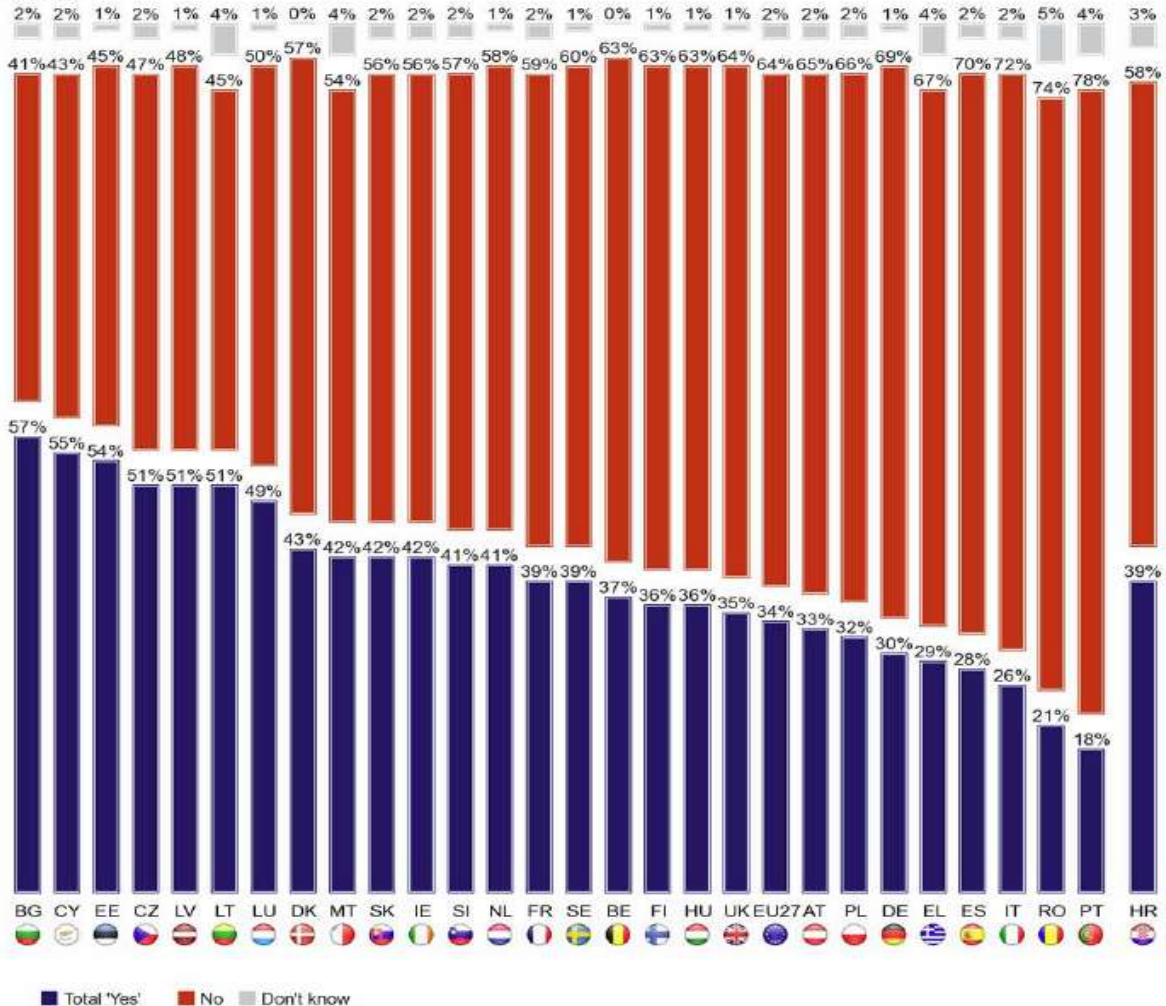
For the purpose of this analysis, it is necessary to assess whether commercial offers of network access based on the referred infrastructures are substitutes of offers for narrowband access to the public telephone network at a fixed location based on the copper infrastructure. For this purpose, it is relevant to verify whether both types of access, narrowband and broadband, allow the provision of substitute telephone services.

First of all, it must be stressed that one of the possible settings of IP voice offers - Vol - presents features that are clearly different from those made available by offers of telephone services based on copper infrastructures. Specifically, a telephone number is not associated to the offer, and in addition, caller location in case of a call to the 112 emergency number is not possible. Moreover, due to the “best efforts” nature of the voice traffic prioritisation, the quality of service guarantee is low. Finally, it has been found that within the OECD context³⁴, Portugal is the country with the highest rate of families that declare not to use, a PC or a Wi-Fi-connected device at home, for the purpose of making Vol calls.

³⁴ According to “E-Communications Household Survey”, published in August 2013 and available at: <https://ec.europa.eu/digital-agenda/en/news/special-eurobarometer-396-e-communications-household-survey>

Chart 4 – Vol rate of use in OECD countries

QAT7. Does any household member, including yourself, use a PC or a Wi-Fi connected device, at home to make phone calls over the Internet?



Source: E-Communications Household Survey de 2013

In the light of the above, and given the substantial difference between the features of this type of offers, it may be concluded that they are not substitutes for narrowband accesses to the public telephone network at a fixed location.

Having been excluded the specific VoIP modality known as Vol, in the rest of this analysis the term VoIP will be deemed to refer to the VoB modality. As far as offers of this type are concerned, a more in-depth assessment will be required, taking into account its features and inherent price structures.

ECL defines obligations of companies providing publicly available telephone services on the basis of the principle of technological neutrality, thus offers based both on copper infrastructure, and on cable and optical fibre infrastructures, where used for the provision of the telephone services, must allow access to the telephone network at a fixed location with the same features.

In 2006, and due to the increasing demand for this type of services by the end user, ICP - ANACOM deemed it necessary to clarify the VoIP service regulatory framework³⁵. In this context, the regulatory authority considered that, as far as numbering and portability were concerned, VoIP offers provided at a fixed location could be assigned geographic numbering, the responsibility for the compliance with this requirement (use at a single fixed location) falling on the VoIP provider.

At the same time, a new non-geographic numbering range - “30” - was made available to distinguish nomadic-use VoIP from fixed telephone services, and accordingly the need for immediate implementation of portability within the “30” numbering range by providers of nomadic VoIP services was stressed.

In addition, as far as access to emergency services is concerned, ICP - ANACOM considered that all VoIP service providers holding numbers of the National Numbering Plan, including nomadic-use VoIP providers, when in national territory, should ensure that VoIP calls are routed to the 112, and that the CLI - Calling Line Identification - is sent³⁶.

As regards the use of the “30” numbering range, the provider that most used this range, ZON³⁷ **[Beginning of Confidential information (BCI)] CONFIDENTIAL [End of Confidential Information (ECI)]** marketed the service as a close substitute for the telephone service provided at a fixed location, as not only the prices are the same as those charged for the VoIP service at a fixed location, but the consumer also perceives the service in the same way, and features provided are the same, given that the consumer in principle is not able to use the service outside his/her residential area.

Accordingly, VoIP services at a fixed location and VoIP services using the “30” numbering range show few differences, namely at the level of the use of service, and may be deemed to be close substitutes.

With regard to the comparison of the quality of service between the telephone service provided over analogue accesses supported on a copper network and the VoIP service, it is noted that the Quality of Service Regulation, which sets out the parameters of quality of service that apply to the service of access to the public telephone network at a fixed location applies also to companies that provide the VoIP service at a fixed location.

In general, the quality of the VoIP service perceived by the user essentially depends on the network topology, the congestion of interconnectors and codecs used, and it is not clear whether

³⁵ <http://www.anacom.pt/render.jsp?contentId=340302>

³⁶ A feature which identifies the calling number so that emergency services are able to call back.

³⁷ Without prejudice to the merger between this operator and Optimus, which resulted in a new company called NOS Comunicações, S.A. (NOS), having regard to the fact that many elements mentioned in this analysis refer to 2013 or to previous years, references both to ZON and to Optimus will be made, where appropriate.

the referred quality is equivalent to that verified in the telephone service provided over narrowband accesses.

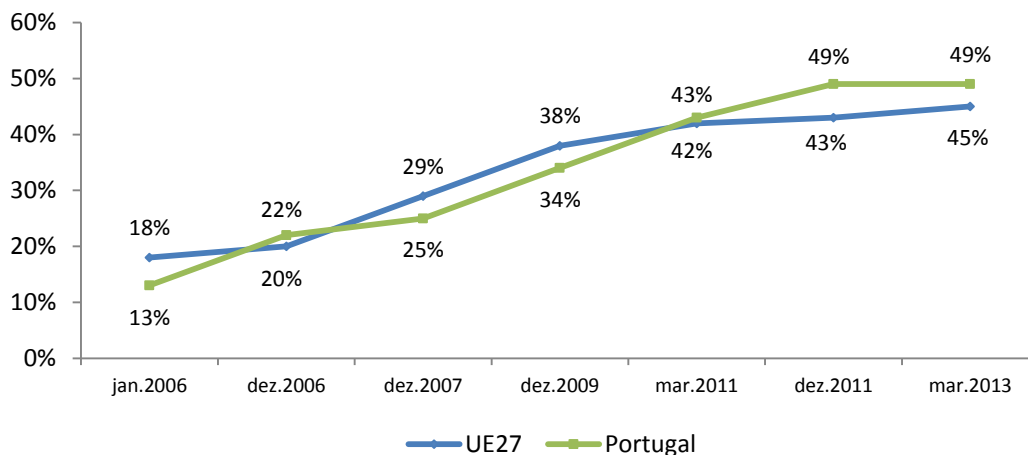
In any case, the quality and amount of available information do not allow a definitive conclusion on the possible differences of the quality of service, and an analysis on a case-by-case basis may be required.

In the light of the above, specifically service features and customer perception, it may be concluded that the VoIP service may be deemed to be a substitute of the telephone service provided at a fixed location. However, although at the level of service substitutability may exist, it is necessary to assess whether there is actual substitutability between narrowband accesses supporting the provision of the telephone service at a fixed location and broadband accesses supporting the provision of VoIP services.

In this context, it must be recalled that the market under definition here is the market for access. It must be thus assessed if customers would substitute a narrowband access for a broadband access to have access to the telephone service or to a VoIP service.

In this context, it is stressed that commercial offers supported on cable and optical fibre networks are usually provided in bundles. The option to buy bundled services has seen a very significant response by consumers of electronic communication services in Portugal. Based on data from the 2013 Eurobarometer, it is possible to see that the penetration rate of bundled services in Portuguese households increased from 13% in 2006 to 49% in March 2013. This last value is 4 percentage points higher than the European Union (EU) average.

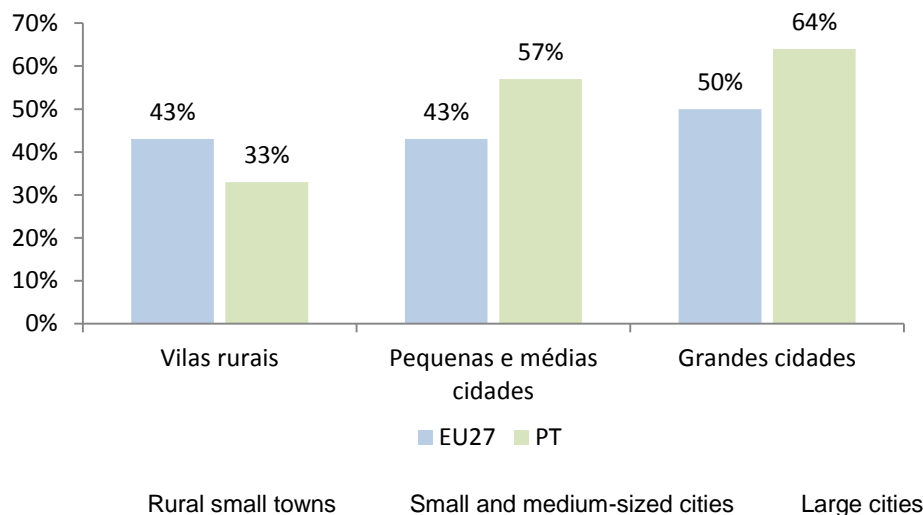
Chart 5 - Penetration rate of bundled services in Portugal and in the European Union



Source: ICP-ANACOM (data published in ICP - ANACOM's "2012 Communications Sector") based on EC data (2013).

On the basis of the same source, it is possible to verify that the penetration rate of bundled services in Portugal, as expected, is higher in urban centres. However, there seems to be no big difference between large and small or medium-size cities. This shows that the prevalence of the bundled services option is quite spread over the whole country.

Chart 6 - Penetration rate of bundled services in households, according to the type of urbanisation



Source: ICP-ANACOM (data published in ICP - ANACOM's "2012 Communications Sector") based on EC data (2013).

According to a recent study commissioned by ICP - ANACOM³⁸, and to data for the end of 2012, around 92% of bundled services included telephone access at a fixed location. There are around 73% of triple play offers (which include fixed telephone service, fixed broadband internet service and television service) and 24% of double play offers (including fixed telephone service and fixed broadband internet service or television service).

The very significant growth of bundled services in Portugal, and the fact that nearly all include the fixed telephone service, led to an relevant rise of the weight of fixed accesses included in bundled services in the total of accesses. Also on the basis of data for the end of 2012, 73% of customers of the fixed telephone service in Portugal engaged this service in the scope of a bundle.

On the other hand, data from an Indera³⁹ study, also commissioned by ICP - ANACOM, show that consumers value the inclusion of the fixed telephone service in subscribed bundled services. According to these data, around 23% of respondents attach a great importance (perfect score=10) to the fixed telephone service, and only 33% refer this service to be of a low relevance (score lower to or equal to 5).

³⁸ Data referred in the study "Caraterização da Adoção e do Consumo de Pacotes de Serviços de Comunicações Eletrónicas", dated August 2013, issued by ICP-ANACOM, available at http://www.anacom.pt/streaming/Estudo_ANACOM_consumo_pacotesCE.pdf?contentId=1173917&field=ATTACHED_FILE

³⁹ Available at <http://www.anacom.pt/render.jsp?contentId=1174657>

These elements indicate a change in preferences of a relevant part of consumers of telephone access at a fixed location, which seem to prefer acquiring the referred service jointly with other services. Objectively, from a demand-side perspective, broadband fixed telephone accesses have replaced “traditional” fixed telephone accesses based on the copper network and purchased separately.

This fact is probably due to the launch of packages of services with monthly charges close to, or in some cases, lower than, the value of the analogue fixed telephone service provided in the scope of the Universal Service (US) over the copper infrastructure (15.57 Euro - VAT included). For example, the “ZON DUO”⁴⁰ package of services, which included the 4-channel television service, telephone access at a fixed location and respective associated services (free-of-charge calls to the national fixed network) cost 10.49€ per month. The “TALK”⁴¹ package of services, provided by MEO, of the PT Group, charged 22.49€ during the promotional period (which included the first 6 months) to charge 34.99€ after that period, for a 115 television channel service and fixed telephone access, with respective associated services (free-of-charge calls to the national fixed network and 50 international destinations). Lastly, Vodafone’s package “Campanha TV Net Voz”⁴², has a monthly charge of 24.90€, and provides a 100 television channel service, broadband internet and fixed telephone access and respective associated services (free-of-charge calls to the national fixed network).

As such, there is an actual substitution of “traditional” accesses for fixed broadband accesses.

Without prejudice, on the basis of data for January 2013⁴³, 13% of respondents (customers of bundled services) referred that they would give up the fixed service in case they were forced to purchase it separately. This may indicate that broadband accesses are substitutes for traditional accesses, but not the other way around, which points towards a situation of asymmetric substitutability, and it is deemed that this may be the case in Portugal. Notwithstanding, given that broadband accesses are able to substitute traditional accesses justifies including the former in the market under analysis, from a demand-side perspective. On the supply-side, it is noted that cable and optical fibre networks are smaller than the traditional copper network, held by PTC. EC data (Digital Agenda Scoreboard 2013) for the end of 2012 show that the standard cable network covers around 77.4% of classic households throughout the national territory, although not all municipalities are covered, especially those with low population density. Optical fibre networks, also according to

⁴⁰ Elements on these offers concern the reference period of October 2013. This specific package was available at <http://www.zon.pt/Pages/Novos-Precos-2013.aspx>. In 2014, and after the emergence of NOS, this package costs 11.49€ and is available at <http://www.nos.pt/particulares/pacotes/todos-os-pacotes/Paginas/pacotes.aspx#tab4>.

⁴¹ Available at <http://meo.pt/pacotes/mais-pacotes/todos-os-pacotes-meo/adsl/tv-voz>

⁴² Available at <http://www.vodafone.pt/main/particulares/tv-net-voz/pacotes/>

⁴³ Data referred in the study “Caraterização da Adoção e do Consumo de Pacotes de Serviços de Comunicações Eletrónicas”, dated August 2013, issued by ICP-ANACOM, available at http://www.anacom.pt/streaming/Estudo_ANACOM_consumo_pacotesCE.pdf?contentId=1173917&field=ATTACHED_FILE.

the Digital Agenda Scoreboard 2013, covered by the end of 2012 around 46.1% of classic households, the Lisbon and Porto areas being more developed.

As such, and although alternative networks do not provide for coverage such as that provided by PTC's copper network, a significant coverage degree is registered, especially as far as the cable network is concerned. In areas where coverage exists, all alternative operators that use these technologies supply the fixed telephone service as part of bundled services, and as such they are deemed to be substitutes.

In conclusion, it is deemed that the broadband access for the provision of voice services (which will be referred in this document as VoIP) is a substitute for the service of traditional access to voice services.

3.1.3 Narrowband dial-up access service vs. Leased line service

Results from the analysis carried out in 2004, which focused on demand and supply-side restrictions on competition as far as offers on dial-up accesses and dedicated accesses are concerned, were as follows:

- (i) As regards demand-side substitutability, ICP - ANACOM lacked evidence to support that the partial substitution between the two types of services under analysis would limit the behaviour of a hypothetical monopolist, bearing in mind the characteristics of services and offers under consideration, the evolution of respective prices and the scope of the segment concerned by this possibility;
- (ii) As regards supply-side substitutability, the substitution of a leased line by an FTS line would require the service provider to be provided with a dial-up network enabling the subscriber to communicate with all other subscribers. Sunk costs of converting a leased line into an analogue, basic ISDN or primary ISDN dial-up line are significant, thus the possibility of using this possibility on the supply-side is remote.

In the light of the above, ICP - ANACOM concluded that, according to available information, the leased line service showed different characteristics than the dial-up access service, and would not restrict the behaviour of a hypothetical monopolist providing this service, the probability of supply-side substitution thus being very low. As such, it was concluded that services under consideration were not part of the same relevant market.

It must be stressed that service features have not changed significantly since the last market analysis, having namely remained the general definition that a leased line corresponds to a permanent and transparent physical connection between two points, for the exclusive and non-

shared use of the user, at a guaranteed and symmetrical transfer speed, and over which any type of electronic communication (traffic) is routed.

As such, the leased line only allows the connection between two fixed and pre-determined locations. The only possibility of supply-side substitution occurs where the user traffic profile implies a high traffic volume between each two fixed and pre-determined locations (for example between the headquarters and branches of a company or between a small company and its internet access provider), and generated traffic must be enough to make the value of the leased line subscription lower than the amount spent with the dial-up access subscription and the dial-up traffic bill, which is not the case for most retail customers.

Just like the conclusions reached in the former analysis on supply-side substitutability, it is considered that, in case a service provider intended to supply dial-up services, he would face significant costs when converting a leased line into an analogue, basic ISDN or primary ISDN dial-up line, thus it is not likely for this possibility to be used.

Taking the foregoing into account, there seem to be no reasons to change the conclusions reached in the scope of the previous analysis, that is, according to available information, and in the current market conditions, the probability of service substitution is very low, thus services under consideration are not part of the same relevant market.

3.1.4 Service of narrowband access at a fixed location vs. Service of mobile access over mobile networks

As referred in the previous analysis, access to the public telephone network at a fixed location may, in certain situations, be replaced by mobile access to make voice and data calls (SMS and Internet access). A call made from a mobile phone may replace a call between fixed destinations or between a fixed destination and a mobile destination (fixed-to-mobile call).

On the matter of substitutability between fixed accesses and mobile accesses, the Commission considers that⁴⁴ *“in the initial Recommendation, a general division was made between services provided at fixed locations and those provided at non-fixed locations. Overwhelmingly, despite some moves towards hybrid or converged offerings, this distinction is considered to be still valid, because there is as yet insufficient evidence that the pricing of mobile services (to non-fixed locations) systematically constrains the pricing of services to fixed locations (or vice versa)”*.

As regards the provision of the telephone service, it must be stressed that fixed networks and mobile networks, as well as associated terminal equipment, have their own features which distinguish and differentiate them, namely as regards their technical characteristics and perception

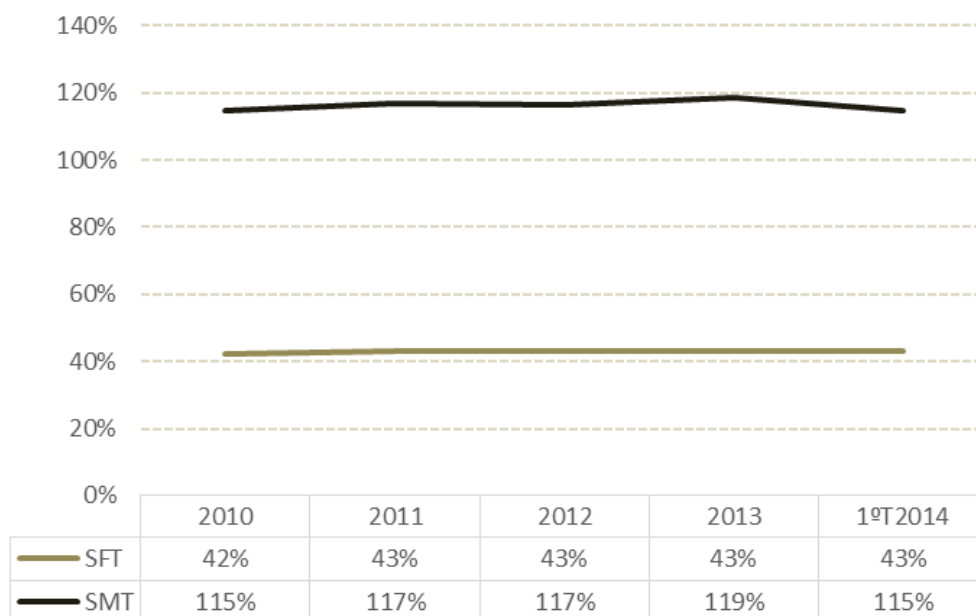
⁴⁴ According to EC's Explanatory Note, SEC(2007) 1483 final, page.20.

on the part of users as to their functionalities and final use. These different characteristics concern mainly the mobility issue and the personal nature of mobile access, which lead to different offer conditions. These factors will justify the different way how these two services are used and the different usage profiles of both services (for example, the average duration is substantially different, as currently the average duration of fixed-to-fixed calls is about 4 minutes whereas calls made from the mobile network have an average duration of about 2 minutes).

There is also a significant difference in the price structure of these services, as mobile operators seek to segment the market by launching a wide range of tariff options, to suit several specific usage profiles. The prevalence of prepaid tariffs, in the mobile segment, contrasts with a very low relevance of this type of tariffs in the case of the fixed service. On the other hand, fixed offers tend to be fewer and more homogeneous, at least as the residential segment is concerned.

As regards the separate penetration rate of both services, it is noted that, ultimately, and in a hypothetical scenario disregarding other factors with influence on the achieved penetration rate, it is likely that, in case of an effective substitution between these two services, the respective penetration rates would present an opposite trend, moving further away from each other, which is not the case (*vide* chart below).

Chart 7 - Evolution of penetration rates of main accesses and of MTS



FTS
 MTS

Unit: Accesses per 100 inhabitants⁴⁵

⁴⁵ The service penetration rate is calculated on the basis of the number of mobile stations/active user equipment with post-paid plans, pre-paid plans and hybrid combination schemes, excluding Internet access boards/modems.

Source: ICP-ANACOM

Although on the demand-side it is deemed that access at a fixed location and access at a mobile location do not present a sufficiently large degree of substitution to justify the integration of both products in the same relevant market, it must be assessed whether at supply level this possibility of substitution exists.

It must be noted, on this issue, that, in general, the provision of these two types of services are subject to different inputs, and for this reason, given the level of fixed costs involved in the implementation of a fixed network, it is not plausible to assume that, in the case of a small but significant price increase of the service of access at a fixed location, a mobile network operator would decide to enter the fixed access market within a reasonable period of time. Notwithstanding, in the specific case of Portugal, the three mobile operators with self-owned networks already provide telephone services at a fixed location on the basis both of their own accesses and of PTC's wholesale offers, thus they are already present in the market, and as such there are no elements to assess the issue of substitutability on the supply-side.

It must be stressed that, more than a substitution of fixed networks for mobile networks, there is nowadays a trend, at the level of access offers by operators, for the convergence of the two services, under a logic of complementarity. Quadruple play offers recently launched in the Portuguese market, which include telephone access services both at a fixed and mobile location, are an example of a trend for an increased complementarity between both services referred. However, it is still too soon to assess the level of uptake of this type of offers.

Considerations made above on the possibility of substitution of access at a fixed location for mobile access indicate that, following a small but significant and non-transitory price increase of the fixed service, an FTS customer would not substitute the fixed service for the mobile service, thus it is deemed that at the moment these two services are not effective substitutes at retail level.

In fact, according to data by Markttest⁴⁶, most individuals with access to the telephone service is provided with both types of access (mobile and fixed). Note that this rate has been increasing, from 55% by the end of 2011, to 70% by the end of 2012, to reach 71% by the end of 2013.

⁴⁶ Markttest -Telecommunications Barometer study.

Technical note: the Telecommunications Barometer is a study prepared on a regular basis by Markttest for the telecommunications sector.

The population on which the Telecommunications Barometer - Mobile Network focuses is comprised by individuals older than 10 years old, living in Mainland Portugal and in the Autonomous Regions of Madeira and Azores, where every month a proportional sample of the pool considered, deemed to be representative, is collected, amounting to 1350 interviews per month.

In any case, it is considered that the mobile access service may be able to apply some competitive pressure at the level of retail demand, given the rate of users that gave up access at a fixed location and that stated that the reason for it was having mobile access (26.2% in February 2012, also according to data by Markttest⁴⁷). Any competitive pressure will also be considered in the scope of the analysis of SMP and, where appropriate, in the framework of the imposition of *ex ante* regulatory obligations.

3.1.5 Service of access at a fixed location provided over copper pairs vs. Service of access at a fixed location provided via GSM/UMTS frequencies

Among offers made available by mobile operators, there is a category of offers with very specific features, the introduction of which represented one of the major changes since the last market analysis. Specifically, the use of alternative infrastructures in the access at a fixed location to the public telephone network, namely solutions based on GSM and UMTS technologies, allowed operators whose business is based on the mobile network to make available offers of access to the public telephone network at a fixed location comparable to those based on the copper pair technology.

These solutions, generally known as homezone offers, are characterized by the provision of the telephone service at a fixed location, supported on the GSM, GPRS and UMTS technologies and networks for access to the final customer and with access via mobile terminals. Mobile terminals receive and make calls within a limited geographical area, corresponding to the customer's address.

This type of products was marketed first in Portugal by NOVIS, by the end of 2004. By determination of ICP - ANACOM of 25.02.2005⁴⁸, this Authority authorized NOVIS to use GSM frequencies of OPTIMUS' terrestrial mobile network for the provision of voice services at a fixed location, and acknowledged the right to use the NNP "2" numbering range in the scope of that service, insofar as the mobility associated to the terminal does not go beyond what is necessary to ensure access at a fixed location, in the light of the technology used.

ICP - ANACOM determined also that the access to the service should be ensured through a terminal connected to a single pre-determined Base Transceiver Station (BTS) when calls are made, received and maintained. In exceptional cases, technically justified and acknowledged by ANACOM to be exceptional, a terminal is allowed to be associated with two - three at the most - pre-determined BTS. The provider was also required to give end users clear and transparent

The population on which the Telecommunications Barometer - Fixed Network focuses is comprised by households in Mainland Portugal and in the Autonomous Regions of Madeira and Azores. Every month a proportional sample of the pool considered, deemed to be representative, is collected.

⁴⁷ This indicator was in the meantime discontinued by the company.

⁴⁸ Available at <http://www.anacom.pt/template31.jsp?categoryId=207203>

information on the characteristics of the service, in particular making it clear that the access to the service is ensured exclusively at the address declared by the end user and that there are limitations at the level of caller location in calls made to the single European emergency number (112).

Note that in the public consultation report approved together with the determination of 25.02.2005⁴⁹, ANACOM referred that “as far as retail markets are concerned, the service presented by NOVIS (...) seems likely to fall within the scope of markets of access to the public telephone network at a fixed location and of publicly available local and/or national and international telephone services at a fixed location, for residential clients (that is, markets 1, 3 and 4 of Commission Recommendation of 11 February 2003).”

By mid-2006, VODAFONE submitted to ICP - ANACOM a communication stating that it intended to launch its own homezone service, called *homephone*, having requested authorization to use GSM and UMTS frequencies whose rights of use it was the holder of for the provision of services at a well-defined geographic location. By determination of 23.10.2006⁵⁰, ICP - ANACOM authorized the use of those frequencies, provided that geographical restrictions which had been outlined for NOVIS’ offer, as well as obligations on the provision of information to customers, were complied with. The right to use NPP “2” numbering range was also acknowledged.

By the end of 2006, MEO (then TMN) notified ICP - ANACOM of its own homezone offer, called “*casa t fixo*”. By determination of 19.04.2007⁵¹, this company was authorized to use GSM and UMTS frequencies for the provision of that offer, along the lines of the two previous competing offers.

There was a significant uptake of this type of offers, especially in the first years they were launched. In the first quarter of 2006, a total of 86.279 accesses were registered, reaching 437.617 accesses by the end of the 1st quarter of 2014.

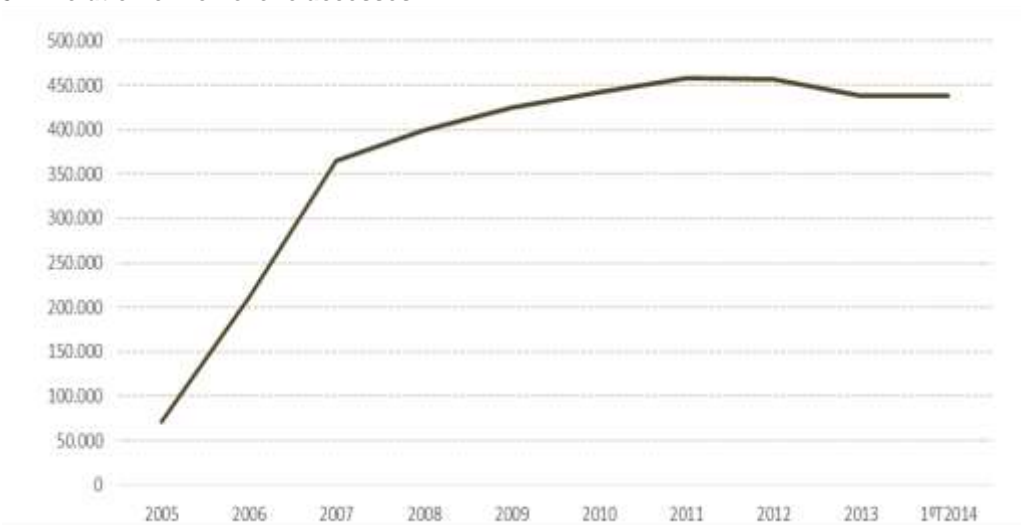
⁴⁹ Available at

http://www.anacom.pt/streaming/rel25.2.05.pdf?categoryId=42989&contentId=258273&field=ATTACHED_FILE

⁵⁰ Available at <http://www.anacom.pt/render.jsp?contentId=412571>

⁵¹ Available at http://www.anacom.pt/streaming/Delib_TMN.pdf?contentId=477341&field=ATTACHED_FILE

Chart 8 - Evolution of homezone accesses



Source: ICP-ANACOM

As set out above, homezone products allow access to the public telephone network within an enclosed geographical location, which roughly corresponds to the customer's address, being used GSM, GPRS and UMTS technologies for this purpose.

Moreover, the use of the NPP "2" numbering range, just like fixed geographic numbers, and the way how these products are advertised⁵², clearly indicates that these products clearly line up as substitutes of the traditional fixed telephone service.

On the other hand, as referred on the section on mobile services, operators providing homezone offers also make available fixed telephone service offers, thus the issue of supply-side substitutability is not decisive for the definition of the relevant market.

Given the strong evidences that, on the demand-side, homezone products are perceived to be substitutes of the telephone service provided at a fixed location, and given that homezone products make it less likely that a hypothetical monopolist could impose a small but significant increase of prices of the access at a fixed location to the public telephone network, it is deemed that access at a fixed location provided via GSM/UMTS frequencies and access based on traditional copper networks are part of the same product market.

⁵² For example, Vodafone's website states, relatively to the product "Vodafone Voz Fixa": "O telefone de sua casa" (your home's telephone) [<http://www.vodafone.pt/main/particulares/tv-net-voz/telefone/voz-fixa.html>]

3.1.6 Basic ISDN access and primary ISDN access

The purpose of this section is to assess whether it is possible for accesses of the ISDN type to integrate the product market under consideration.

In this scope, it is noted that it was concluded in the scope of the previous analysis that the various types of accesses (namely, analogue, basic ISDN and primary ISDN accesses) were all part of the same market, having regard both to demand-side and supply-side substitutability. Today, features of ISDN accesses have been brought closer to those provided by broadband-based accesses, namely at the level of the possibility of simultaneous use of voice and Internet services. Moreover, as far as the feature that most distinguishes ISDN accesses is concerned, which is the existence of several voice channels, it is noted that it is now possible to replicate several voice channels, obtained with ISDN, by engaging a set of single-channel accesses.

In this context, it is verified that the price of two analogue accesses corresponds to roughly the price of a basic ISDN access and, as from 9 basic ISDN accesses, it is less expensive to take up a primary ISDN access, in terms of monthly expenses. As such, there is some level of chain substitutability between the various types of accesses.

Table 5 – PTC prices for the various types of access

Narrowband access	Residential		Non-residential	
	Set up	Monthly charge	Set up	Monthly charge
Analogue line	€ 71.83	€ 12.66	€ 71.83	€ 15.54
Basic ISDN line	€ 148	€ 26.46	€ 148.00	€ 31.19
Primary ISDN line	-	-	€ 740.00	€ 269.68

Source: PTC (values available on 12.11.2013). Values without VAT.

It must be stressed that the most recent evolution of ISDN accesses shows that they represent an insignificant part of the total of accesses⁵³, the market not having registered an evolution such as to make this Authority change the conclusions reached in the previous analysis. In fact, the market evolution trend is for a progressive reduction of this type of accesses, and in the specific case of primary accesses, the market share of the PT Group has also shown a parallel decrease.

As such, in conclusion, it is deemed that (basic and primary) ISDN accesses are part of the product market under consideration.

⁵³ The total of equivalent ISDN accesses in the total of equivalent main accesses was 12% by the end of 2013.

3.1.7 Market segmentation: access for residential customers and non-residential customers (SMEs and large corporate customers)

In the scope of the 2003 Recommendation on relevant product and service markets within the electronic communications sector, EC referred two retail access markets susceptible to *ex ante* regulation (market 1 and 2). Market 1 included residential customers, and market 2 non-residential customers. In the new Recommendation, the Commission gathers market 1 and 2 in a single market (new market 1), leaving it for each NRA to determine if this option makes sense for that specific market. In a given market, differences in terms of offer conditions and models for the determination of prices may justify the segmentation of the referred market according to the type of user.

In the words of EC:

“In the initial Recommendation, a distinction was made between residential and non-residential access. However, the market analyses and notifications under the Framework Directive have so far shown that the contractual terms of access, in most Member States, do not significantly and systematically differ between residential and non-residential access. Operators do not generally seek to classify different demand categories and do not normally register whether a particular access service is supplied to a residential or non-residential customer, so that collecting separate data for both groups of customers has in practice often proved to be difficult. From a supply perspective, since similar products (in particular public telephone network access lines) are often used by residential and non-residential users, suppliers to non-residential customers could generally divert their supplies to residential customers should prices to residential customers rise, and vice versa. On this basis, the Commission proposes in the draft revised Recommendation to define one single narrowband access market for residential and non-residential customers. “

Services required by residential and non-residential customers present some differences, which are reflected in the different features of offers. Especially as regards non-residential customers, it was referred in the previous analysis that they resorted more than residential customers to ISDN accesses and technologies for access support other than copper pairs, such as, for example, FWA accesses, radio relay or optical fibre.

However, it must be stressed that the market under consideration is access at a fixed location for the provision of the telephone service, and for the purpose of the provision of this service requirements of residential and non-residential customers differ mainly as regards the volume of traffic that they generate/receive and the number of accesses intended to be maintained simultaneously. In this scope, non-residential customers often tend more towards ISDN accesses,

given that the latter are able to use PPCA⁵⁴ and all related features, an aspect which residential customers do not value.

Without prejudice, the market evolution shows that offers currently available in the market for residential customers, namely those based on technologies other than copper pairs, present features that are close to issues required by non-residential customers, thus the distinction mentioned in the previous analysis is of less importance.

As such, it is likely that a significant part of non-residential customers uses offers intended for residential customers, especially SMEs and professionals, that represent the vast majority of Portuguese companies⁵⁵. According to information from the Electronic Communications Services Consumer Survey to SMEs and quoted in the 2012 “State of Communications” report⁵⁶, only 19.4% of surveyed SMEs refer that they are provided with tailor-made offers, that is, offer specifically designed for the interests and needs of the company. In any event, around 69% refer they are provided with a standard corporate offer.

Although it is acknowledged that there may be some differences between offers intended for residential access customers and for non-residential SMEs, it is deemed that they do not justify the division into different markets, being thus concluded that there is only a single market for these two types of customers.

Notwithstanding, it is noted that operator’s offers for large companies generally present different features, with integrated offers of voice and data telecommunication solutions, information systems, Internet, email, network outsourcing, among many others, and the distinction made by operators between large corporate customers may be based on different criteria for the classification of the respective customers according to their dimension.

As such, it is deemed relevant to analyse separately the situation of large corporate customers.

It should be recalled that the substitutability between standard offers for residential customers and SMEs and tailor-made offers for large customers had been taken into account in the previous analysis, having ICP - ANACOM analysed the impact of the possible existence of differences at the level of the final use, combined with the existence of competitive pressures associated to three different groups of users: residential customers, SMEs and large corporate customers.

Some market actors have opted to focus their activities on the provision of services to large corporate customers, namely ONI, which shifted its focus of activity, ceasing to provide services to

⁵⁴ PPCA (Posto Privado de Comutação Automática) - Private Automatic Branch Exchange.

⁵⁵ According to data from the Bank of Portugal (statistical bulletin for December 2013 available at <http://www.bportugal.pt/pt-PT/Estatisticas/PublicacoesEstatisticas/BolEstatistico/BEAnteriores/Lists/FolderDeListaComLinks/Attachments/162/BEdez13.pdf>) around 98% of Portuguese companies are small and medium-sized enterprises.

⁵⁶ Available at <http://www.anacom.pt/render.jsp?contentId=1168316>.

residential customers to focus its activity mainly on large corporate customers and the public sector, having also decided to meet the needs of large corporate customers by providing package solutions that include voice communication services at a fixed location.

On the contrary, the PT Group made the decision (December 2011) to shut down PT Prime – Soluções Empresariais de Telecomunicações e Sistemas, S.A., incorporating it into PT Comunicações, S.A., thus integrating in a single company offers intended for residential and non-residential customers, as well as offers for large corporate customers.

As regards offers available in the market, especially as far as tariff discrimination is concerned, it is found that, contrary to the general situation with SMEs and residential customers, a greater price difference exists at the level of large corporate customers that enjoy specific commercial conditions associated to individual tariff proposals. It is noted in fact that operator websites do not provide information on conditions made available to large corporate customers.

However, it is stressed that the increasing penetration of new generation networks, based on coaxial cable and optical fibre, make it possible for SMEs to be provided with offers with characteristics that, until recently, were mainly within the reach of the large customer segment.

As regards supply-side substitutability, it is not automatic that companies that provide services only to residential and non-residential SMEs customers start providing services to large customers also, as a consequence of a small but significant and non-transitory increase of prices imposed by a hypothetical monopolist in the offer of access to large customers. In fact, it is deemed that requirements of large corporate groups demand, from operators, greater responsiveness, in terms of quality of service, than that required by residential customers or small enterprises, apart from the fact that these large companies, because of their size, hold a stronger bargaining power.

Notwithstanding, it must be stressed that, although some operators provide specific offers for each type of customer (residential customers, SMEs, large companies), and some of them focus on large corporate customers, as referred above, providers with an increased presence in the market act as global operators, able to provide services to all these segments.

In the light of the above, given the analysis presented, namely as regards demand and supply-side substitutability, it is not clear that large customers represent a segment distinguished from other business customers (SMEs).

It must also be stressed that there is no consensus on criteria for defining a large customer or SME. The definition of markets based on arbitrary criteria (for example, by defining a specific turnover limit) could lead to the establishment of an artificial market, thus biasing the development of the market and competition.

In view of the above, and given the perspective that residential and business customers (SMEs) are part of the same market, it is concluded that the three types of customers taken into consideration (residential customers, SMEs and large companies) are part of the same market.

3.2. Definition of the Geographic Market

In the new Explanatory Notes, the Commission refers that:

“... a relevant geographic market comprises an area in which the undertakings concerned are involved in the supply and demand of the relevant products of 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”

“In the electronic communications sector, the geographic scope of the relevant market has traditionally been determined by reference to two main criteria: the area covered by the network and the scope of application of legal and other regulatory instruments”

“...investment in alternative infrastructure is often uneven across the territory of a Member State, and in many countries there are now competing infrastructures in parts of the country, typically in urban areas. Where this is the case, an NRA could in principle find sub-national geographic markets. The NRA would need to identify the competitors of the potential SMP operator(s) and assess the area of supply of these competitors. Competitors include both actual competitors providing competing offers in the relevant product market and entrants who are likely to enter the market in the case of a small but non-transitory price increase of the incumbents’ offer on that market. According to competition law principles, only short-term entry (i.e. less than one year) is taken into account for the purpose of market definition. The fact that competitors have a supply area which is not national does not suffice to conclude that there are distinct markets. Further evidence relating to demand-side and supply-side substitutability on the relevant market will have to be considered. Regional competitors can indeed exercise a competitive pressure reaching beyond the area in which they are present when the potential SMP operator applies uniform tariffs and the regional competitor is too large to ignore. Moreover, there should be evidence that the pressure for regional price differences come from customers and competitors and is not merely reflecting variation in underlying costs”

In the last analysis, the geographic market defined corresponded to the national territory. Given the entry of new market operators, as well as the introduction of new technologies in the access market, a new identification of the geographic market must be undertaken. For this purpose, account shall be taken of operators currently providing commercial offers and future commercial offers expected to emerge within a reasonable time horizon of 2 to 3 years.

Among current operators, it is noted that the historical operator, PTC, provides national coverage based on its copper network. On the other hand, in the Portuguese case, licences allowing the provision of the telephone service at a fixed location have a national scope, and where they include general and specific conditions associated to rights of use for numbers, such conditions are applied anywhere within the national territory.

It must also be stressed that the US provider must provide this service throughout the national territory, applying accordingly an uniform tariff. It should be noted that, due to the uniform tariff applied by the referred provider, which is followed by other market providers although not all of them have national coverage, any response of companies in the market to changes in competition conditions is reflected throughout the territory.

In addition, mobile network operators providing homezone products have GSM/UMTS networks with national coverage.

Cable and optical fibre networks, although still lacking national coverage, already show a significant degree of coverage, especially as far as cable networks are concerned. Moreover, and just like with US tariffs, homezone tariffs and VoIP-based tariffs are uniform throughout the national territory.

In addition to offers made available in the market and the geographic coverage of the main networks supporting access at a fixed location, it is highlighted that the legal framework and the geographic scope of activity records are also uniform throughout the national territory, thus there seems to be no reason to segment the geographic market.

In the light of the above, it is concluded that the relevant geographic market for this analysis corresponds to the national territory.

3.3. Conclusion

The analysis undertaken, based on supply and demand-side substitutability, leads to the conclusion that there is a single market for the product:

- Access to the public telephone network at a fixed location for residential and non-residential customers.

The above-mentioned market covers the entire national territory and comprises access to the public telephone network at a fixed location for the provision of telephone services, irrespective of the technology used and the type of access.

ICP - ANACOM considers that factors taken into account in this analysis will not change in the short/medium term, until the next market definition and SMP analysis take place.

3.4. Markets susceptible to *ex ante* regulation

The product market defined above corresponds to the relevant market recommended by EC, plus broadband accesses for the provision of the VoIP service. According to EC, it is assumed that in markets listed in the Recommendation on Relevant Markets, the three cumulative criteria, used to determine whether a national market is relevant for *ex ante* regulation purposes, are complied with, thus the NRA is not required to reassess their application. However, EC refers also that the NRA is free to assess whether the three criteria apply to the national case, in case it deems it to be appropriate. In the specific case of the market defined in the preceding chapter, ANACOM believes that the assessment of compliance with the three cumulative criteria should be undertaken.

As such, the three cumulative criteria with which EC considers that markets identified for the purpose of *ex ante* regulation must comply are as follows⁵⁷:

- Presence of high and non-transitory barriers to entry, of a structural, legal or regulatory nature;
- A market structure which does not tend towards effective competition within the relevant time horizon. The application of this criterion involves examining the state of competition behind the barriers to entry.
- The insufficiency of competition law alone to adequately address the market failure(s) concerned.

This section focuses on the assessment of the cumulative compliance of the three criteria listed by EC, relatively to the market of access to the public telephone network at a fixed location. In addition to elements presented by EC in the scope of the Recommendation, ICP - ANACOM mentions also ERG's position on the application of the three-criteria test several times throughout the text in this section. All these mentions refer to ERG's document known as "*Guidance on the application of the three criteria test*"⁵⁸.

Without prejudice to the cumulative nature of the three criteria, each one will be dealt with separately regardless of whether others are complied with.

⁵⁷ Cf. Recommendation – Explanatory Notes 2.2 (pág.8).

⁵⁸ The document (ERG(08)21- ERG Report on Guidance on the application of the three criteria test) is available at: http://www.irg.eu/streaming/erg_08_21_erg_rep_3crit_test_final_080604.pdf?contentId=545221&field=ATTACHED_FILE.

3.4.1. Presence of high and non-transitory barriers to entry

The Recommendation on Relevant Markets refers in recital 8 that there are two types of relevant barriers to entry in the market: structural barriers and legal or regulatory barriers.

3.4.1.1. Structural barriers to entry

As far as structural barriers are concerned, the European Commission refers, in recital 9 of the Recommendation, as follows:

“Structural barriers to entry result from original cost or demand conditions that create asymmetric conditions between incumbents and new entrants impeding or preventing market entry of the latter. For instance, high structural barriers may be found to exist when the market is characterised by absolute cost advantages, substantial economies of scale and/or economies of scope, capacity constraints and high sunk costs. To date, such barriers can still be identified with respect to the widespread deployment and/or provision of local access networks to fixed locations. A related structural barrier can also exist where the provision of service requires a network component that cannot be technically duplicated or only duplicated at a cost that makes it uneconomic for competitors.”

The ERG report lists a set of indicators that, according to the 2002 Commission Guidelines, may be useful for NRAs to assess the magnitude of the barriers to entry:

- Existence of sunk costs
- Control of infrastructure not easily duplicated
- Technological advantages or superiority
- Easy or privileged access to capital or financial resources
- Economies of scale and scope
- Vertical integration
- Highly developed distribution and sales network
- Diversification of products or services

In this analysis, ICP - ANACOM will take in general the referred indicators as a basis, in the context of a modified Greenfield approach, that is, taking into consideration obligations imposed in wholesale markets or in markets associated to markets under consideration. Accordingly, and

taking into account that pre-selection and SLRO were imposed on this market, the starting point for the analysis should not consider their existence. In any event, the possibility that obligations concerned could be imposed in the wholesale call origination market will have an impact in this market, and as such, they should be taken into consideration where appropriate.

3.4.1.1.1. Sunk costs and control of infrastructure not easily duplicated

Sunk costs, or irreversible costs, are costs which the company must bear to enter the market, but which cannot be recovered. These costs, like fixed costs, do not change with the amount produced, but contrary to the latter, do not depend on the total period during which the company remains in the market. High sunk costs, all other things being equal, make the entry in the market less attractive, and in this perspective they are deemed to be barriers to entry.

Some telecommunications infrastructures involve high sunk costs and long construction time limits. In particular as regards copper networks, traditionally used in the provision of access to the public telephone network at a fixed location, they are not easily duplicated infrastructures of a lengthy implementation. In addition, the network of the historical operator (PTC) has a strong presence throughout the country, both in terms of the access network, and of interconnection. This operator currently holds infrastructures which allow it to provide services to almost 2 million customers in the direct access modality.

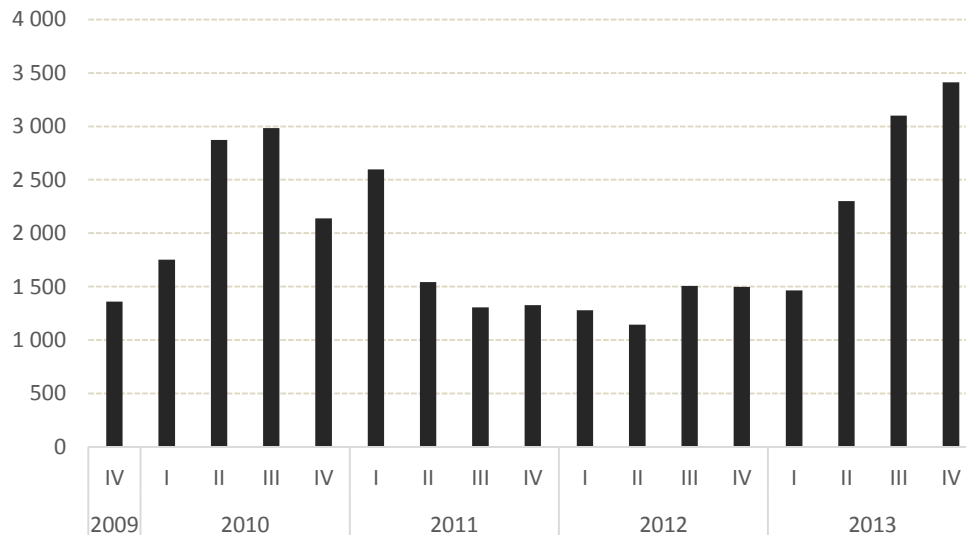
The difficulty in duplicating PTC's copper network, which is likely to place barriers to a quick and effective entry in the market, must be weighted in the context of the presence of wholesale offers, imposed on the historical operator, as well as of the strong development of new generation networks (NGN) (both coaxial cable and optical fibre) supported on wireless technologies (especially mobile networks) held by alternative operators, which are widely spread throughout the country.

Relevance of wholesale offers in the reduction of barriers to entry

The development of the Reference Conduit Access Offer (RCAO) has been a major factor to reduce barriers to the implementation of networks other than that provided by the historical operator, allowing physical and economic obstacles to be overcome, associated to subsoil saturation, logistic and bureaucratic difficulties in the development of conduit construction activities, the high overall amount of investments required by new operators to duplicate infrastructures, as well as the inefficiency of duplication in a large number of geographic areas.

Since its entry into force (in mid-2006), RCAO has registered an increasing level of interest by operators benefiting therefrom, which led to the increase in the number of responses to requests for information on conduits and associated infrastructure and the number of interventions performed in PTC's conduits.

Chart 9 – Number of responses to installation requests in the scope of RCAO



Source: ICP-ANACOM

Conditions for access and use of conduits and infrastructure set out in RCAO are in fact a decisive aspect to enable the competitive implementation of optical fibre access networks, and the development of services based therein. Alternative operators who have benefited from RCAO do so at a large extent in the scope of the construction of broadband networks, for the provision of broadband services, and for this reason this obligation was identified further to the analysis of relevant markets 4 and 5.

In addition, attention should be dawn also to the leased lines reference offer (LLRO) and to the reference Ethernet leased lines offer (RELLO), which are important mainly for operators whose business model does not involve high investments in alternative network infrastructures, or who do not hold networks of national coverage, as these offers provide nation-wide access, in a non-discriminatory manner, to wholesale inputs that enable operators to build up their own networks.

The provision of RUO⁵⁹, which allows problems associated to the investment in an operator's own network to be overcome, should also be mentioned. This offer allows alternative operators to provide narrowband and broadband services based on the use of the local loop held by PTC. Without prejudice, alternative operators usually do not resort to local loop unbundling to provide telephone accesses at a fixed location individually, thus this wholesale offer is not deemed to be

⁵⁹ Local Loop Unbundling means the unbundling of the local loops between the customer's premises and the local exchange, which enables other operators to use them on a full or shared basis in order to provide services to the user.

particularly relevant for the competitive analysis of this market. In addition, although this involves lower investments than those required for the construction of a self-owned network, such investments are only justified in some areas of the exchange, so operators using local loop unbundling are not present in all exchange areas, and thus are not present also throughout the territory.

Without prejudice to the existence of RAO, particularly relevant at the level of the construction of broadband networks - which also allow access to the public telephone network at a fixed location -, and also of LLRO, RELLO and RUO, the difficulty to quickly implement and provide in a general fashion an access network of a national dimension, is still deemed to be a significant barrier to the expansion of new operators. In this context, the obligation to provide such an offer (SLRO), which will be imposed on the PT Group in the scope of the wholesale origination market, must be stressed.

The SLRO consists in a wholesale offer, of a specific price, of the right to bill PTC's telephone line, enabling other legally qualified companies to render available their own retail offers that integrate both the line resale and telephone services.

Having been launched in 2006, by the end of 2007 it was possible to see the reduction of the number of requests for SLRO activation, as shown above in Chart **Chart 4 - Information presented by PTC on analogue accesses and ISDN accesses with active SLRO (not equivalent), including activations by companies of the PT Group**

. This situation is related to a change in the business model of "other non-PT Group operators" (hereinafter OSP) benefiting from SLRO, to support their offers in RUO, or in self-owned infrastructure, thus climbing the so-called "investment ladder".

An analysis which only takes account of the number of SLRO accesses will not enable, however, a complete assessment of the importance of this wholesale offer in downstream markets, given that the provision of such an offer guarantees a certain level of contestability in the market, that is, the possibility of an effective and quick entry in the market. The simple existence of this contestability contributes to constrain retail market prices, given that the existence of abnormal profit in this market could encourage an operator to enter the market supported on SLRO.

Finally, there are also network access obligations, imposed under the multi-band auction, held in 2011, which effectively compel the three current mobile operators with self-owned networks to accept negotiating in good-faith agreements for the wholesale access to their networks in the 800 (MEO, NOS and Vodafone) and 900 MHz bands (Vodafone). Operators are specifically required to negotiate in good-faith agreements that allow the provision of final services equivalent to those provided to their own customers in those bands. In case operators opt for the provision of

homezone services in those bands, any operator may request the negotiation of MVNO agreements along these lines.

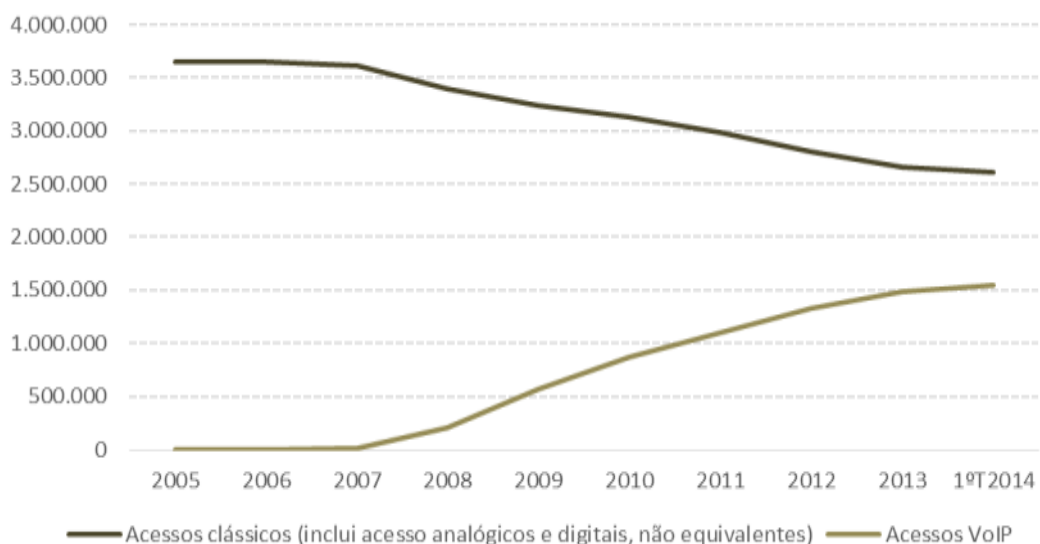
As such, a wide set of means is available at present for operators, other than the construction of a self-owned copper network, for the purpose of the provision of accesses to the public telephone network at a fixed location.

Offer of a self-owned network

In addition, in higher steps of the “investment ladder”, the offer by alternative operators of access to the public telephone network at a fixed location based on a self-owned networks also exists, namely on the basis of mobile networks, using GSM/UMTS technology, and of NGN, namely coaxial cable and optical fibre networks.

In fact, the significant increase of accesses based on alternative technologies to copper is relevant. On the one hand, this growth is registered in parallel with a relatively symmetrical decrease of accesses based on copper, which shows the increasing importance of accesses based on alternative technologies. On the other hand, there is a significant market share of alternative operators whose accesses are based on NGN and mobile networks - although this market share has been decreasing, due the increase of telephone accesses of the PT Group, provided on the basis of its optical fibre network.

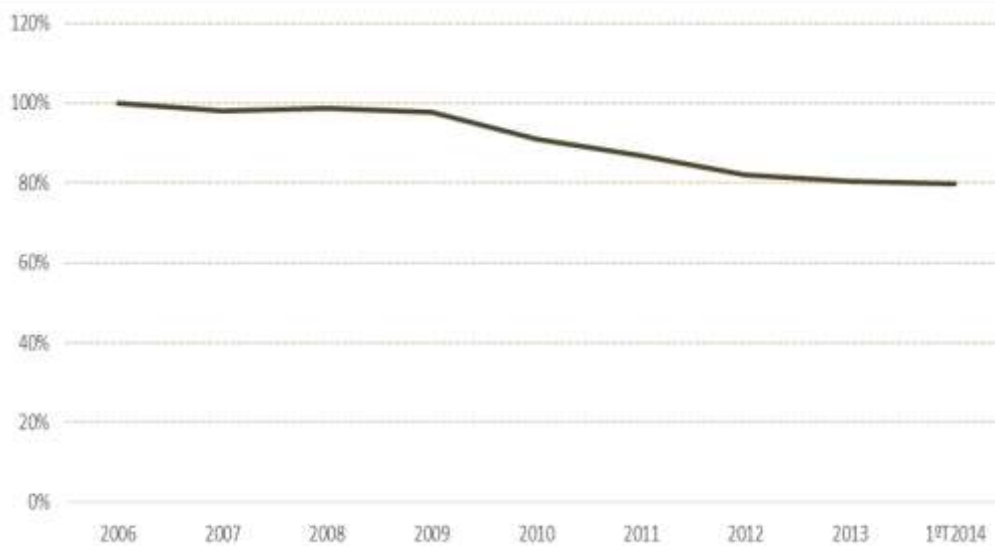
Chart 10 – Total evolution of classic and VoIP accesses



Classic accesses (including analogue and digital non-equivalent accesses) VoIP accesses

Source: ICP-ANACOM

Chart 11 – Market share of homezone and VoIP accesses held by alternative operators



Source: ICP-ANACOM

It must be taken into account that⁶⁰, in parallel with the large coverage of the copper network, at the level of analogue accesses, and at DSL level (almost 100% in December 2012, one of the highest rates within the European context; as far as only rural areas are concerned, more than 90% has been reached, also one of the highest rates within the referred context), mainly ensured by the PT Group, there are in Portugal relevant coverage levels by networks other than that owned by the PT Group.

In fact, as far as the cable network is concerned, the rate of homes with accesses supported on EuroDOCSIS 3.0 – standard corresponded, by the end of 2012, to around 68.2% of total number of homes⁶¹. Based on EC data (Digital Agenda Scoreboard 2013) , by the same period, the coverage of cable networks based on EuroDOCSIS 3.0 in Portugal (76%) ranked 4th among EU countries. Without prejudice, and shown in the picture below, the density of cabled homes is mainly concentrated in large coastal urban centres. Even so, Portugal presented, by December 2012, and again on the basis of EC data, one of the largest cable network coverage of the EU (coverage of standard cable networks in Portugal rated, in December 2012, 77.4% of total number of homes, exceeding the 42.7% EU average. As far as rural areas are concerned, a coverage by 30.8% of total number of homes occurs, against 7.2% of the European average).

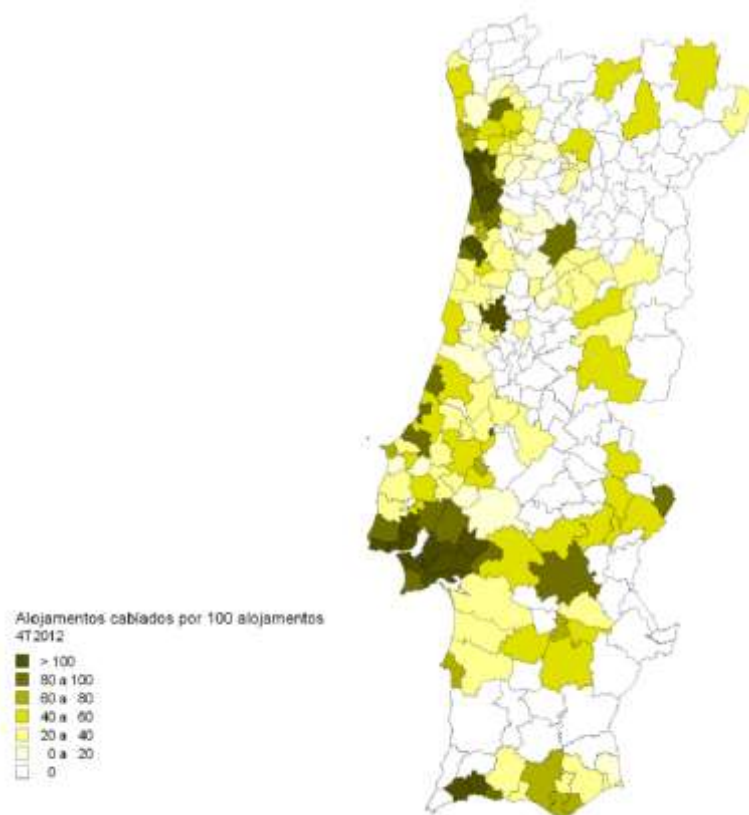
⁶⁰ Statistical data on coverage, referred in this section, may be found in the document “The Communications Sector 2012”, issued by ICP - ANACOM, available at <http://www.anacom.pt/render.jsp?contentId=1168316>, which quotes Digital Agenda Scoreboard 2013, among other sources.

⁶¹ The provision of the service by more than one operator in the same region makes multiple cabling of the same home possible. This means that the sum of cabled homes by all operators may result in double counting. ICP - ANACOM estimates, as referred in the document “The Communications Sector 2012”, that this double counting effect affects at the most 13.2% of the total number of cabled homes with EuroDOCSIS 3.0.

Homes cabled with optical fibre (*fibre to the home* or *fibre to the building* - FTTH/B) by all operators amounted, by the end of 2012, to around 37.1% of the total number of conventional dwellings. It is estimated that the double counting effect affects at the most 24.4% of cabled dwellings. Combining existing platforms for high speed internet access, by the end of 2012, around 77.8% of dwellings in Portugal were prepared to receive high speed services (according to data from the Digital Agenda Scoreboard 2014 – Broadband markets⁶² the rate of NGN coverage in 2013 in Portugal was already around 84%), apart from being also prepared, naturally, for the reception of voice services.

It is thus possible to conclude that, although cable and optical fibre networks do not cover the entire national territory, they show very significant levels of coverage, complementing the copper network offer in many municipalities of the country, a situation that tends to intensify with the extension of optical fibre network coverage, including more remote and/or less populated municipalities (in this case, via the installation, management, operation and maintenance of high speed electronic communication networks in rural areas).

Figure 1 – Distribution by municipality of the total number of dwellings cabled by all operators relatively to the total number of dwellings (Mainland)



Cabled dwellings per 100 dwellings

⁶² Available at http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=5804.

4Q2012
> 100
80 to 100
60 to 80
40 to 60
20 to 40
0 to 20
0

Source: ICP-ANACOM (data published in ICP - ANACOM's "2012 Communications Sector").

The relevance of the regulation of markets 4 and 5 must be stressed, as far as the increase of broadband accesses is concerned. ICP - ANACOM approved, by determination of 06.02.2012, a draft decision on wholesale markets of access network infrastructure at a fixed location and broadband access.

The market analysis carried out and measures provided for in this draft decision took into consideration changes which took place at the level of broadband access retail and wholesale markets, with significant impact, namely the proliferation of bundled, especially triple-play, offers, provided by the historical operator and by alternative service providers in the market, the increase of broadband offer speeds with the marketing of offers based on optical fibre and coaxial cable distribution (DOCSIS 3.0) networks, with offers of 100 Mbps download speed and above, and the increase of investment in high speed access networks, both cable and FTTH.

In this context, in addition to the obligation of unbundled access to the copper local loop and sub-loop and of access to conduits and masts throughout the national territory, the possibility of imposing in certain municipalities a temporary access to optical fibre via a virtual access (while an unbundled access thereto is not viable) is being weighted.

Taking into account, specifically, the set of access obligations expected to be imposed on the PT Group, the operator with SMP, by ICP - ANACOM's draft decision, as well as the market development, especially as regards recent investments in self-owned infrastructure, especially optical fibre, on the part of alternative operators, the increase of the pool of broadband accesses is likely to occur, contributing at the same time to an even more significant growth of VoIP services provided by alternative operators.

From an integrated analysis of the various levels of entry, based on an increasing degree of use of self-owned infrastructure, it is possible to conclude that the size of sunk costs may be adjusted to various entry strategies. Given the existence of wholesale offers that guarantee the access to the network, including SLRO and RUO, it is not considered that this factor constitutes a significant barrier to entry. In fact, the diversity of providers in the market should be highlighted.

It is noted that by the end of the first quarter of 2014, there were 7 active companies that provided telephone service via direct access only, both over self-owned infrastructures or over third-party infrastructures (mainly over SLRO accesses and local loops) while 8 providers provided the service both on direct and indirect access, in this last case based on call-by-call carrier selection or carrier pre-selection. On the other hand, there were several types of providers, including providers integrated in predominantly national electronic communications groups (such as the PT Group and ZON Optimus⁶³), providers integrated in international economic groups (Vodafone, Colt Telecom and Orange), providers present in various markets and providers focused on specific segments, such as the business sector (such as Onitelecom and G9SA).

3.4.1.1.2. Technological advantages or superiority

Alternative providers use several technologies to provide telephone services at a fixed location. These technologies, based on the IP protocol or on 2nd or 3rd generation mobile networks, are not technologically lower than the copper network technology, held by the historical operator.

3.4.1.1.3. Easy or privileged access to financial resources

Some providers other than the historical operator integrate large foreign corporate groups, such as the Vodafone Group or the Altice Group, others are mainly held by national groups, as referred earlier. The company resulting from the merger process recently concluded between ZON and Optimus is quoted on the Lisbon Stock Exchange, and listed in its main index, which aggregates securities with higher liquidity (PSI 20). At the level of access to the capital market, there seems to be no significant asymmetry between the historical operator and main alternative operators.

3.4.1.1.4. Economies of scale, of scope, of experience

The existence of economies of scale determines decreasing average costs with the amounts produced, which naturally has impact at the level of the competitive capacity of small companies vis-à-vis larger companies. At the time of the previous analysis, in 2004, the infrastructural dependency on the copper network, held by the historical operator, was such that a high degree of economy of scale in the sector was deemed to exist. In fact, electronic communications services required the installation of infrastructure with significant indivisibilities, which implied, for relevant levels of production, the existence of extremely high fixed costs, entailing particularly relevant economies of scale.

Wholesale offers referred earlier help to mitigate this intrinsic aspect of an industry with high fixed costs, given that, for a regulated price that is oriented towards costs of the providing company, a smaller operator is able to provide access at a fixed location at an average cost close to that borne

⁶³ Group that integrates NOS, TV Cabo Madeirense and TV Cabo Açoreana..

by the historical operator. Additionally, telephone access offers based on networks with IP protocol and mobile networks with GSM/UMTS technology, given the installed capacity of these networks, which at the moment show a significant coverage in the national context (with particular emphasis on mobile networks), place some of the alternative providers in competitive situations close to that held by the historical operator. In particular, marginal costs of providing homezone accesses are particularly low.

Economies of scope determine that the cost of jointly producing two different products (or more) is lower than the cost of producing them separately. At this level, in these markets, the dissemination of multiple play offers must be highlighted, both on the part of the historical operator and of alternative operators. These offers give the consumer the advantage of receiving a single bill for the various services, and also benefit from economies of scope. In this regard, the historical operator seems not to enjoy advantages vis-à-vis other operators, who, based on the referred technologies, provide several final services to customers, such as broadband Internet services, pay-TV and content rental services, and in some cases, voice and data mobile services.

There are two other barriers to entry: economies of experience and switching costs.

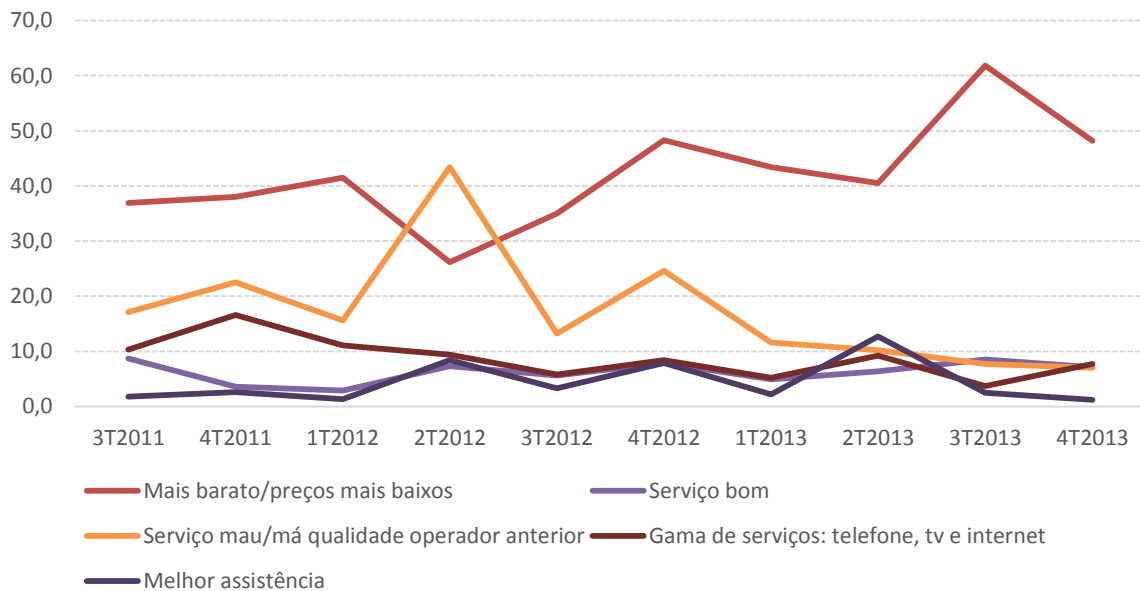
Economies of experience determine decreasing average costs with the company's time of experience. Broadly speaking, economies of experience are economies of scale, where the latter takes on a time dimension. In the sector under consideration, it is not possible to conclude that there are significant economies of experience, due to the nature of technologies used, which implies constant innovation, thus experience gains are relatively limited. On the other hand, several providers benefit from technological expertise and experience of subsidiary groups or groups they integrate, where appropriate, or of manufacturers, who are sometimes common to several providers.

Lastly, switching costs borne by users may constitute significant barriers to entry. Switching costs may be generally defined as costs incurred with the change of provider. These costs are not exclusively pecuniary, as there are also psychological and time costs, namely associated to the search for and uptake of an alternative provider. The higher these costs, all other things being equal, the higher the discounts to be practised by alternative operators, compared to the price practised by the historical operator, to attract customers.

The market share of the PT Group, which is slightly over 50%, as will be seen, could indicate that consumer mobility is still relatively low. Without prejudice, there are signs in the fixed telephone service as a whole (that is, including access and telephone services provided at a fixed location), that consumers strongly value the price factor. As shown by the chart below, the most important operator-changing factor referred by consumers of the fixed service was the price. In the range

between 25% and 50%, this factor showed twice the responses of factors identified subsequently during the last year, namely the range of services factor, telephone, TV and Internet, with around 8% of responses, and quality of service, with around 7% of responses by the end of 2013.

Chart 12 – Reasons for change



Cheaper/lower prices

Good service

Bad service/bad quality of the previous operator

Range of services: telephone, TV and Internet

Better consumer support

Technical note: the Telecommunications Barometer is a regular study carried out by Marktest for the telecommunications sector. The Telecommunications Barometer - Fixed Network pool comprises dwellings in the Mainland and in the Autonomous Regions of Madeira and Azores. Every month a proportional sample of the population, and representative thereof, is collected.

Source: Marktest - Telecommunications Barometer study, 2004 to 2013.

Even so, it is necessary to take into account the low level of customers who declare to intend to change the fixed telephone service operator, which by the end of 2013 was around 4.6%, also according to Marktest data⁶⁴.

Moreover, according to the Survey on the use of electronic communications services by small and medium-sized enterprises, of December 2012, published in April 2013⁶⁵, around 35% of surveyed

⁶⁴ Telecommunications Barometer study, 2004 to 2013.

Technical note: the Telecommunications Barometer is a regular study carried out by Marktest for the telecommunications sector. The Telecommunications Barometer - Fixed Network pool comprises dwellings in the Mainland and in the Autonomous Regions of Madeira and Azores. Every month a proportional sample of the pool considered, deemed to be representative, is collected.

⁶⁵ Available at http://www.anacom.pt/streaming/ICSCE_PME_2012.pdf?contentId=1161652&field=ATTACHED_FILE

companies referred that the price was the most important factor when selecting an operator. The second main reason (“there were no providers with better offers”) achieved 13.7% of responses.

The Memorandum of Understanding (MoU) concluded in 17.05.2011, between the Government of the Republic, the International Monetary Fund (IMF), the European Central Bank (ECB) and the European Commission (EC), noted, as regards electronic communications fixed networks, that there was a need for measures that increased competition in the fixed communications market⁶⁶.

In order to encourage consumer mobility in the engagement of communications services, ICP - ANACOM implemented a set of measures aimed at facilitating the change of service provider in fixed networks, decrease bureaucracy, steps and documents required to conclude or terminate a contract.

In this context, attention must be drawn, among several measures taken, to the amendment to the Portability Regulation⁶⁷, ensuring the effective porting of the subscriber's number within one working day at the most, and the Decision on procedures required for the termination, on the initiative of subscribers, of contracts governing the offer of public networks or of publicly available electronic communication services⁶⁸.

In practise, there has been a considerable increase in the number of accesses based on technologies other than copper, which indicates a changing trend on the part of customers. It is also revealing that, in the second half of 2012, the share of direct access subscribers of alternative providers in Portugal, exceeding 40%⁶⁹, was the third highest among EU countries, as shown in the chart below. This element is particularly telling of the competitive capacity of alternative providers in Portugal, on the one hand, and also of some consumer mobility, on the other (although, in this last case, it is necessary to take into consideration the spin-off effect that led to the establishment on ZON).

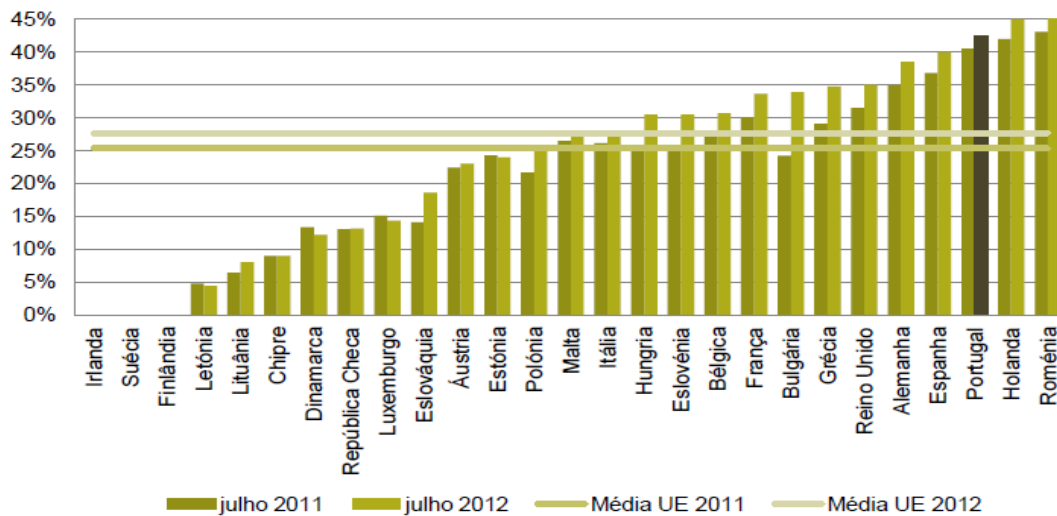
⁶⁶ Vide paragraph 5.21 of the MoU version updated on 01.09.2011 and paragraph 5.17 of the MoU version updated on 09.12.2011: “measures to increase competition in the fixed communications market by: i) alleviating restrictions on mobility of consumers by reducing costs faced when deciding on provider along the lines proposed by the Competition Authority (such as standardized contracts, explicit right to free cancellation and facilitating price comparison) [Q3-2011]; reviewing barriers on entry and adopting measures to reduce them. [Q1-2012]”.

⁶⁷ Available at <http://www.anacom.pt/render.jsp?contentId=1119156>

⁶⁸ Available at <http://www.anacom.pt/render.jsp?contentId=1120684>

⁶⁹ Almost 49% by the end of the 1st quarter of 2014.

Chart 13 – Share of direct access subscribers of alternative providers in the EU



Ireland / Sweden / Finland / Latvia / Lithuania / Cyprus / Denmark / Czech Republic / Luxembourg / Slovak Republic / Austria / Estonia / Poland / Malta / Italy / Hungary / Slovenia / Belgium / France / Bulgaria / Greece / United Kingdom / Germany / Spain / Portugal / The Netherlands / Romania

Source: Digital Agenda Scorecard 2012 and Digital Agenda 2013 (provisional data). Data published in ICP - ANACOM's "2012 Communications Sector".

3.4.1.1.5. Vertical integration

Vertically integrated companies are able to place non-integrated competitors at a competitive disadvantage. This situation is due to the likely market power leverage towards associated markets, namely when an integrated competitor supplies a non-integrated competitor an essential intermediate production or consumption factor. In these circumstances, it is harder for the non-integrated operator to meet the increase in demand resulting from the increase in the price of a competitor. This situation was the case at the moment of the analysis carried out in 2004.

PTC still is today a vertically integrated electronic communications operator, present both at the level of the wholesale market and at the level of the retail markets.

However, the provision of several wholesale offers allowing other operators to implement and supply network access in a general manner, as well as the use by OSP of other technologies of access to the network, made the presence of PTC at wholesale level in the copper network less of a relevant obstacle.

On the other hand, the market seems to be undergoing a significant strengthening, with the establishment of operators with their own networks that allow the offer of fixed and mobile

accesses, which is the case of the merger process between ZON and Optimus which led to the establishment of NOS and between Cabovisão and ONI. Vodafone, on the other hand, is an operator with an important presence in several markets, providing offers of fixed and mobile accesses, in the scope of the provision both of telephone services and Internet access services.

It is concluded that, without prejudice to the significant vertical integration of the historical operator, the development of self-owned networks and the increasing vertical integration of OSP, as well as the more recent shifts towards concentration, together with the provision of regulated wholesale offers, decrease the possible negative impact that this integration could have on competition.

3.4.1.1.6. Highly developed distribution and sales network

Current alternative operators to the historical operator acting in markets under consideration generally hold distribution and sales network of a national dimension. In particular, NOS and Vodafone have shops in a significant proportion of districts in the Mainland and islands where their various services are sold jointly, in competition with the historical operator.

3.4.1.1.7. Diversification of products or services

The product proliferation strategy may represent an effective barrier to entry, in the presence of high fixed costs. If a company in the market makes available a varied offer of products/services, it will be more difficult for a new entrant to address a specific segment of the market successfully. In the presence of sufficiently high fixed costs, inherent to the creation of each variety of product/service, an entry into the market may be effectively prevented via a product/service proliferation strategy.

The diversification of products and services may be considered, in the markets under analysis, under two different perspectives: 1) the aggregation of various services of a different nature in the same package and 2) the launch of different types of tariffs for the fixed telephone service.

As far as 1) is concerned, there is in fact a proliferation of bundled sales in Portugal, which associate access to the public telephone network at a fixed location to other fixed and, in some cases, mobile, retail services, as referred earlier. However, this strategy is being followed successfully by some of the alternative providers, thus it is not deemed to be a competition-restrictive strategy, on the contrary, it meets a preference shown by consumers.

As far as 2) is concerned, this strategy does not seem to correspond to a situation that restricts the entry into the market under consideration. In fact, some players of a small/medium size, have entered the market and effectively addressed specific segments of customers, without prejudice to a general diversification of products/markets in the market. This was the case, in the past, and

based on indirect access, of Tele 2, which would later be acquired by Sonaecom, but also of companies that focus on offers for the corporate segment and, within the latter, in specific types of companies, such as the case of Colt and ONI.

3.4.1.1.8. Conclusion on structural barriers to entry

In the market under consideration, two strong factors - a regulatory one, and the other one resulting from the free commercial activity of competing companies and from technological development - had a decisive influence at the level of barriers to entry.

First, the existence of certain wholesale offers imposed on the PT Group effectively affected a transversal set of structural barriers to entry, and will continue to affect, both facilitating the establishment of self-owned networks, and increasing the speed of entry in the market. In particular, the possibility of supplying access to the public telephone network from a fixed location on the basis of the resale of the subscriber line enabled alternative providers, without incurring in significant sunk and fixed costs, to produce with average costs close to those incurred by the historical operator, to gain market share and in some cases to climb the investment ladder. It is noted, on the one hand, that without prejudice to the current low expression of the number of access based on the SLRO, this wholesale offer guarantees a certain degree of contestability in the market, by allowing a quick and effective entry into the market in the presence of excessive prices, and on the other hand, there are other wholesale offers that may favour the entry in the market based on different degrees of use of self-owned networks.

Second, technological evolution and an increasing preference of consumers for the purchase of bundled electronic communications services allowed some providers to enter the fixed access market based on their own technology, via mobile networks and/or IP protocol networks. This increase of infrastructure competition enabled operators of a significant size to compete directly with the historical operator on the fixed access market, with a commercial freedom and autonomy to define tariffs which, as will be seen below, will have a significant impact at the level of final prices presented to consumers.

Moreover, the regulation of wholesale markets of access to network infrastructure at a fixed location and broadband access will also provide, where appropriate and under terms to be determined, conditions for increased competition as far as broadband accesses are concerned.

In parallel, and as charts 1 and 2 demonstrate, the FTS penetration rate in Portugal has been increasing since 2008, contrary to the average European trend.

It is thus concluded that the first cumulative criterion to identify markets susceptible to *ex ante* regulation, concerning the presence of high and non-transitory barriers to entry has not been met in

the Portuguese case, that is, there are currently no structural barriers to the entry in the retail market of access to the public telephone network at a fixed location that prevent a high degree of competition. It should be noted, however, that this conclusion may only be reached due to the presence of wholesale regulation.

3.4.1.2. Regulatory and legal barriers

The European Commission refers as follows in recital 10 of the Recommendation on Relevant Markets, as far as regulatory and legal barriers are concerned.

“Legal or regulatory barriers are not based on economic conditions, but result from legislative, administrative or other state measures that have a direct effect on the conditions of entry and/or the positioning of operators on the relevant market. An example of a legal or regulatory barrier preventing entry into a market is a limit on the number of undertakings that have access to spectrum for the provision of underlying services. Other examples of legal or regulatory barriers are price controls or other price-related measures imposed on undertakings, which affect not only entry but also the positioning of undertakings on the market. Legal or regulatory barriers, which can be removed within the relevant time horizon, should not normally be deemed to constitute an economic barrier to entry, such as to fulfil the first criterion.”

The sector under consideration is liable to two possible regulatory restrictions:

- Need for general authorization for the provision of services of access to the telephone network at a fixed location;
- Scarce radio spectrum, in case of the option for entry in the market on the basis of mobile networks.

As far as the first restriction is concerned, the following is noted:

As from 01.01.2000, the entry in markets under analysis became subject only to a licensing process, in compliance with legal and formal, economic and technical requirements laid down in Decree-Law No. 381-A/97, of 30 December⁷⁰.

Subsequently, authorization procedures for network operators and electronic communication service providers were further streamlined. For this purpose, it is noted that Law No. 5/2004, of 10 February, as amended by Law No. 51/2011, of 13 September, lays down in its article 20 the procedure required to commence activity by providers that intend to provide electronic communications networks and services. This procedure requires only a short notice of the network

⁷⁰ Vide: <http://www.anacom.pt/render.jsp?contentId=23056>

or service to be provided, as well as the date upon which the activity is estimated to commence. The address must be notified, as well as any changes thereto, within 30 days. Following this notification, undertakings may immediately commence activity, subject to the limitations resulting from the allocation of rights to use frequencies and numbers. The general regime of authorisation is thus simple and quick, and consequently it is not deemed to constitute a barrier to the entry in the market.

At the level of the construction of new networks, there are some barriers related to the access to buildings and to the municipal public domain, namely in this case as regards deadlines for the execution of works on the road.

It must be stressed however, that, in Portugal, ITED (regime that applies to the design and the installation of telecommunication infrastructures in buildings and respective connection to public telecommunication networks, in force as from 2004), made the installation of cables in buildings much easier. On 01.01.2010, a new legal framework came into force, with new technical standards⁷¹, which required a technical evolution and the extension of the scope thereof, with a significant impact for the sector and benefit for the consumer, namely by facilitating access to services provided over NGN, in optical fibre.

It should be noted also that the Government acknowledged, in Resolution of the Council of Ministers No. 120/208, of 30 July, the need to attenuate or eliminate obstacles to the installation of networks and to remove barriers to the access to the existing infrastructure, for the purpose of the development and promotion of investment in new generation networks. In this context, Decree-Law No. 123/2009, of 21 May, was published, later amended by Decree-Law No. 258/2009, of 25 September⁷², governing the regime that applies to the construction of infrastructures suitable for the accommodation of electronic communications networks, to the set up of electronic communications networks and the construction of infrastructures for telecommunications in housing developments, urban settlements, concentrations of buildings and buildings. These statutory instruments lay down a set of obligations that fall on the State, Autonomous Regions, local authorities, public companies, concessionaries and, in general, bodies holding infrastructures that integrate the public domain of the State, so as to ensure the access, by electronic communications companies, to infrastructures suitable for the accommodation of electronic communications networks.

These legal measures also establish the use of harmonised procedures, particularly as regards the relationship between operators and local authorities, which will remedy the identified legal barrier.

⁷¹ ITED Manual – 2nd edition and ITUR manual – 1st edition.

⁷² Available at <http://www.anacom.pt/render.jsp?contentId=981371>.

In addition, there could be a regulatory restriction in the scope of a possible scarcity of radio spectrum, in the case of the option for the entry in the market on the basis of mobile networks.

On this issue, it must be referred that a multiband auction took place in Portugal by the end of 2011, through which the regulator made available multiple rights of use for frequencies over a total of 392 MHz, in a wide combination of low and high frequencies (450 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2600 MHz). Relatively low reservation prices were defined, particularly as regards higher frequencies, and given the effective reservation of spectrum in those bands for new entrants (in the light of the spectrum caps that were defined), the absence of interest on the part of new operators in acquiring rights of use seems to indicate that no scarcity of spectrum exists, and that this factor is not restrictive of entry in the market.

Given the results of the auction, Vodafone must make available any amount of spectrum above 2 X 20 MHz that it holds in the set of frequency bands of the 800 MHz and 900 MHz, as from 2015, which could contribute for the secondary marketing of spectrum and facilitate the entry in the market of more operators.

In this auction, network access obligations were defined, which effectively compel the three current mobile operators with self-owned networks to negotiate agreements in good-faith for the wholesale access to their networks in the 800 MHz (MEO, NOS and Vodafone) and 900 MHz (Vodafone) bands. Operators are specifically required to negotiate agreements that enable the provision of final services equivalent to those provided in those bands to their own customers. In case operators opt for providing homezone services in those bands, any operator may request the negotiation of MVNO agreements along these lines.

it should be noted that ICP - ANACOM has introduced amendments to LLRO and RELLO, namely as regards supply and repair deadlines, and compensation for non-compliance, and in the scope of the quality of service of regulated wholesale offers, the imposition of amendments in the scope of fault repair deadlines, and procedures on fault detection, repair and closure. Measures were taken also at the level of the supervision of ITED/ITUR and RCAO. These measures obviously have a positive impact at the level of the reduction of barriers to entry.

Lastly, there has been a sustained and relevant increase of ported numbers, which reveals the importance of this regulatory measure for the market under analysis. In 2013, the rate of ported numbers compared to the number of main accesses was around 34%, as shown in the table below, which indicates a significant level of churn.

Table 6 – Ported numbers (accumulated values by the end of the year)

	2008	2009	2010	2011	2012	2013

Geographic numbers	918.953	1.149.926	1.314.178	1.489.515	1.418.580	1.541.795
Non-geographic numbers	885	1.066	1.472	1.803	1.904	2.632
% ported numbers compared to the number of main accesses	22%	27%	29%	33%	31%	34%

Source: ICP-ANACOM (available at <http://www.anacom.pt/render.jsp?contentId=1011657>).

Relatively to the last market analysis, the entry into force of Regulation No.58/2005, published on 18 August, must be pointed out, whereby principles and rules applicable to portability in public telephone networks were laid down. The Regulation was subsequently amended in February and July of 2009, and in March 2012⁷³, aiming for a faster and more effective portability process.

3.4.1.3. Conclusion on the existence of high and non-transitory barriers to entry in these markets

Technological evolution and measures imposed in wholesale markets lead to the conclusion that there are no significant structural barriers to entry in the market under consideration. This analytical consideration is supported empirically by entries in the market that have taken place, on the part of companies who have been able to expand, by continuously climbing several steps of the investment ladder. The sustainability of the entry of these companies may be gauged by this fact, making it possible to conclude that, at this point in time and within the relevant time horizon, no significant structural barriers to entry exist.

Regulatory and legal barriers have also not been detected. On the contrary, there are specific regulatory measures that have been aimed at reducing restrictions to entry, namely as regards switching costs and the amount of spectrum available on the market.

3.4.2. Market structure which does not tend towards effective competition within the relevant time horizon

The European Commission notes, in recital 11 of the Recommendation, as follows:

“Even when a market is characterised by high barriers to entry, other structural factors in that market may mean that the market tends towards an effectively competitive outcome within the relevant time horizon. Market dynamics may for instance be caused by technological developments, or by the convergence of products and markets which may give rise to competitive constraints being exercised between operators active in distinct product markets. This may also be

⁷³ Versions available at <http://www.anacom.pt/render.jsp?categoryId=328895>

the case in markets with a limited — but sufficient — number of undertakings having diverging cost structures and facing price-elastic market demand. There may also be excess capacity in a market that would normally allow rival firms to expand output very rapidly in response to any price increase. In such markets, market shares may change over time and/or falling prices may be observed. Where market dynamics are changing rapidly, care should be taken in choosing the relevant time horizon so as to reflect the pertinent market developments.”

The rationale underlying this second criterion is that, even in the presence of barriers to entry, market dynamics could lead to the achievement of a competitive situation within the relevant time horizon.

As far as this second criterion is concerned, ICP - ANACOM will again use indicators suggested by ERG in its “Guidance on the application of the three criteria test”, namely:

- Market shares
- Price trends
- Control of infrastructure not easily duplicated
- Diversification of product/services (e.g. bundled products or services)
- Barriers to expansion
- Potential competition

For this purpose, ICP - ANACOM will consider that criteria on infrastructure not easily duplicated and on product diversification have already been addressed in the previous section.

3.4.2.1. Market shares

The market share of the PT Group in the years before 2004 always exceeded 90% in narrowband accesses⁷⁴ to the public telephone network at a fixed location. In the period before 2006, the market only integrated narrowband accesses, and the market definition itself was restricted to this type of accesses. The first broadband accesses used for the provision of the telephone service at a fixed location were registered as from mid-2007, and have significantly increased since then.

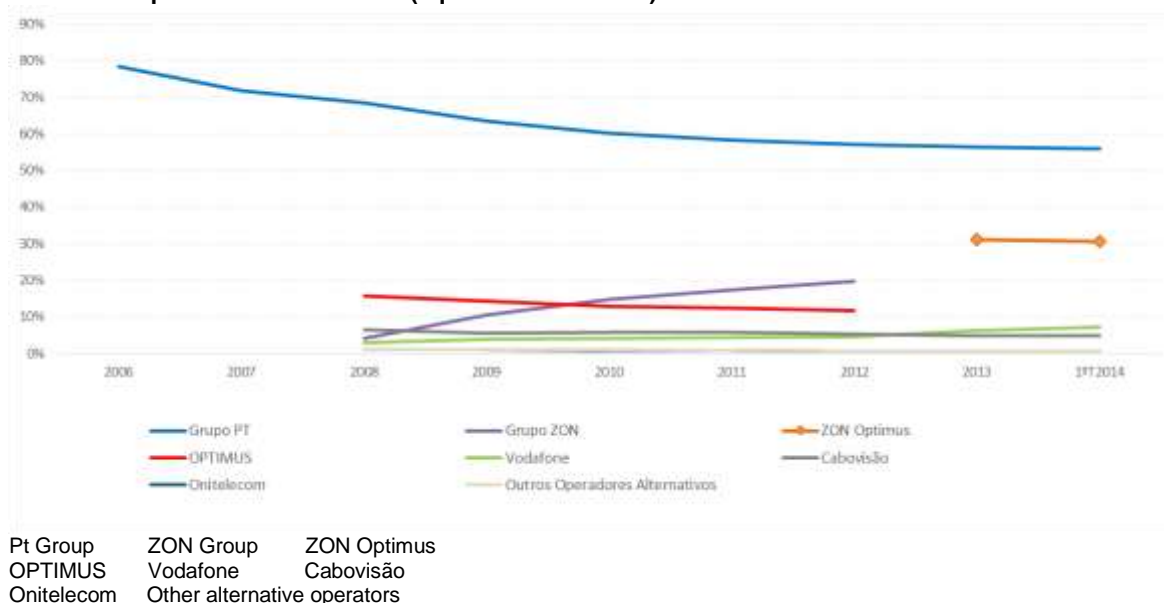
As the chart below shows, market shares of the various providers in the market have significantly changed since the last market analysis. In particular, the share of the PT Group, measured in terms of the number of fixed telephone accesses, has successively decreased, currently standing (by the

⁷⁴ Accesses considered correspond to the total of equivalent accesses.

end of the first quarter of 2014) at 56% (55.9%). While at the time of the first market analysis this company's share exceeded 90%, by 2006 it had decreased to 78% and since then and up to 2010 it decreased every year between 3 to 6 percentage points. Between 2010 and the end of the first quarter of 2014, the market share of the PT Group continued to fall, although at a slower pace.

The increase in the market share of some OSP must also be stressed, especially the important weight of the joint share of the Zon and Optimus Group, which by the end of the 1st quarter of 2014 already represented one third of the market.

Chart 14 – Operator market shares (equivalent accesses)



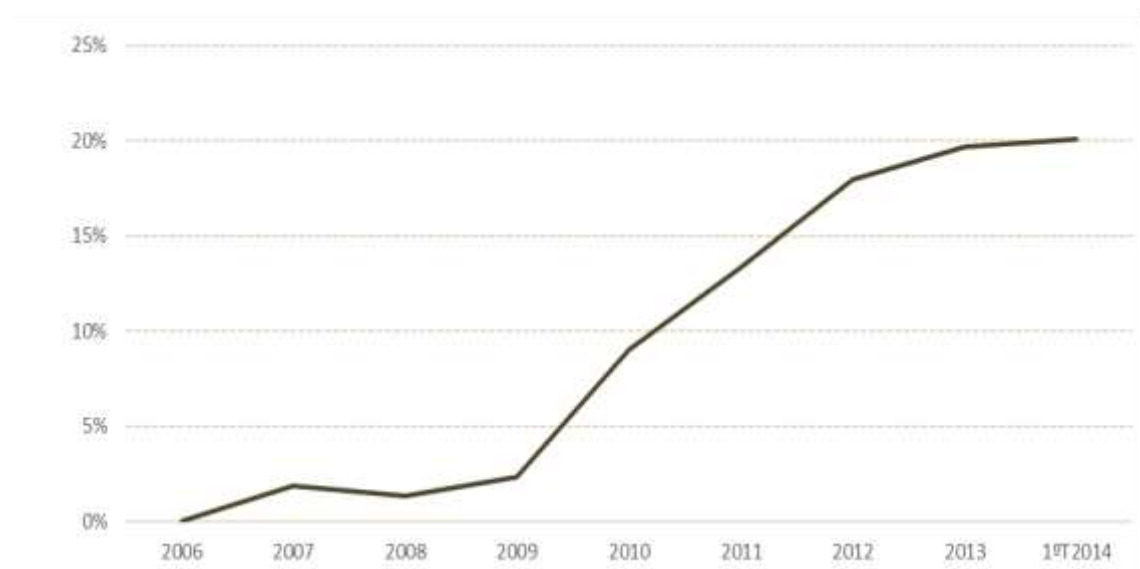
Source: ICP-ANACOM

Note: Charts presents separate shares for the ZON Group and Optimus up to 2012, and as from 2013, the joint share of ZON Optimus (which aggregates NOS, TV Cabo Madeirense and TV Cabo Açoreana).

The part of the market with the highest growth concerns broadband accesses for the provision of VoIP services (*vide* Chart 10). It is also as that part of the market is concerned (together with homezone accesses) that alternative operators present larger market shares, with a joint share of around 80% (*vide* Chart 11).

In fact, at the level of accesses based on technologies other than copper, which justify the increase of the total number of accesses in the most recent periods, the market share of the PT Group is significantly lower than the share of the market as a whole, although an increasing trend may be observed, as the PT Group has also entered this part of the market, with accesses supported in multiple-play offers (copper/ADSL, but also optical fibre).

Chart 15 – Market share of the PT Group in homezone and VoIP accesses



Source: ICP-ANACOM

The increase in the number of alternative accesses, mostly used by alternative operators, especially those supported on coaxial cable and fibre networks, has been parallel with the growing relevance of bundled offers. In this regard, it is stressed that a significant part of accesses of ongoing contracts were purchased in the scope of bundled services (usually triple play or double play). As referred earlier⁷⁵, by the end of 2012, it is estimated that 73% of FTS customers engaged this service in the scope of a bundle of services. On the other hand, a large majority of bundled services integrate the telephone service provided at a fixed location (around 92% of the total number of bundled offers).

Without prejudice to what was stated above on the decrease of the market share of companies of the PT Group, which by the end of the 1st quarter of 2014 was around 56%, and taking into account that the market aggregates traditional copper pair accesses, as well as all broadband accesses used for the provision of VoIP services, there could be a set of captive customers in the traditional copper network, due to inertia or high switching costs.

Depending on the dimension of captive customers, a competitive problem could arise affecting these customers especially, as there could be an incentive for the increase of retail prices on the part of holder of copper accesses.

⁷⁵ As referred in the above-mentioned study “Characterization of take-up and consumption of bundles of electronic communications services”, issued by ICP-ANACOM.

However, the capacity of the operator concerned to increase retail prices could be limited by several factors, such as the degree of competition in broadband retail markets, the capacity of the operator to shift to its IP network a part of customers migrating from copper networks to other networks, the size of the set of captive customers and also the existence of US obligations.

The trend of broadband retail markets is for a progressive increase of competitive levels, namely the presence of regulated upstream offers, thus it is likely that a competitive pressure continues to be present, with effects on the migration of customers from the copper network to other networks, including broadband networks, for the provision of voice services.

As regards the largest operator's capacity to retain in its IP network a part of customers migrating from copper networks to other networks, it is stressed that the PT Group has a low market share of accesses not supported on copper (a share between 15% to 25%, according to whether all accesses other than copper are taken into account, or only accesses for the provision of VoIP), so this capacity is also low.

As regards the dimension of captive customers, it is noted that in the study prepared by Ecorys for EC⁷⁶, mentioned in the first part of this document, it is referred that there could be a competitive problem where this size is equal to or exceeds 70% (level as from which a hypothetical monopolist operator could profit from a 5% to 10% price increase), although the same study concludes that there seems to be no evidence that this size is reaching a critical value.

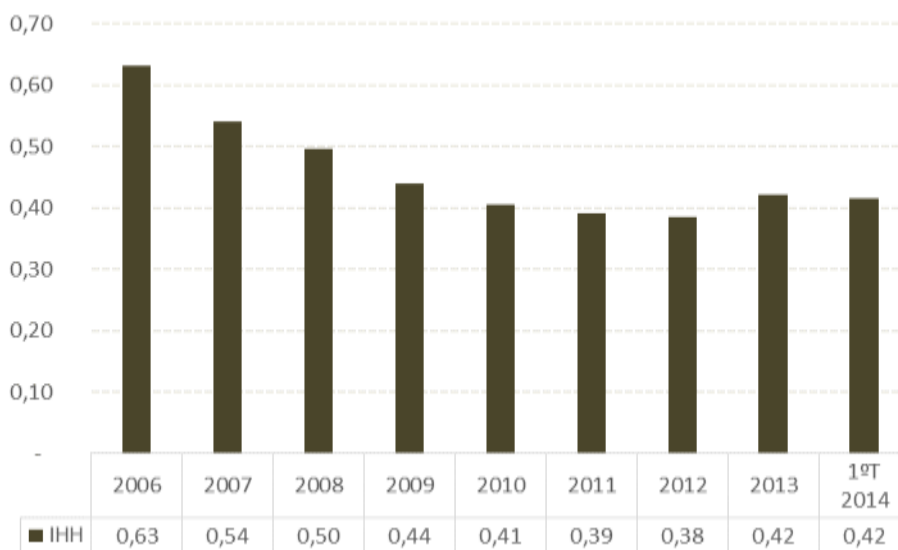
In the national market it is difficult to estimate the size of these customers. However, it is considered that the migration process from the copper network to other networks, including networks supporting the VoIP service, is far from over, namely in the light of the most recent advertisements on the intention for NGN investments. As such, the fact that many customers still use the copper network is mostly due to the ongoing migration process, and not so much because customers are captive in the copper network.

Last but not least, it must be stressed that, irrespective of the size of the group of customers that may be deemed to be captive in the copper network, the capacity of the PT Group to increase retail prices, in the absence of retail regulation, is restricted by the competitive pressure applied by NOS as operator subject to US obligations, a matter which will be further elaborated below.

Finally, as regards the evolution of the HHI Index, it is noted that also in this case there has been a reduction of the degree of concentration in the market up to 2012. The consolidation of ZON and Optimus, in parallel with that of Cabovisão and Oni, entails a new increase in the HHI index, which however occurs due to the strengthening of alternative operators.

⁷⁶ "Future electronic communications markets subject to ex ante regulation", dated September 2013, available at <http://ec.europa.eu/digital-agenda/en/news/future-electronic-communications-markets-subject-ex-ante-regulation>.

Chart 16 – HHI Index



Source: ICP-ANACOM

3.4.2.2. Size of (the) market leader(s)

The evolution of market shares shows the PTC remains the largest provider of accesses to the public telephone network at a fixed location. However, there are now other operators, some of them integrated in large economic groups, who have gained a degree of capacity to compete with the historical operator. This evolution is visible through the comparison of the main size indicators associated to alternative operators and to the PT Group, at the time of the previous analysis and the present time, according to the table below (which does not take account of the merger between Optimus and ZON, as these data concern 2012). In particular, a significant reduction of the asymmetry between the PT Group and its main competitors may be observed.

Table 7 – Size indicators for the main operators

Empresa	2004		2012	
	Volume de Negócios	Número de trabalhadores	Volume de Negócios	Número de trabalhadores
Grupo PT	2.301.362	10270	2.927.628	7.206
2º maior operador em termos de volume de negócio	156.996	200	1.199.276	1.484
3º maior operador em termos de volume de negócio	155.425	732	700.007	756
4º maior operador em termos de volume de negócio	79.359	351	730.896	786
5º maior operador em termos de volume de negócio	25.566	149	118.754	135

Nota: Valores em 1000 unidades

Fonte: Diretório de empresas do sector das comunicações, Edição de 2013

Company	Turnover	Number of employees
PT Group		
2 nd largest operator in terms of turnover		
3 rd largest operator in terms of turnover		
4 th largest operator in terms of turnover		
5 th largest operator in terms of turnover		

Note: Values in 1000 units.
Source: Directory of Companies in the Communications Sector 2013

It must also be referred that the PT Group is able to supply accesses using the various technologies available in the market. On the other hand, NOS has recently merged the Optimus and ZON brands, and holds cable and mobile networks of a significant size in the national context. Vodafone is also able to supply accesses using the various technologies available.

Relatively to the last analysis, and although the difference between the size of the market leader and that of its competitors is still relevant, it is clear that at the present moment, the market of access at a fixed location is characterized by the presence of bodies whose competitive capacity is significant.

3.4.2.3. Price trends

At the time of the previous analysis, competition between operators in the market was similar to a relationship between a leader company and its followers. In part, the nature of the main technology in the sector explained this behaviour: the strong dependence by alternative operators, for the provision of retail services, of wholesale inputs which could only be provided by the historical operator that also operated in the referred retail markets, led to a limited capacity for effective competition. This situation is still true for operators who decided to base their offers on PTC's wholesale inputs, notwithstanding the fact the their prices are regulated by ICP - ANACOM, in the light of obligations imposed under conclusions of market analysis procedures, namely the obligation for cost orientation of prices.

However, the emergence and expansion of platforms other than copper allowing access to the public telephone network at a fixed location significantly decreased the referred dependence. As tables below demonstrate, operators who provide GSM/UMTS-based accesses have made available in the market tariffs that do not just reproduce tariffs provided by the historical operator on the basis of its copper network, but which are different both as regards the structure itself and prices practised. As regards accesses, it is observed that there are homezone offers which do not entail any monthly charge, and there are also available in market offers which do not include a fixed payment or mandatory top-ups (*vide* example in the table below).

Table 8 – Homezone offers provided by operators, values in Euro including VAT

Tariff	Operator
--------	----------

	Vodafone (1)		MEO (2)		NOS (3)	
	Vodafone Voz Fixa	Vodafone Voz per-second based	Casa t Livre	Casa t Zero	Plano poupança total	Plano poupança fixo
Monthly charge	0	11.21	0	10.99	0	10.79
Mandatory top-ups	0	0	10.99	0	12.79	0

Source: Tariffs available at websites of operators in 2014 (non-promotional values):

<http://www.vodafone.pt/main/particulares/tv-net-voz/telefone/voz-fixa.html>

<http://www.tmn.pt/TMN%20Institucional/Casa%20T/main.swf> e

<http://www.nos.pt/particulares/telefone/tarifarios/Paginas/tarifarios.aspx>

In the period before liberalisation, from a tariff perspective, the element associated to access (installation and subscription) was clearly separated from the element associated to use (national and international calls). As far as call prices were concerned, peak-load pricing was practised in general, and prices of calls were proportional to their distance.

This situation changed with tariffs plans of offers based on other technologies. In the case of tariff plans of homezone products, as seen above, a mandatory top-up, common practise in tariff plans of mobile operators, introduces an element of differentiation relatively to tariff plans practised in the fixed network supported on copper networks. This mandatory top-up may be deemed as an intermediate version of the two-part tariff. The difference is that the top-up value may be deducted in calls, contrary to the monthly charge. Vodafone introduced another change, which includes the basic tariff and “additives”, allowing the reduction of the price of calls to the fixed network at certain times, against payment of a fixed value. In addition to GSM-based offers, commercial offers of operators who base their offers on other technologies have developed, and bundles including access and traffic are common. The historical operator itself made available a tariff plan (which until 31 May 2014 corresponded to the US tariff) which charges 15.57€, VAT included, for the monthly subscription, which comprises the access to a tariff where calls to the fixed network at night time and during week-ends, are free-of-charge. In the alternative, clients may pay 14.33 € VAT included, without access to free calls.

The historical operator has also launched promotional offers, of a limited duration, which are subject to compliance with the principle of cost-orientation, and which aggregate monthly charge and traffic, at lower prices than this operator’s own subscription price (however, the final user is required to pay a value associated to the activation of the offer). This type of promotional offers seems to be a direct consequence of the change in the tariff structure resulting from competition by alternative operators, which led to a reduction in prices for the access element, that is, for the fixed element of two-part tariffs of the fixed telephone service.

This evolution in tariff structures and the reduction in access prices seem to be supported by empirical evidence available to ICP - ANACOM. In fact, the reason “payment of monthly charge /

expensive monthly charge” has lost relative weight as grounds for quitting the fixed network. The table below shows that this motivation decreased from 41.6% of the total sample collected, in the 4th quarter of 2007, to 8.8% in the 4th quarter of 2011. More recent data collected on this issue concern February 2012 and point towards the continuation of the downward trend of the indicator “payment of monthly charge / expensive monthly charge”, which by then represented 6.7%.

Table 9 – Reasons for quitting the fixed network

	4T2007	4T2008	4T2009	4T2010	4T2011
Taxa de abandono da rede fixa	33,3	32,4	32,8	34,4	39,7 ↑
Base: Lares sem acesso ao serviço telefónico fixo (não inclui as não respostas)					
Motivos de abandono da rede fixa (escolha múltipla)					
Pagamento de assinatura/ assinatura cara	41,6	17,3 ↑	12,9 * ↓	11,8 *	8,8 *
Preços altos/ demasiado gasto	20,9	30,3 ↑	22,7 ↓	23,2	19,9
Utiliza telemóvel	17,9	20,2	25,3 ↑	23,6	24,6
Utilizava pouco/ deixou de ter utilidade	23,0	22,0	34,8 ↑	32,4	30,4
Má assistência do operador/ problemas	1,6 #	3,1 *	2,5 #	3,1 *	6,1 * ↑
Outro	2,5 #	2,6 #	6,8 * ↑	5,9 *	9,8 * ↑
Ns/Nr	3,1	9,9	8,5	6,7	2,8

Unidade: %

Fonte: MARKTEST - Estudo Barómetro de Telecomunicações, 4T2007 a 4T2011

4Q2007 4Q2008 4Q2009 4Q2010 4Q2011

Fixed network abandonment rate

Base: Dwellings without access to fixed telephone service (not including non-responses)

Reasons for quitting fixed network (multiple choice)

Payment of monthly charge/expensive monthly charge

High prices / too much expense

Use mobile phone

Gave little use / no longer useful

Poor operator assistance/problems

Other

Don't know/No response

Source: Marktest (data published in ICP-ANACOM's "State of Communications 2011")

Using only prices of offers made publicly available by incumbents in 19 countries of the European Union considered by OECD⁷⁷, it is noted that prices practised in Portugal for installation and monthly charge, for the residential segment, are clearly below the European average, as demonstrated in the table below.

⁷⁷ For this purpose, usage profiles/baskets of the Organisation for Economic Cooperation and Development (OECD) were taken into consideration. Values are presented in Euro and correspond to monthly bills, net of VAT and one-off costs. Purchasing power parities were not used. Values presented for the residential segment exclude discounts and promotions, which were included in the case of the business segment.

Table 10 – International comparisons with prices applied in Portugal for the residential segment (November 2012)

		Baixo consumo	Médio consumo	Alto consumo
Instalação e assinatura	Despesa mensal com instalação e assinatura	12,66€	15,91€	20,94€
	Desvio em relação à média	-18,8%	-13,5%	-10,2%
	Ranking UE19	6	7	7

Low consumption Average consumption High consumption
 Installation and monthly charge
 Monthly expense with installation and monthly charge
 Deviation from the average
 EU19 ranking

Source: Teligen, OECD, ICP-ANACOM (data published in ICP - ANACOM's "2012 Communications Sector")

In the business segment, as can be seen in the table below, the relative position of national prices is also positive, again taking only into consideration prices of offers made publicly available by incumbents.

Table 11 – International comparisons with prices applied in Portugal for the business segment (November 2012)

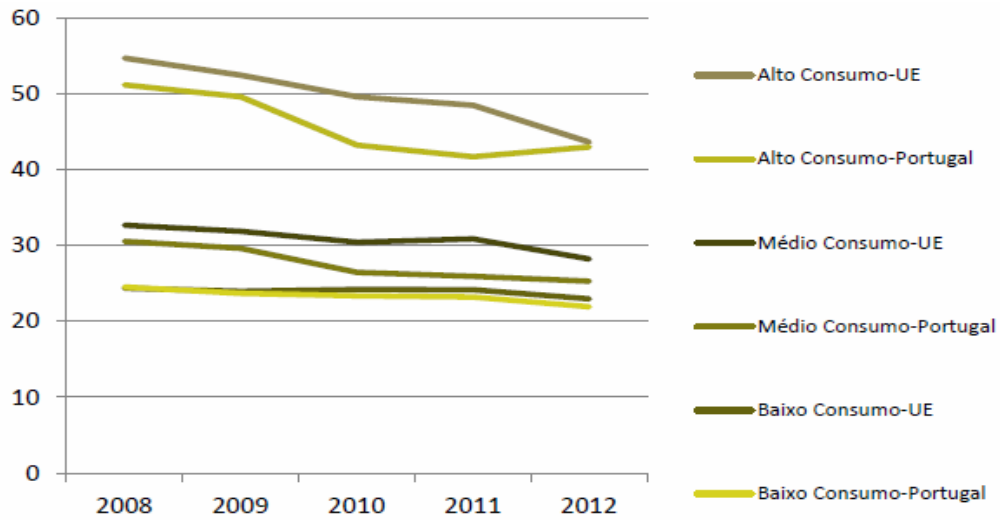
		SOHO	PME
Instalação e assinatura	Despesa mensal com instalação e assinatura	15,54€	15,54€
	Desvio em relação à média	-16,6%	-23,0%
	Ranking UE19	6	4

SOHO SME
 Installation and monthly charge
 Monthly expense with installation and monthly charge
 Deviation from the average
 EU19 ranking

Source: Teligen, OECD, ICP-ANACOM (data published in ICP - ANACOM's "2012 Communications Sector")

The analysis of the FTS residential bill as a whole, but still taking only into consideration the historical operator's publicly available tariffs, shows a consistent reduction of prices in the last years, which are generally lower than the average of countries taken into account.

Chart 17 – Evolution of the FTS residential bill in Portugal and in a selection of 19 EU countries (values in Euro)

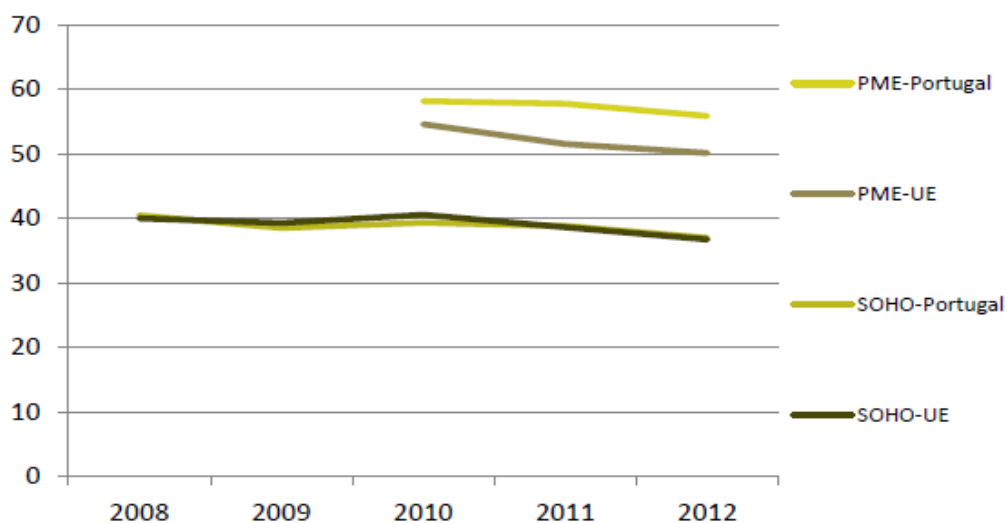


High consumption-EU
 High consumption-Portugal
 Average consumption-EU
 Average consumption-Portugal
 Low consumption-EU
 Low consumption-Portugal

Source: Teligen, OECD, ICP-ANACOM (data published in ICP - ANACOM's "2012 Communications Sector")

As regards the business segment, the reduction of prices also takes place, but Portugal's relative position compared to the average is not so favourable, especially far as SME are concerned.

Chart 18 – Evolution of the FTS business bill in Portugal and in a selection of 19 EU countries (values in Euro)



SME-Portugal
SME -EU
SOHO -Portugal
SOHO-EU

Source: Teligen, OECD, ICP-ANACOM (data published in ICP - ANACOM's "2012 Communications Sector")

In case this market is deregulated, PTC will have greater flexibility to determine its tariffs, adjusting them more easily to consumers' current preferences. Although PTC is no longer the US provider, thus having ceased to be subject to obligations imposed in this scope, related, among other aspects, to the provision of a specific tariff for US customers, NOS, as the new US provider, designated in the scope of a specific tender procedure, will have to comply with a set of conditions, including the provision of tariffs that ensure the affordability of prices, whereby it will be able to exert competitive pressure on prices practised by PTC, relatively to US customers.

3.4.2.4. Barriers to expansion

The installed capacity of networks allowing access to the public telephone network at a fixed location is significant. Coverage of the GSM/UMTS network is almost nation-wide, and there are cable and optical fibre networks, held by providers other than the historical operator, with significant levels of coverage. The expansion of access offers, in the light of an increase in demand, may thus take place without requiring high marginal costs.

As also referred above, an important barrier to expansion concerns consumer switching costs. As concluded, these costs are not sufficiently high to prevent a significant competitive degree.

3.4.2.5. Potential competition

The threat of a quick entry in the market of telephone access at a fixed location is a credible threat, bearing in mind details outlined in section 3.4.1.1.1. Taking into account the multiplicity of modalities for entry in the market, with different degrees of self-owned infrastructure, it is considered that potential competition is significant, credible and sustained, and will contribute towards affectively preventing increases in retail prices above competitive levels.

Although it does not concern the potential entry in the market of telephone access at a fixed location, in the Portuguese case, the potential influence in the market under consideration of services based on mobile networks that are not confined to a specific area should be stressed. The mobile terrestrial service achieved in Portugal a high penetration rate (measured on the basis of active mobile stations, with effective use, and excluding Internet access boards/modems, and Machine-to-Machine (M2M) mobile stations, the penetration stood at 110.2 per 100 inhabitants in the 1st quarter of 2014).

There are also pre-paid tariffs whose fixed element of the two-part tariff (whether mandatory top-up or monthly charge) is low or even non-existent - such as the modalities with no mandatory top-ups or tariffs of low-cost brands of operators with self-owned networks. The fixed element of mobile tariffs allows access to the public telephone network, through the mobile network, thus it could possibly create some pressure on prices practised in the fixed access. This competitive pressure could be stronger for certain population segments, namely the younger people (according to Markttest⁷⁸ data, by the end of 2013, in almost 50% of dwellings with no voice service, the individual contributing with the larger income is below 44 years of age.) Moreover, according to data of the e-household survey for 2011⁷⁹, in Portugal around 33% of dwellings are only provided with mobile service. In any case, given the different features of fixed services and mobile services, it is not considered that the latter put a significant competitive pressure on prices, as they are frequently deemed by final users to be complementary, as referred in section 3.1.4.

The use of specific software that enable the establishment of voice communications over Internet (VoI) could exert some competitive pressure on the provision of access to the public telephone network, however in this specific case, and as mentioned in section 3.1.2, the use of these functionalities is not relevant.

In conclusion, it is not considered that any of the cases presented, namely related to services based on mobile networks and to VoI services, sufficiently constrains the definition of prices in the market under analysis, due to the difference at the level of functionalities, identified in the market definition.

3.4.2.6. Universal Service

In addition to factors referred above, there is another element with a significant impact on the criterion under analysis here. This element, associated to a situation which is very specific to Portugal, concerning the recent award of the US, in the FTS component, to two operators⁸⁰ other than the historical operator, is the fact that, in the scope of a specific tender procedure for the designation of US providers, in which the (lowest) price was the single factor for assessment of proposals, a set of conditions was laid down specifically associated to providers of this offer. These conditions include the obligation to make available tariffs that allow compliance with the objective of ensuring the affordability of US prices.

⁷⁸ Telecommunications Barometer study, 2004 to 2013.

Technical note: the Telecommunications Barometer is a regular study carried out by Markttest for the telecommunications sector. The Telecommunications Barometer - Fixed Network pool comprises dwellings in the Mainland and in the Autonomous Regions of Madeira and Azores. Every month a proportional sample of the pool considered, deemed to be representative, is collected.

⁷⁹ Available at http://ec.europa.eu/public_opinion/archives/ebs/ebs_381_en.pdf

⁸⁰ The US was awarded to ZON and Optimus, both of which merged subsequently to this procedure, adopting the name NOS.

As such, the existence at national level of a tariff offer associated to the US, where prices of access and of telephone services provided at a fixed location are subject to certain restrictions, is on its own a factor which will constrain the establishment of prices on the part of the historical operator.

In this respect, it must be taken into account that PTC, besides being the operator with SMP in this market, was also over the last years the US provider. However, in 2012 three public tender procedures were launched to designate US providers, which have reached the completion stage, offers under this procedure having been awarded and the new US provider having already started its activity.

Although PTC was one of the qualified candidates in the tender, the combination of winning tender proposals were submitted by two alternative operators, Optimus and ZON (which in the meantime merged into NOS, as mentioned earlier), having the former won the tender in the North and Centre areas of the country, and the second the South and island areas⁸¹.

As soon as NOS started its activity as US provider, on 1 June 2014, PTC ceased its activity in this field. Conditions/obligations set in the scope of referred procedures are thus ensured by the new US provider.

Obligations concerned imply, among other issues, that NOS must meet all reasonable requests for connection to a public communications network at a fixed location and the provision of a telephone service affordable to the public over that connection, in geographic areas where the service provision is engaged.

NOS must also ensure that the network connection and the provision of the service made available allows:

- a) The connection and use of appropriate terminal equipment;
- b) The establishment and reception of local telephone calls, national telephone calls, namely involving geographic and non-geographic numbers, in compliance with the NNP, and international telephone calls;

⁸¹ Areas under consideration are as follows:

Areas	Districts	Areas	Districts	Areas	Districts
North	Braga	Centre	Coimbra	South and islands	Madeira
	Porto		Leiria		Azores
	Viana do Castelo		Lisbon		Portalegre
	Aveiro		Santarem		Evora
	Bragança		Castelo Branco		Setubal
	Guarda				
	Vila Real				
	Viseu				

- c) The establishment and reception of facsimile communications;
- d) The establishment of data communications, at data rates that are sufficient to permit functional Internet access;
- e) The access, through the national emergency number defined in the NNP or any other numbers specified by ICP - ANACOM, to the various emergency systems, under national law;
- f) The access to a comprehensive directory enquiry service provided under point c) of paragraph 1 of article 89 of ECL.

Services made available to customers must be provided at a fixed location, through geographic numbers, using any technology, either wired or wireless.

These new obligations which must be met by NOS necessarily require the reinforcement of its presence throughout the national territory. As such, this situation will also contribute in the medium term to alleviating the obstacles to entry and the development of competition.

In parallel with obligations referred earlier, NOS, as the US provider, is also required to make available a “US tariff”, to be applied in an uniform manner, in each of the geographic areas included in the US provision, and in all geographic areas where the provision is engaged, a tariff which must meet the objective of ensuring affordability of prices of the US provision.

NOS must meet also a set of parameters of quality of service with defined performed targets.

In this context, it is deemed that it is not because PTC ceased to be the provider of the US of connection to a public communications network at a fixed location and of publicly available telephone services, and consequently ceased to be under obligations to which it was previously subject, that it will no longer be constrained in the provision of access at a fixed location. ICP - ANACOM takes the view that this constrain will occur due to the competitive pressure exerted by NOS, given the obligation to ensure the affordability of US prices, throughout the national territory. PTC (and generally the PT Group) will be required to take into account the US tariffs at all times, and its provision throughout the territory, when setting the prices of its retail offers.

Consequently, the constrains to which PTC was directly subject for being an operator with SMP and the US provider continue to be indirectly exerted on this company, even after it ceased to be regulated at SMP level and ceased to be the US provider, thus being ensured the protection of any customers who remain captive in the copper network.

3.4.2.7. Conclusion on the market structure which does not tend towards effective competition within the relevant time horizon

It was found in the previous section that there are no relevant barriers to entry in markets under consideration. In this section, it was observed additionally that companies that have effectively entered the market have launched in general relatively innovative tariffs at competitive prices, with which their customer database has increased. This fact demonstrates, on the one hand, low barriers to expansion and, on the other, a relatively elastic demand - this factor plays a very important part in the assessment of the present cumulative criterion, given that, as stated by the European Commission in the Recommendation on Relevant Markets, “(...) *it is necessary to examine whether the industry has experienced frequent and successful entry and whether entry has been or is likely in the future to be sufficiently immediate and persistent to limit market power*”.

The sector thus shows frequent successful entries of operators in the market, which is demonstrated by the increase of the market share of alternative operators, and price sensitiveness on the part of consumers makes the threat of new successful entries likely, in the future, and will necessarily constrain the price established in the market under consideration.

The analysis also demonstrated that the market share of the PT Group has decreased in a sustained fashion, and alternative providers are already responsible for a significant part of offers of access to the public telephone network at a fixed location. The market share held by these operators is one of the highest compared to their European peers, and in parallel the market share of companies of the PT Group is one of the lowest among European incumbents.

Additionally, it is noted that the present market has shown increased competitive dynamics with the dissemination of new types of access on which the provision of the fixed telephone service is also supported, namely at the level of coaxial cable networks which cover around 80% of dwellings in the country and which provide FTS at a low marginal cost, as well as with the proliferation of bundled offers, wherein an important part of total accesses already engaged are integrated.

The maintenance of carrier pre-selection and of wholesale offers such as SLRO allows the entry of new operators with relatively low investments, and the regulation of wholesale markets of access to network infrastructure at a fixed location and broadband access, in accordance with rules to be determined, may also provide increased competition conditions as far as broadband accesses are concerned. Additionally, these offers ensure that operators already active in the market continue to provide their retail services, namely to corporate customers with multiple locations.

It must also be stressed, as referred earlier, that the FTS penetration rate, contrary to other countries in Europe, has increased since 2008, which is largely due to the increase of accesses held by alternative operators.

Lastly, the changes that have occurred due to the fact that PTC ceased to be the US provider of connection to a public communication network at a fixed location and of publicly available telephone services, and which led a different company (NOS) to be subject to conditions set out in the tender for the designation of the US provider, among which the obligation to provide a uniform US tariff throughout the national territory, will allow the maintenance of a competitive pressure on the PT Group, even in the absence of specific obligations on this company, and the continued, and perhaps more effective, protection, of the most vulnerable consumers, contributing towards reducing the risks of the maintenance of any captive customers by PTC⁸².

This factor takes on a special relevance as it can limit the ability of the PT Group to increase retail prices of customers who could be considered captive customers of the copper network.

In the light of the above, it is thus concluded that the market structure tends towards effective competition within the relevant time horizon.

3.4.3. Insufficiency of competition law

According to the European Commission, “*the decision to identify a market as susceptible to ex ante regulation should also depend on an assessment of the sufficiency of competition law to address the market failures that result from the first two criteria being met. Competition law interventions are unlikely to be sufficient where the compliance requirements of an intervention to redress a market failure are extensive or where frequent and/or timely intervention is indispensable.*”

As with the two preceding criteria, factors suggested by ERG’s “Guidance on the application of the three criteria test” shall be taken into account:

- a) Degree of generalization of non-competitive behaviour;
- b) Degree of difficulty to address non-competitive behaviour;
- c) Non-competitive behaviour bringing about irreparable damage in related or connected markets;
- d) Need of regulatory intervention to ensure the development of effective competition in the long run.

⁸² It should be noted in this scope that, in its opinion on the draft reviewed Recommendation on relevant markets, BEREC refers that the proportion of captive users varies significantly across Member States, but in some cases it can exceed half of the customers of the public switched telephone network, adding as follows as far as Portugal is concerned: “This may for instance not be the case in Portugal, where the universal service is provided by an operator which is not the incumbent operator, with the consequence that at least two operators compete at the retail level, one of them being subject to a price cap.”

3.4.3.1. Degree of generalization of non-competitive behaviour

ERG's document refers that competition law may be considered to be sufficient if the frequency of intervention on the part of the national competition authority is likely to be low.

The number of complaints submitted by consumers to ICP - ANACOM, on regulated markets, although obviously not an accurate indicator to indicate the degree of frequency of interventions that would be required if the market was subject to *ex ante* deregulation, may be useful as an approach for the identification of the number of situations where regulatory intervention would be necessary.

The proportion of complaints submitted to ICP - ANACOM on the fixed telephone service is relatively low, where considered in the context of all electronic communications services. In terms of records per 1000 customers, the fixed internet service received an average of 4.28 complaints in 2012, while complaints on pay-TV service received 4.27%. Ranking third, the fixed telephone service received 2.77⁸³.

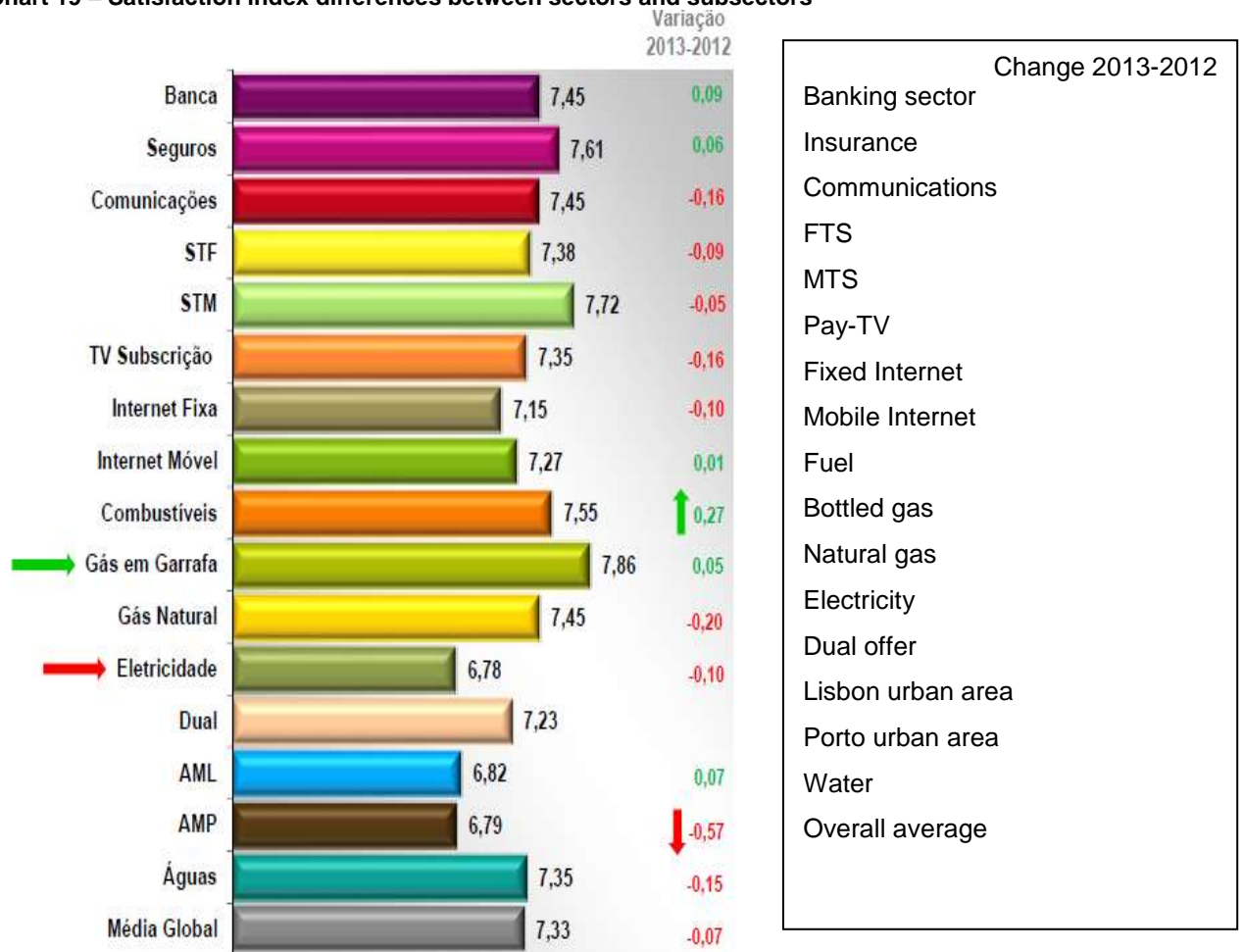
These are complaints from final consumers. ICP - ANACOM has also received reports of some situations from operators, partly as responses to public consultations, which tend to focus on matters, however, that are not exclusively FTS-related. They are rather focused on the possible cross-subsidisation between mobile and fixed operators, and the difficulty in having access to mobile networks for the provision of integrated services.

Data from ECSI 2013⁸⁴ show also that customer satisfaction as far as the FTS is concerned is above the overall average in the satisfaction index for the various sectors, exceeding sectors such as electricity, transports (Lisbon and Porto urban areas) and water. At sector level it exceeds also the provision of mobile and fixed internet, as well as pay-TV.

⁸³ Data from ICP - ANACOM's Report on Regulation for 2012: <http://www.anacom.pt/render.jsp?contentId=1179182>:

⁸⁴ Available at http://www.ecsiportugal.pt/Apres_ECSI_2013_5-junho-2014#Apres_ECSI_2013_5-junho-2014

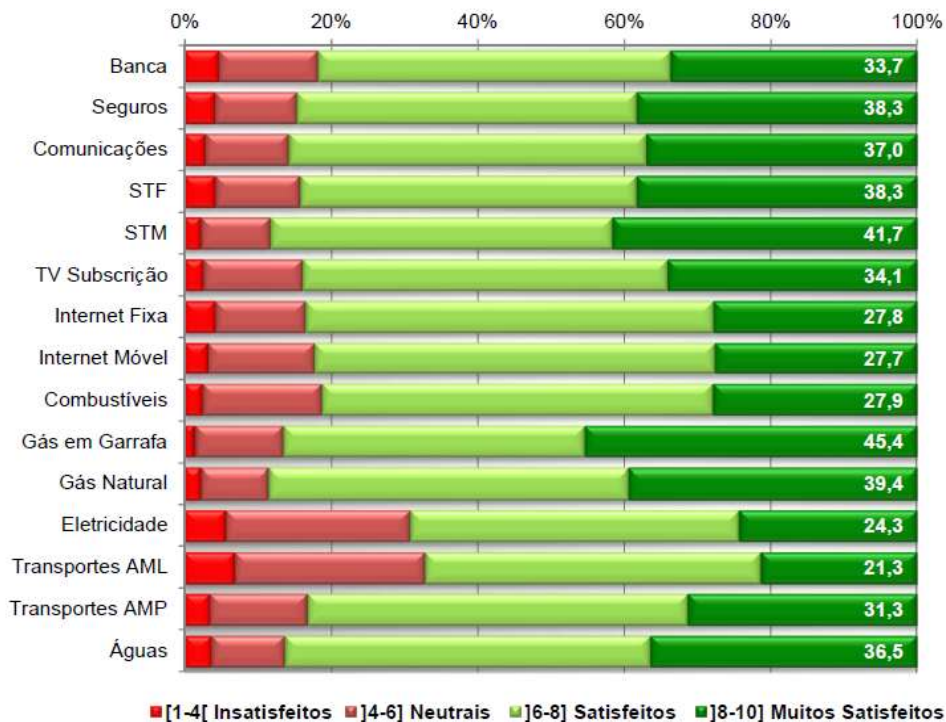
Chart 19 – Satisfaction index differences between sectors and subsectors



Source: ECSI 2013

An analysis of frequency of responses shows also that the proportion of FTS customers who declared to be “very satisfied” exceeds that of customers who declared to be very satisfied with Pay-TV, fixed internet or mobile internet.

Chart 20 – Frequency on satisfaction per sector and sub-sector



Unsatisfied Neutral Satisfied Very satisfied
 Source: ECSI 2013

Given the data presented, it does not seem likely for anti-competitive problems to arise more in markets of fixed telephone services than in other markets where no *ex ante* regulation exists - such as the mobile retail market or the pay-TV retail market.

3.4.3.2. Degree of difficulty to address non-competitive behaviour

ERG refers that, in the assessment of excessive pricing scenarios, arising in a context of single firm dominance, competition law may in certain instances be insufficient, due to the difficulties in the detection and proof of such conduct. As referred above, the price trend of the law few years, as well as price sensitivity of demand, show that excessive pricing problems seems not likely to be higher than in other markets without *ex ante* regulation in the electronic communications sector. Without prejudice, data on prices and other tariff conditions are available at providers' websites, as providers, under paragraph 1 of article 47 of ECL, are under the obligation to “*make available to the public adequate, transparent, comparable and up-to-date information on standard terms and conditions in respect of access to, and use of, services provided to end-users and consumers, setting out in detail the applicable prices and any other charges (...)*”. As such, it is considered that general legal provisions make excessive pricing easy to be detected.

Additionally, competition law could not be sufficient to address joint dominance problems. Again, due to the non-existence of significant barriers to entry (or to exit, in the presence of reference

offers on access, including SLRO) in this market, and price sensitivity of demand, it is considered that the degree of contestability is sufficient to discourage collusive behaviour. Moreover, the increase in the last few years of bundled offers must be taken into consideration, as providers seek to gain market share in order to be able to sell services with relatively high profitability, such as pay-TV services. In this context, the tendency for collusion is relatively low as far as the telephone service element is concerned.

3.4.3.3. Non-competitive behaviour bringing about irreparable damage in related or connected markets

Timely intervention may be indispensable to prevent serious and irreparable damage to competitors. As stated by ERG in the document on the three criteria, mentioned earlier, undertakings with SMP may have incentives to engage in conduct that increases barriers to entry, and once these strategies are successful it will be very difficult to bring the market dynamics back to the point of departure.

It is noted that the existence of several wholesale offers, including SLRO, contributes towards making it possible to enter in the market in a quick and successful manner. ICP - ANACOM considers that this guarantee will reduce the practical effectiveness of potential strategic behaviours tending to increase barriers to entry. On the other hand, the national dimension of the coverage of infrastructures other than copper, held by providers other than the historical operator, namely operators with mobile networks and cable and optical fibre networks, will also tend to thwart the effectiveness of such behaviours.

3.4.3.4. Need of regulatory intervention to ensure the development of effective competition in the long run

At present, providers competing in the market are provided, in several cases, with self-owned infrastructures, and in ICP - ANACOM's perspective, this has effectively contributed towards the sustained promotion of competition in the market under analysis. In particular, the high level of freedom in the definition of tariff infrastructures, arising from the fact that these providers hold their own infrastructure, should be stressed, and it is reflected, for example, in homezone offers, which differ from "traditional" tariffs. This diversified offer of various tariffs allows a more effective response to preferences shown by the various segments of the market, contributing to an expansion of consumer surplus.

For these reasons, it is deemed that regulatory intervention to ensure the development of effective competition in the long run is not expected to be required.

3.4.3.5. Conclusion on insufficiency of competition law

It is deemed that competition law, or *ex post* regulation, is sufficient to address effectively and in a timely manner any competition distortions that may occur in the market of access to the public telephone network at a fixed location, taking into account that it is unlikely for any operator to be able to act independently of its competitors and final users.

In particular, there is a low chance of behaviours with irreversible impact on the market, in view of the existence of a degree of competition, based both on regulated offers imposed on wholesale markets and on the prevalence of competition in infrastructures, that decreases the practical effectiveness of restrictive behaviour.

3.4.4. Conclusion on the application of the three cumulative criteria

The separate analysis of the three cumulative criteria leads to the conclusion that, for each one, requirements that make the market of access to the public telephone network at a fixed location subject to *ex ante* regulation have not been met.

In this regard, the factors that contribute most to this conclusion must be highlighted.

First, the evolution of market shares, which points to a systematic loss of market share on the part of the PT Group, in a market where its presence had a broad majority.

Alternative operators have reinforced their respective market shares, in many cases supported in wholesale accesses provided by PTC itself, but in other cases also based on the construction of self-owned network. At EU level, Portugal is indeed among the countries with the highest share of direct accesses provided by alternative operators, as demonstrated in

Chart 13 hereof.

In this scope, attention must be drawn to investments made in the increase of self-owned infrastructures, namely broadband accesses (standard coaxial cable, EuroDOCSIS 3.0, FTTH, FTTB) which have also been used for the provision of the fixed telephone service.

A significant increase of bundled offers, in general supported on broadband accesses, has also been registered, presenting already an important rate of penetration in national households. In fact, not only a high percentage of customers engages the access to the telephone network at a fixed location in the scope of a bundle of services, for example by combining the cable television distribution service, and/or the internet access service (73% by the end of 2012), but also a very high percentage of bundled offers integrate the fixed telephone service (92% by the end of 2012).

Lastly, an important issue is the fact that PTC ceased to be the US provider.

The new US provider in the scope of a connection to a public communications network at a fixed location and of publicly available telephone services, NOS, is subject to a set of conditions laid down in the scope of the tender which recently took place for this purpose, which concern the level of provision of the service, the existence of a US tariff that ensures the affordability of prices and the application of uniform prices throughout the country, which will necessarily constrain the action of other operators in the market, including the PT Group's behaviour.

In this context, ICP - ANACOM believes that, although PTC is no longer the US provider for the connection to a public communications network at a fixed location and for publicly available telephone services, and it is no longer subject to a set of obligations arising from that provision, it will still remain subject to constraints that result from the competitive pressure exerted by NOS.

Additionally, other obligations at wholesale level (SLRO and offers considered in wholesale markets of access to network infrastructure at a fixed location and of broadband access) also effectively limit PTC's ability to set retail prices above the competitive level.

Accordingly, ICP - ANACOM considers that all issues referred are likely to have an important impact on the market, allowing it to strengthen the characteristics that contribute towards the increase of effective competition, making regulatory *ex ante* intervention at retail level unnecessary.

These conclusions are generally in line with BEREC's position in its response to the European Commission's public consultation on the revision of the Recommendation on Relevant Markets⁸⁵, not having opposed the deregulation of market 1 insofar as the regulation of wholesale offers is guaranteed via market 2:

"Regarding the list of relevant markets, BEREC has identified current market 1 as a potential candidate to be excluded from the list if there is a clarification that associated relevant obligations concerning wholesale line rental and carrier selection and carrier pre selection, if necessary, can be imposed at wholesale level."

In this context, the recent position taken by BEREC, in June 2014⁸⁶, on the draft Recommendation on relevant markets proposed by EC, should be stressed, having been stated as follows:

"BEREC notes that even in cases where competition on the retail market has reached a satisfactory level, this is, in most cases, due to the availability of regulated offers on wholesale markets such as wholesale call origination that still plays a significant role in the development of competition in the retail markets, since some operators still rely on the wholesale inputs of the SMP"

⁸⁵ Document available at http://berec.europa.eu/eng/document_register/subject_matter/berec/opinions/1218-berecs-response-to-the-european-commission8217s-questionnaire-for-the-public-consultation-on-the-revision-of-the-recommendation-on-relevant-markets

⁸⁶ Available at http://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/4438-berecs-opinion-on-the-commission-recommme_0.pdf

operator to enhance their coverage of the national territory and thus compete in more similar conditions with larger operators. In a large majority of countries, PSTN is operated by the incumbent operator. A significant number of NRAs therefore fear that removing the regulatory obligations imposed under Market 2 would leave the incumbent operator with significant market power in Market 1, without incentives not to abuse this market power (applying market foreclosure or higher pricing strategies), as alternative operators would no longer be able to compete with the same underlying offers.”

3.5. Analysis of significant market power

Under article 60, paragraph 1, of ECL “*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*”. As such, SMP may be held by a single company in the market (individual dominance) or by more than one body (joint dominance).

Consistently with conclusions reached on the three criteria test in the preceding chapter and acknowledging that both exercises have a great deal in common, as far as the assessment of market SMP is concerned the following must be referred:

In the case of individual dominance, it must be stressed that it does not result only from market shares. In this case, although the market share of the PT Group, by the end of the first quarter of 2014, was around 56%, it is a value that has shown a downward trend, and the second operator shows a presence which already represents around a third of the market (vide chapter 3.4.2.1).

There are also other factors which are essential to assess the existence of significant market power, which were analysed in the scope of the 3-criteria test, over the last few chapters, and which confirm that the PT Group no longer holds SMP. The conclusions reached by ICP - ANACOM with the analysis carried out are relevant in this scope, namely as regards the presence of high and non-transitory barriers to entry, in terms of sunk costs and control of infrastructure not easily duplicated, technological advantages or superiority, economies of scale, of scope and of experience and vertical integration (chapter 3.4.1.), dimension of the leader (chapter 3.4.2.), price trends (chapter 3.4.2.3.), barriers to expansion (chapter 3.4.2.4.), potential competition (chapter 3.4.2.5.) and factors associated to the US provision by a company other than PTC (chapter 3.4.2.6.). Conclusions on the need to ensure that wholesale offers, namely SLRO, continue to be provided, must also be stressed, thus guaranteeing that entry in the market takes place quickly and that OSP who are already active continue to provide their services even if they are not provided with their own network in the whole territory.

As such, conditions allowing the largest operator to behave to an appreciable extent independently of its competitors, in terms of prices, seem not to be in place, having been found also that other operators have entered the market and have been able to increase their market share.

As regards the possibility of existence of joint dominance, it is stressed that the market does not seem to show any indicators of coordinated conduct. Market shares are different and have developed in a different way. Moreover, the market is currently characterized by a reduction in barriers to entry, resulting from the existence of wholesale offers that support the entry and stay in the market of several companies. In addition, as referred earlier, the market is also characterized by the existence of some competitive pressure and increase of potential competition, factors which hinder the emergence and sustainability of any kind of coordinated conduct.

In the light of the above, and consistently with conclusions reached in the scope of the three criteria, ICP - ANACOM reaches the conclusion that there are no operators with individual significant market power, nor is there any evidence pointing towards the existence of joint dominance.

4. RETAIL MARKETS OF TELEPHONE SERVICES PROVIDED AT A FIXED LOCATION

The FTS may be generally defined as the provision to the general public of the direct transport of real-time speech, at a fixed location, which allows any user using equipment connected to a network termination point to communicate with another termination point.

There have been some changes over the years in the traditional way of providing FTS, due to regulatory, technological and commercial amendments and alterations.

From a technological point of view, the telephone service may be supported in different access technologies, namely:

- Voice over analogue access (via copper pairs and coaxial cables)
- Voice over ISDN accesses (in the various modalities)
- Voice over IP (for example EuroDOCSIS, ADSL, FTTH, FTTB)

The fixed telephone service may be provided over direct accesses (supported in self-owned infrastructures or in infrastructures held by third parties) or over indirect access.

The provision of the telephone service using third party infrastructure is supported on reference offers such as RUO and SLRO, and although with a lower degree of representation, also on leased lines.

By the end of the first quarter of 2014, active providers included:

Table 12 – Providers of telephone services, VoIP services, public pay-phone services and resale of telephone traffic

3GNTW - Tecnologias de informação, Lda.
Amazing Life, Unipessoal, Lda
AR Telecom - Acessos e Redes de Telecomunicações, S.A.
Cabovisão - Televisão por Cabo, S.A.
Choudhary - Comércio de Equipamentos de Telecomunicações, Lda
COLT Technology Services, Unipessoal, Lda.
CLARA.NET PORTUGAL - Telecomunicações, S.A.
Cyclop Net - Informática e Telecomunicações, Lda
G9 SA - Telecomunicações, S.A.
Let's Call - Comunicações, Lda
Moneycall - Serviços de Telecomunicações, Lda
Nacacomunik - Serviços de Telecomunicações, Lda

ONITELECOM - Infocomunicações, S.A.
Optimus – Comunicações S.A. (1)
Orange Business Portugal, S.A.
Otnetvtel-Unipessoal, Lda
Palco da Vida - Telecomunicações Unipessoal, Lda
PT Comunicações, S.A.
REFER Telecom - Serviços de Telecomunicações, S.A.
STV - Sociedade de telecomunicações do Vale do Sousa, SA
TMN – Telecomunicações Móveis, S.A. (2)
Ultraserve - Consultoria e Apoio Empresarial, Lda
UNITELDATA - Telecomunicações, S.A.
VODAFONE PORTUGAL - Comunicações Pessoais, S.A.
Voipunify Telecom, Lda
Voxbone, SA
Wisevector - Telecomunicações, Lda
ZON TV Cabo Açoreana, S.A.
ZON TV Cabo Madeirense, S.A.
ZON TV Cabo Portugal, S.A. (1)

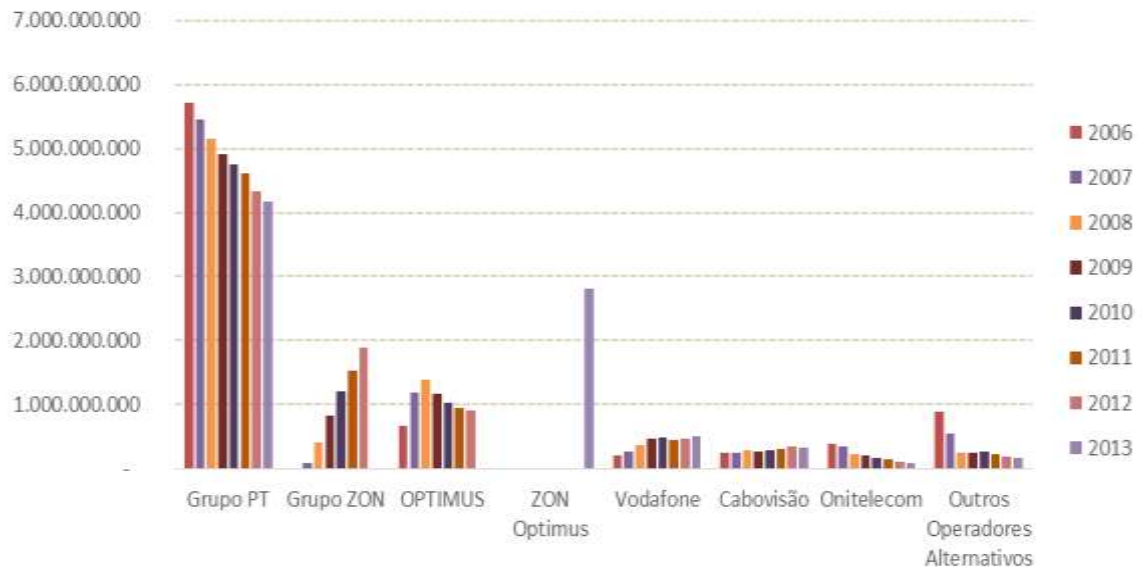
Source: ICP-ANACOM

Note: The table includes FTS providers, providers of voice telephone traffic resale, providers of the public pay-phone service and VoIP (including nomadic VoIP) providers.

- (1) In 2013, OPTIMUS - SGPS, S.A. merged into ZON Multimédia - Serviços de Telecomunicações e Multimédia, SGPS, S.A., which changed its corporate name to ZON OPTIMUS, SGPS, S.A.; in 2014, but after the first quarter of the year, the merger by acquisition of ZON TV Cabo Portugal, S.A. (ZON) into Optimus Comunicações, S.A. (Optimus) was registered, having the new company been renamed NOS Comunicações, S.A. (NOS)
- (2) In 2014, TMN changed its name to MEO – Serviços de Comunicações e Multimédia, S.A. (MEO).

The chart below shows the evolution of the telephone traffic generated by FTS users (including the provision of the traditional telephone service and the provision of the VoIP telephone service), broken down by service providers.

Chart 21 – Volume of national and international voice FTS in minutes



Pt Group ZON Group OPTIMUS ZON Optimus Vodafone Cabovisão Onitelem Other alternative operators

Source: ICP-ANACOM

Note: Charts presents separate shares for the ZON Group and Optimus up to 2012, and as from 2013, the joint share of ZON Optimus (which aggregates NOS, TV Cabo Madeirense and TV Cabo Açoreana).

By the end of 2013, around 8 billion communications were registered, at the level of FTS voice traffic, 93% of which correspond to national traffic.

4.1. Definition of the product market

The process of definition of the product market consists in identifying all products/services that are sufficiently interchangeable or substitutable, not only in terms 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 use⁸⁷.

The exercise of defining the relevant product or service market commences by grouping together products or services that are used by consumers for the same purposes/end use, that is⁸⁸, according to demand, on the basis of the more restricted market.

These products and services are part of the same relevant market where the behaviour of the producers or service providers are subject to the same type of competitive constraints, that is, on the supply side, namely, as far as the price-setting is concerned.

⁸⁷ Cf. Guidelines §44. As referred in the Explanatory Note of the European Commission, SEC(2007) 1483 final, the Recommendation should be considered in conjunction with the 'Guidelines for market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services.

⁸⁸ Cf. Guidelines §44.

In this context, there are two main competitive constraints: (i) demand-side substitution; and (ii) supply-side substitution⁸⁹.

These competitive constraints, alternatively or together, may represent grounds for defining the same product market.

One possible way of assessing the existence of any demand and supply-side substitution is to apply the so-called “hypothetical monopolist test” (SSNIP test – small but significant non-transitory increase in price)⁹⁰.

The relevant geographic market comprises the area in which companies 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 relatively to neighbouring areas⁹¹.

Next, and taking into account that this is a review of the analysis carried out in 2004, the substitutability between publicly available communication services provided at a fixed location and:

- (i) Services of access to the public telephone network at a fixed location;
- (ii) E-mail services and chat applications;
- (iii) Fixed network SMS services;
- (iv) VoIP and nomadic VoIP services;
- (v) Mobile services (voice and SMS); and
- (vi) Fixed telephone services provided over GSM/UMTS frequencies;

is focused on.

The possibility of substitution between local, national, international and fixed-to-mobile calls is also considered. It is subsequently weighted whether the segmentation of the market between residential and non-residential customers is possible.

Lastly, the possibility of substitution between telephone services provided at a fixed location and non-geographic call services for the provision of special services is analysed.

⁸⁹ Cf. Guidelines §38. A third source of competitive constraint on operator’s behaviour exists, namely potential competition - this possibility will be taken into consideration where relevant.

⁹⁰ Cf. Guidelines §40-43.

⁹¹ Cf. Guidelines §56.

4.1.1. Telephone services vs. Access to the public telephone network at a fixed location

Just like in the 2004 analysis, and bearing in mind conclusions reached in point 3.1.1 (Service of access to the public telephone network at a fixed location vs. Publicly available telephone services at a fixed location), it is considered that the two services under consideration do not integrate the same market, in the light of their characteristics and the possibility of using indirect access, which allows customers, including those that at present choose to purchase access and services from the same operator, to purchase each service separately at any moment.

Notwithstanding, it is highlighted that conclusions reached in this analysis would not differ where both services were integrated the same market, namely as regards the relevance of markets for the purpose of *ex ante* regulation and the need for the imposition of obligations, given the existing competitive dynamics.

4.1.2. Voice telephone services at a fixed location vs. E-mail and chat applications

In the 2004 analysis, ICP - ANACOM weighted the possibility of considering the email service (and other message services), among data services, as a substitute for voice telephone services, having concluded that, due to their different functionalities, price evolutions and competitive dynamics, there was no information supporting that the two services in question were part of the same market.

In addition to email, there are applications today which may be installed in state-of-the-art mobile terminals (the so-called smartphones) or personal computers with Internet connection, which allow real-time interaction between users, in a chat model, by sending and receiving text messages. These applications include, for example, gtalk, Skype and Whatsapp.

As a rule, these applications do not charge for the sending of messages, although fixed and mobile operators charge for Internet access.

It is noted that the use of these applications from a personal computer requires that both users participating in the conversation have this application installed, and that an internet connection, preferably broadband, is available. In addition, on account of the nature of the interaction established, namely the difference between a written conversation and a voice conversation, it is deemed that the degree of substitutability between these applications and the fixed telephone service is low.

The same conclusion is reached as regards the use of these applications on a smartphone, whose mobile nature, which not available for telephone services at a fixed location, must be stressed, in addition to the characteristics pointed above.

4.1.3. Telephone services at a fixed location - Voice vs. SMS services at a fixed location

At the time of the previous market analysis in 2004, ICP - ANACOM considered that, given the characteristics and functionalities of the service, its price, the existence of switching costs associated to the purchase of a new terminal and the low uptake level of the service (which was available since April 2003), it was not possible to conclude that the fixed network SMS service⁹² was part of the voice call market.

The uptake of the available SMS service requires the activation of the calling line identification service, which is free-of-charge, as well as terminal equipment compatible with the SMS service. SMS may be received in any telephone as messages may be voice-delivered.

The analysis of available data shows that this service registers a very low uptake level, in the light of the range of customers of the two companies that provide it, their revenues representing a marginal value in the context of the total value of revenues of the telephone service at a fixed location (less than 0.01% of total FTS revenues).

Taking into account the low relevance of the service, the existence of switching costs associated to the need for a compatible telephone that allows the sending of SMS and the characteristics of the service itself which does not allow an immediate communication between the sender and the receiver, ICP - ANACOM maintains its conclusion of 2004, that is, there is no evidence to suggest that the fixed network SMS service is part of the voice call market.

4.1.4. Telephone services at a fixed location vs. VoIP and nomadic VoIP services

In this context, it must be analysed whether internet-based voice services supported on broadband accesses may be deemed to be substitutes for telephone services provided at a fixed location, supported on narrowband accesses.

As pointed out in the scope of the access market, it is considered that the Vol service⁹³ shows functionalities that are clearly different from those provided in traditional telephone service offers, as the offer is not associated to a telephone number and caller location is not possible in case of a call to the 112 emergency number. As also referred above in the scope of the analysis to the access market, according to data from the Eurobarometer, Portugal is the country with the lowest degree of substitution of the traditional telephone service for Vol in the European context.

On the other hand, the Voice over IP protocol (VoIP) service, in its settings of voice service over broadband (VoB) is a publicly available electronic communications service. This setup allows the

⁹² The SMS (Short Message Service) service may be defined as a service for the exchange of short messages, common in mobile communications networks, that allows the sending/reception of text messages or small graphics.

⁹³ Vol settings require the transmission of voice data packages via public Internet, being usually provided through computer-to-computer connections. The quality of Vol traffic, in this case, does not differ from other Internet-based applications, which as a rule are of the "best efforts" type.

receiving and making of calls to and from NNP numbers, and for this purpose the use of a gateway for the connection between the IP network and the public telephone network is necessary.

Final customers usually do not perceive differences between the VoIP service (VoB setup) and the traditional telephone service, as there may not be any distinctive aspects at the level of features made available and prices of the service. As far as the level of the quality of service is concerned, equivalent levels are currently being provided. In any case, regardless of whether access is provided over narrowband or over broadband, the telephone service provided (traditional or VoIP) is perceived in an equivalent way and as such it is considered to integrate the same market.

Most commercial offers of VoIP-based telephone service provided at a fixed location are sold in bundles of services. Most of these bundles are of a flat-rate structure where for the payment of the monthly charge associated to the bundle as a whole, the client has access to free communications to fixed networks and, in some cases, also to fixed international networks.

The nil marginal price for a set of national and international communications, as well as the increasing popularity of bundled services, have led to a significant consumption of minutes of this type of communications based on these offers. This increase has been accompanied by a relatively symmetrical decrease of traffic generated on the basis of other offers of fixed telephone services, which also indicates some degree of substitutability, in addition to the user perception issue referred to above.

It is clear that this phenomenon arises both in the scope of national and of international communications. The substitution of communications based on “traditional” means of support for VoIP-based communications, in the light of the practise of marginal prices that are equal to or lower than “traditional” services, manifestly shows demand-side substitutability.

As far as the nomadic VoIP service is concerned, ICP - ANACOM's determination of 23.02.2006 must be mentioned, which determined the opening of a new range of non-geographic numbering - “30” - distinguishing the nomadic VoIP service from the telephone service provided at a fixed location.

The referred determination focused on the various characteristics which must remain similar between services provided at a fixed location and nomadic services provided within the national territory, namely at the level of VoIP calls to the 112 number, the sending of the calling line identification and the minimum contents to be included in contracts for the provision of publicly available telephone services.

Without prejudice to the use of a different numbering range, given nomadic VoIP offers and fixed VoIP offers show the same characteristics, and that the latter coincide with those of the traditional

telephone service at a fixed location, it is deemed that there is an important degree of substitutability between these three services which justifies their integration in the same relevant market.

4.1.5. Telephone services at a fixed location - Voice vs. Mobile telephone services – Voice/SMS

Like in the 2004 analysis, and taking into account conclusions of the analysis in point 3.1.4 (Service of narrowband access at a fixed location vs. Service of mobile access over mobile networks), on the possibility of substituting access at a fixed location for mobile access, and taking specifically into account their different features and prices, it is deemed, in the case of voice services, that mobile telephone services are not substitutes for telephone services provided at a fixed location.

As regards the SMS service, in the scope of the 2004 analysis ICP - ANACOM considered that the SMS service could be a substitute for the fixed telephone service given that is relatively easy to write short messages and hardly likely for the addressee not to receive it. However, the Authority concluded that, taking into account the differences on mobility, different needs which mobile services aim to meet and the fact that the analysis concluded that the price of an SMS did not restrict the price of a voice call originating in the fixed network, the two services were not substitutes for each other.

By the end of the 1st quarter of 2014, this service represented around 7% of total retail revenues of mobile operators.

In terms of market evolution, by the end of the 2nd quarter of 2005 a monthly average of around 20 SMS per subscriber had been registered. This value changed significantly as from that date, having increased significantly in the following period. By the end of the 1st quarter of 2014, each subscriber sent a monthly average of 245 SMS, that is, around 8 SMS per day. This marked trend for SMS increase, which started in mid-2005, was enhanced by promotional campaigns launched by mobile operators and by tariffs with free of charge on-net SMS. The evolution of off-net SMS traffic was substantially less significant than on-net SMS traffic. It should be noted that, in general, the price of off-net SMS is higher. By way of example, off-net SMS of versions without monthly charge of plans such as Moche, Vodafone 91 Extreme and TAG (which have shown a significant uptake level) have an associated price of respectively 11.1, 10.4 and 6.9 cents⁹⁴. On the other hand, there are many pricing plans of the fixed telephone service which do not charge for calls made from and to the fixed national network.

In any case, and considering the intrinsic features resulting from the fact that the service is provided over a mobile network, namely mobility, the fact that an immediate communication

⁹⁴ Prices in force by the end of 2013.

between the sender and the receiver is not established, conclusions reached in the scope of the preceding analysis are maintained, that is, the short message service provided over a mobile network and mobile voice services are not substitutes for voice telephone services provided at a fixed location.

4.1.6. Telephone services at a fixed location vs. Telephone services at a fixed location provided over GSM/UMTS frequencies

The analysis of a possible substitutability is equivalent to that in point 3.1.5 (Service of access at a fixed location provided over copper pairs vs. Service of access at a fixed location provided via GSM/UMTS frequencies).

The emergence of infrastructures other than access to the public telephone network via fixed networks, namely solutions based on GSM and UMTS technologies, allowed operators that support their business on the mobile network to present offers of access to the public telephone network at a fixed location which are comparable to those based on the copper pair technology.

These solutions, usually known as homezone offers, are characterized by the provision of the telephone service at a fixed location, supported on the GSM, GPRS and UMTS technologies and networks, for access to the final customer, with access via mobile terminals. Mobile terminals receive and make calls in a limited geographic area, corresponding to the customer's address.

Homezone products, in addition to characteristics described above, use the NNP numbering "2", common to fixed numbers, and providers which market them use an advertisement approach that associates the value of the mobile operation brand to a telephone service at a fixed location - for example, Vodafone calls it "Vodafone's telephone at home" and MEO describes its offer as "a TMN telephone with a fixed number for use at home only". Moreover, flat-rate tariffs are available, with nil marginal price for communications to national fixed networks, against payment of a monthly charge. Given the structure of these tariffs, there is a clear incentive for the substitution of communications based on "traditional" offers for homezone offers.

All these factors contribute to making these products effectively perceived, by final customers, as substitutes of the fixed telephone service.

On the other hand, operators who provide homezone offers make also available other offers of the fixed telephone service, and as all mobile operators are present in both markets, the issue of supply-side substitutability does not arise.

It is thus concluded that homezone products are part of the market of telephone services provided at a fixed location.

4.1.7. Telephone services at a fixed location - Local, national, international and fixed-to-mobile calls

ICP - ANACOM reached the conclusion, in its analysis of 2004, that national telephone services (both short and long distance) and international telephone services were not part of the same relevant market, taking into account the way how providers and users supply and consume the referred services and their different competitive dynamics.

At demand level, ICP - ANACOM considers that there is in fact a single market for calls from a fixed location, as the final user is not able to choose another operator to make its calls, that is, the user does not only purchase calls to the same network, nor to fixed networks separately from mobile networks and in general users do not acquire only national calls nor only international calls, although carrier selection and pre-selection enable the user to resort to different providers to make its national and international calls, based on a single network access.

Still on the demand-side, and as far as local and national calls are concerned, it is noted that currently the vast majority of offers in the market do not differentiate them, having operators chosen to present, also in the scope of the US, a single tariff for both types of calls, which is also reflected in terms of how these calls are perceived by users.

At supply level it is deemed also that there is no difference as regards wholesale inputs required for the provision of services for local and national calls. In the case of calls to mobile services there seems to be supply substitution, as an operator providing only fixed-to-fixed service is easily able to conclude interconnection agreements with a mobile operator, or use third-party interconnection agreements, so as to terminate calls in those operators. In practise, all operators currently in the market provide all types of calls, including international calls.

As regards international calls, on the demand side, there is a distinct element relatively to national calls, given that its cost for final users is frequently higher. Moreover, in the case of international calls, there may be different competitive dynamics, relatively to national calls, which justifies a separate analysis.

In the light of the above, ICP - ANACOM takes the view that local and national calls (including fixed-to-mobile calls) are part of a market which is separate from the market for international calls. However, this division does not have an impact on conclusions of the analysis, as further explained below.

4.1.8. Market segmentation per type of customer: residential and non-residential customers and large customers

ICP - ANACOM concluded in 2004 that there was evidence supporting the existence of different markets for residential and non-residential customers. On the other hand, it concluded also that the establishment of a segment for large customers would not be relevant for the purpose of SMP assessment.

The analysis of this issue is equivalent to that made in point 3.1.7 on the market of narrowband access to the public telephone network at a fixed location, thereby contradicting conclusions reached in 2004.

In fact, nowadays, the evolution in the market results in the provision of offers in the market for residential customers with characteristics close to the requirements of corporate customers, and as such, it is likely that a significant part of non-residential customers uses offers intended for residential customers, especially small and medium-size companies (SME) and professionals.

It is deemed that although there may be some differences between offers intended for residential access customers and for non-residential SMEs, it may be concluded that there is only a single market for these two types of customers.

Without prejudice, and although global operators are concerned, able to supply services to all segments, taking into account that there are operators who have focused their activities on the provision of services to large corporate customers⁹⁵, it is deemed appropriate to analyse separately the situation of large customers.

In fact, the possible focus on large corporate customers reflects not only the differences in offers made by operators to large companies which usually present different features, with integrated offers of voice and data telecommunication solutions, information systems, Internet, email, network outsourcing, among many others, but also the distinction made by operators to classify the respective customers, according to their dimension or the existence of agreements, with sales channels and models for setting prices which are specific for these services and for these customers.

It is found that, contrary to the general situation with SMEs and residential customers, a greater price difference exists at the level of large corporate customers that enjoy specific commercial

⁹⁵ PTC had a company that focused specifically on the provision of telecommunication solutions, information systems and technologies for Large Customers of the PT Group, however in December 2011 it decided to shut down PT Prime – Soluções Empresariais de Telecomunicações e Sistemas, S.A., merging it into PT Comunicações, S.A. ONI shifted its focus of activity, ceasing to provide services to residential customers to focus its activity mainly on large corporate customers and on the public sector.

conditions associated to individual tariff proposals. It is noted in fact that operator websites do not provide information on conditions made available to large customer accounts.

However, demand-side substitutability may be justified by the fact that some operators have recently started to provide SME with offers which, until recently, were mainly within the reach of the large customer segment. This is the case, for example, of offers based on optical fibre made available by PTC and NOS, until now available only to large companies. There are also offers that aggregate several types of services (fixed and mobile voice services, fixed and mobile Internet), which until recently were made available only to large companies and which are now available for smaller companies.

As regards supply-side substitutability, it is not automatic that companies that provide services only to residential customers and non-residential SMEs start providing services to large customers also, as a consequence of a small but significant and non-transitory increase of prices by a hypothetical monopolist. The reverse situation will also not be automatic. However, the largest providers in these markets are global operators, with offers for various segments, including residential customers, corporate customers and large customers.

In the light of the above, it is deemed that the market integrates residential and non-residential customers, including large companies, but it should be stressed that a possible separation would have no impact on this competition assessment.

4.1.9. Calls to non-geographic numbers (in the scope of the provision of special retail services)

Calls to non-geographic numbers involve the routing of a non-geographic number to a network termination point where the non-geographic number is translated into a geographic number, thereby enabling these calls to be routed to a specific location.

The last market analysis concluded that calls to geographic numbers and to non-geographic numbers were part of different markets, as the latter have a very specific purpose and as such no demand-side substitutability exists as regards calls to geographic numbers.

Institutions seeking this type of numbers have a specific target that differs from that which results from the use of calls to geographic numbering. These are usually non-residential customers who use this numbering to provide universal access services, utility services at an increased tariff rate, flat rate tariff services, calls free of charge to the caller or shared cost call services, namely in the scope of the provision of customer support, advertising services, information and sales services, among others - a purpose which is different from that associated to the use of other numbering ranges (such as those for the telephone service at a fixed location and mobile services), thus being

concluded that services under consideration are not substitutes for national and international telephone services provided at a fixed location.

Operators providing number translation services also have their own pricing plans which differ from those applied to the provision of the telephone service, which frequently include a monthly charge, in addition for the value due for invoiced traffic, which may vary depending for example on the call origination/termination and duration.

On the supply-side, the market entry depends only on the existence of a network with an intelligent service platform, enabling the provision of number translation services. In fact, there are several telephone service providers who supply both calls for national and international numbers, in addition to calls to non-geographic numbers for the provision of special services.

Given that there were no relevant changes on the demand- and supply-side, there seem to be no reasons for changing conclusions reached in 2004 as regards the definition of this market, being thus concluded that calls to non-geographic numbers for the provision of special services represent a different market than the market of national and international telephone services provided at a fixed location.

4.2. Definition of the Geographic Market

In the last analysis, the geographic market defined for telephone services provided at a fixed location and the market for non-geographic numbers was the national territory.

Given that there are several market operators providing services concerned throughout the national territory, in compliance with the principle of a uniform tariff and that, in general, such operators are subject to homogeneous conditions of competition in all of the national territory, it is deemed that there are no reasons supporting a different conclusion than the one reached in the 2004 market analysis.

Moreover, the legal framework and the geographic scope of activity records are also uniform throughout the national territory, thus there seems to be no reason for segmenting the geographic market.

In the light of the above, it is concluded that the relevant geographic market for telephone services provided at a fixed location and for geographic call services corresponds to the national territory.

4.3. Conclusion

The analysis carried out, based on supply and demand-side substitutability, leads to the conclusion that the following product markets exist:

- Market of publicly available local and national telephone services provided at a fixed location for residential and non-residential customers;
- Market of publicly available international telephone services provided at a fixed location for residential and non-residential customers;
- Market of calls to non-geographic numbers for the provision of special services.

The three markets mentioned above cover the entire national territory and comprise all types of technologies that allow the provision of the respective services, including GSM/UMTS and VoIP mobile technologies.

ICP - ANACOM considers that factors taken into account in this analysis will not change in the short/medium term, until the next market definition and SMP analysis, should this be necessary.

4.4. Markets susceptible to *ex ante* regulation

Recommendation 2007/879/EC, currently in force, identifies markets susceptible to *ex ante* regulation. In this recommendation, EC lists, in annex, markets deemed to be relevant. The only retail market identified is access to the public telephone network at a fixed location for residential and non-residential customers.

As referred earlier, markets of telephone services at a fixed location are not included in the annex to the Recommendation, and as such, are not deemed by EC to be relevant markets. Likewise, no relevant market of calls to non-geographic numbers for the provision of special services has been defined.

Commission Recommendation 2007/879/EC, of 17 December 2007, refers that in case a NRA identifies markets other than those listed in the annex, it must make sure that the following three criteria are met⁹⁶:

- Presence of high and non-transitory barriers to entry, of a structural, legal or regulatory nature;

⁹⁶ *Vide* recital 5.

- A market structure which does not tend towards effective competition within the relevant time horizon. The application of this criterion involves examining the state of competition behind the barriers to entry;
- The insufficiency of competition law alone to adequately address the market failure(s) concerned.

Just like in the section on market for access, this section assesses the cumulative compliance with the three criteria listed by EC, relatively to markets identified in this chapter, in order to weight whether there are grounds to maintain their regulation. In addition to elements presented by EC itself in the scope of the Recommendation, ICP - ANACOM bases this analysis on ERG's "Guidance on the application of the three criteria test".

Without prejudice to the cumulative nature of the three criteria, each one will be dealt with regardless of whether others are complied with.

There is an overlap between the analysis of the three criteria as regards the market for access and the analysis of the three criteria as regards the market for services, given that, to a large extent, indicators are common: both accesses and telephone services at a fixed location and non-geographic call services use the same technologies and the same networks, so issues on entry and expansion in markets have a very close nature. In fact, telephone services are provided on the basis of operators' self-owned networks that also provide access, except as regards telephone services provided over indirect access.

4.4.1. Presence of high and non-transitory barriers to entry

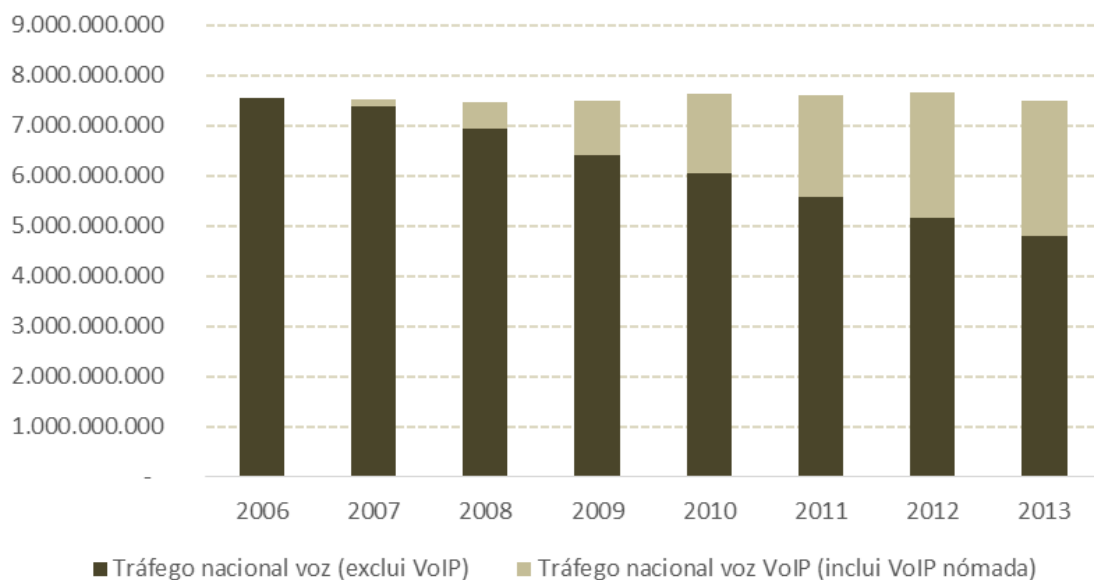
As referred in the section on market for access, the Recommendation on Relevant Markets refers in recital 8 that there are two types of relevant barriers to entry in the market: structural barriers and legal or regulatory barriers.

4.4.1.1. Structural barriers to entry

The analysis of structural barriers to entry in the market of telephone services at a fixed location is conceptually close to the analysis of barriers to entry in the market of access at a fixed location, as far as the entry with self-owned infrastructure is concerned. In fact, the entry in the market of telephone services at a fixed location based on self-owned infrastructure, due to technologies included in the market definition, necessarily guarantees the possibility of providing the access service. As such, issues discussed and weighted in the scope of the market for access, as a service provided on the basis of self-owned infrastructure, may be replicated for markets of telephone services at a fixed location.

As specifically regards the provision of telephone services, it is noted that the development of networks which operate as copper alternatives, such as mobile networks, cable networks and optical fibre networks, significantly decreased the dependency on the copper infrastructure held by the historical operator, which is not easily duplicated, and favoured lasting entries and expansion in markets under analysis. In this scope, attention should be drawn to the increasing expansion of the rate of minutes over networks other than copper, as well as the evolution of market shares of alternative providers in this type of networks (as also explained in the following section). The following charts include traffic routed in direct and indirect access, and show the evolution of traffic supported on VoIP accesses, as opposed to traffic supported on other types of access, the most representative of which are copper accesses.

Chart 22 – National voice traffic, originating in VoIP accesses vs. other accesses (minutes)

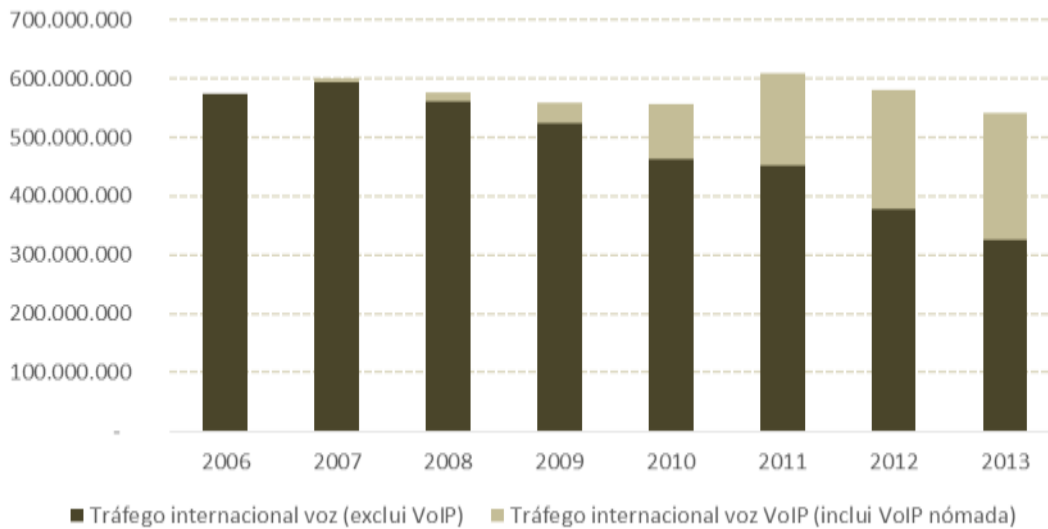


National voice traffic (excluding VoIP)

National voice VoIP traffic (including nomadic VoIP)

Source: ICP-ANACOM

Chart 23 – International voice traffic, originating in VoIP accesses vs. other accesses (minutes)



International voice traffic (excluding VoIP)

International voice VoIP traffic (including nomadic VoIP)

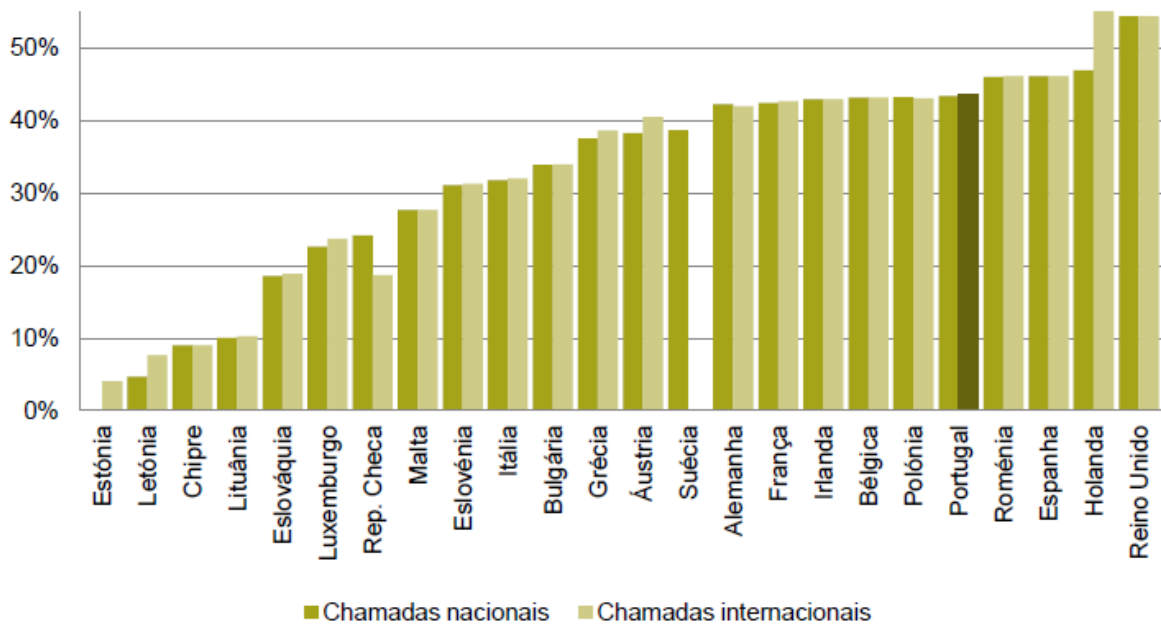
Source: ICP-ANACOM

Note on Chart 22 and Chart 23: traffic originating in VoIP accesses (excluding nomadic VoIP) was estimated on the basis of the weight of VoIP accesses in the total of equivalent main accesses per operator and per year.

The use of self-owned infrastructure, developed at national level and used also for the provision of services such as pay-TV, broadband internet or mobile services, allows significant economies of scale and of scope, a competition degree with a high level of marketing freedom and autonomy in the definition of tariff plans. Moreover, the weight of the use of self-owned infrastructure in total infrastructure used for the provision of the telephone service at a fixed location has increased, representing by the end of the first quarter of 2014 around 96% of total accesses.

An especially relevant indicator of the competitive capacity of alternative providers is Portugal’s 5th relative position in the ranking of the proportion of customers using offers of the referred providers, both in the scope of national calls and of international calls. The chart below shows the relative ranking in the EU based on data from July 2012.

Chart 24 – Proportion of customers using alternative providers to make fixed voice calls



Estonia / Latvia / Cyprus / Lithuania / Slovak Republic / Luxembourg / Czech Republic / Malta / Slovenia / Italy / Bulgaria / Greece / Austria / Sweden / Germany / France / Ireland / Belgium / Poland / Portugal / Romania / Spain / The Netherlands / United Kingdom /

National calls International calls

Source: Digital Agenda 2013 (provisional data). Data published in ICP - ANACOM's "2012 Communications Sector".

Although the number of accesses supported on infrastructure owned by third parties has decreased, at any rate the importance of wholesale offers that allow the retail provision of the telephone service must be stressed, including the offer of access to the local loop, carrier selection and pre-selection, which enable the retail provision of the telephone service by indirect access, and SLRO, in both cases likely to be imposed in the wholesale origination market. This latter offer, in particular, creates the conditions necessary for a quick and effective entry in the market, based on an average regulated cost which is close to the cost borne by the historical operator for the provision of the service to its own customers. Finally, it is stressed that the assessment of the impact of this measure on markets under analysis must not focus solely on the analysis of the proportion of indirect traffic in total fixed traffic, as it ensures a certain level of contestability and pressure on retail prices applied.

In this context, the trend for an increase of the rate of FTS penetration must be stressed, contrary to the situation registered for most European countries.

Overall, the emergence and development of self-owned networks, in alternative to the “traditional” copper network held by PTC, as well as the existence of regulated wholesale offers, have enabled new entrants in the market, in various steps of the “investment ladder” and with different business models. In fact, there are operators providing national and international communications services, either as stand-alone services or integrating a bundle of services, and other operators focus mainly on international calls, on the basis, for example, of calling cards. These various business modalities show that there is a low degree of barriers to entry in the three markets under consideration, which is reflected in competition, as pointed out below.

4.4.1.2. Regulatory and legal barriers

Similar to what was mentioned in the analysis to the three cumulative criteria in the market for access, to two possible regulatory restrictions may be considered, for markets of telephone services at a fixed location:

- Need for general authorization for the provision of telephone services at a fixed location;
- Scarce radio spectrum, in case of the option for entry in the market on the basis of mobile networks.

Available evidence, already explained in chapter 3.4.1.2, shows that none of these two restrictions currently prevents an effective and timely entry in the market. In addition, functionalities such as carrier selection and pre-selection, and SLRO, reduce even further any barriers which may exist in the provision of the service, as they make the provision viable even if the provider does not have direct accesses available.

4.4.1.3. Conclusion on the existence of high and non-transitory barriers to entry in these markets

Technological evolution, markets’ own evolution, with an increasing investment in self-owned networks and the existence of wholesale measures imposed at the level of carrier selection and pre-selection, and SLRO, as well as those concerning access obligations in the framework of market 4, lead to the conclusion that there are no significant structural barriers to entry in markets under consideration.

4.4.2. Market structure which does not tend towards effective competition within the relevant time horizon

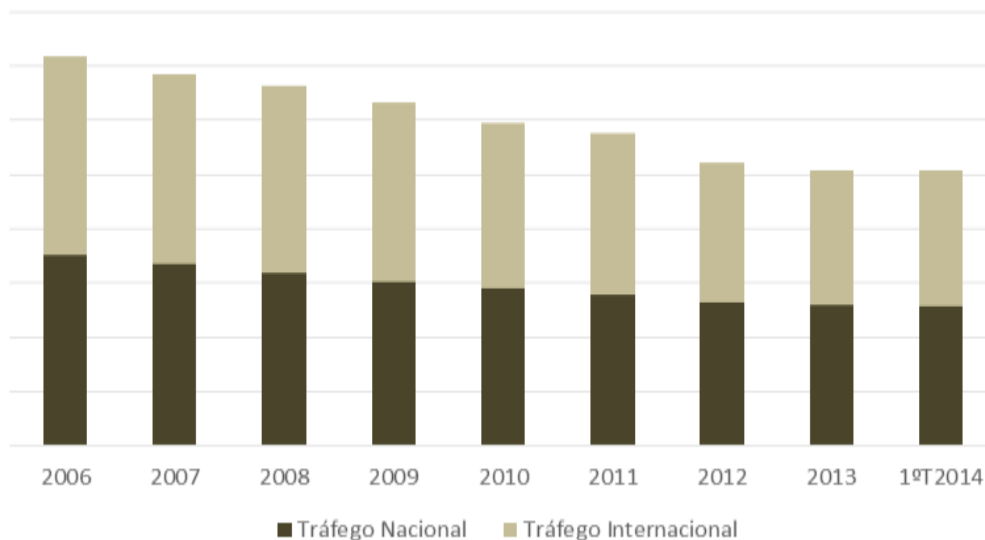
As far as this second criterion is concerned, ICP - ANACOM will again use indicators suggested by ERG, namely:

- Market shares
- Price trends
- Control of infrastructure not easily duplicated
- Diversification of products/services (e.g. bundled products or services)
- Barriers to expansion
- Potential competition

4.4.2.1. Market shares

The chart below shows the evolution of voice traffic market share of the PT Group, measured in minutes, from 2004 to the first quarter of 2014, for the markets of national and international telephone services at a fixed location. By the end of the first quarter of 2014, the market share of the PT Group was respectively of 51% and 50%, with a joint market share (national and international telephone services) of 51%.

Chart 25 – Shares held by the PT Group as regards national and international traffic

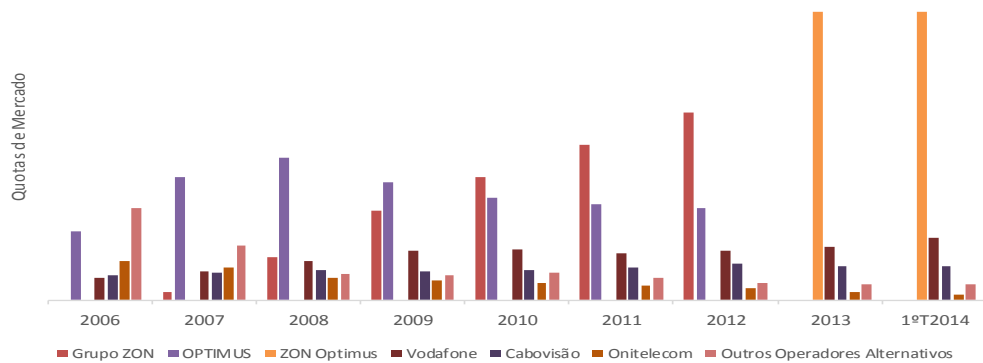


National traffic International traffic
 Source: ICP-ANACOM (includes traffic registered at the level of direct access, indirect access, public pay-phones and VoIP and nomadic VoIP service)

Just as important as the analysis of the market share of the PT Group, its evolution and that of several alternative providers must also be considered. The chart below shows the evolution of market shares of main alternative providers, as far as national traffic is concerned. The positive and consistent market share evolution one of the alternative operators must be stressed. On the other

hand, the joint market share of just two of the alternative operators exceeds 40% (ZON Optimus and Vodafone). Some providers were also able to remain in the market with relatively stable and low shares **(BCI) CONFIDENTIAL (ECI)**.

Chart 26 – Market shares of OSP as regards national traffic



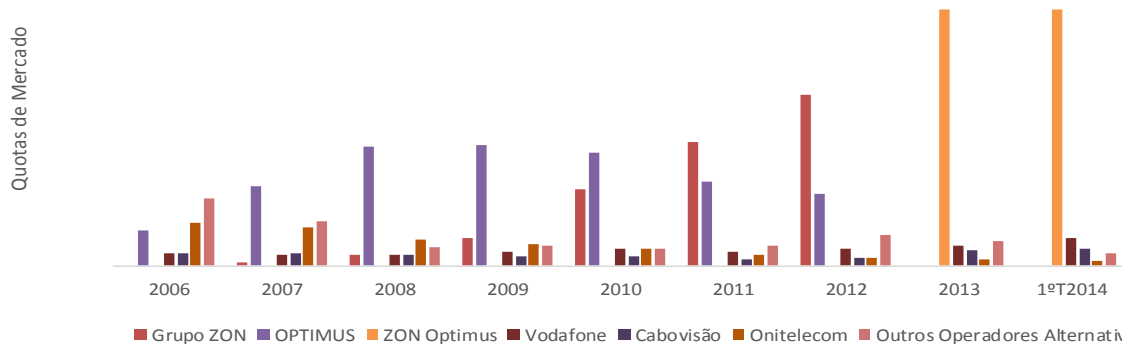
Grupo ZON	[0-5%]	[0-5%]	[5-10%]	[10-20%]	[10-20%]	[10-20%]	[20-30%]	-	-
OPTIMUS	[5-10%]	[10-20%]	[10-20%]	[10-20%]	[10-20%]	[10-20%]	[10-20%]	-	-
ZON Optimus	-	-	-	-	-	-	-	[30-40%]	[30-40%]
Vodafone	[0-5%]	[0-5%]	[0-5%]	[5-10%]	[5-10%]	[5-10%]	[5-10%]	[5-10%]	[5-10%]
Cabovisão	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Onitecom	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Outros OPS	[10-20%]	[5-10%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]

Source: ICP-ANACOM (includes direct access, indirect access, public pay-phones, VoIP and nomadic VoIP)

Note: Charts presents separate shares for the ZON Group and Optimus up to 2012, and as from 2013, the joint share of ZON Optimus (which aggregates NOS, TV Cabo Madeirense and TV Cabo Açoreana).

The scenery is relatively close as far as international traffic is concerned. By the end of the first quarter of 2004, 2 operators concentrated more than 40% of the market share (ZON Optimus and Vodafone).

Chart 27 – Market shares of OSP as regards international traffic



Grupo ZON	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[10-20%]	[10-20%]	[20-30%]	-	-
OPTIMUS	[5-10%]	[10-20%]	[10-20%]	[10-20%]	[10-20%]	[10-20%]	[10-20%]	-	-
ZON Optimus	-	-	-	-	-	-	-	[30-40%]	[30-40%]
Vodafone	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Cabovisão	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Onitelecom	[5-10%]	[5-10%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Outros OPS	[10-20%]	[5-10%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]

Source: ICP-ANACOM (includes direct access, indirect access, public pay-phones, VoIP and nomadic VoIP)

Note: Charts presents separate shares for the ZON Group and Optimus up to 2012, and as from 2013, the joint share of ZON Optimus (which aggregates NOS, TV Cabo Madeirense and TV Cabo Açoreana).

In summary, the market share of the historical operator has systematically decreased over the last few years. In addition, new entrants have simultaneously achieved and strengthened significant market shares, while others have been able to remain in the market with lower market shares. These elements lead to the conclusion that entries in the market have been successful, based on various business models and different target segments, the trend for the reduction of PT Group's market share being visible.

As regards the market of telephone services to publicly available non-geographic numbers at a fixed location, the 2004 market analysis referred that the PT Group was the leader in the segment of traffic minutes to non-geographic numbers, with market shares exceeding 75%. Today, as shown by the graphic below, PT Group holds a lower market share, of 39%, and there are other relevant operators in the market.

Table 13 - Market shares per operator of traffic to non-geographic numbers and short numbers

MS Total traffic non-geographic numbers (FTS+VoIP)	2006	2013	1ºQ2014
PT Group	69%	40%	39%
ZON Optimus	[0-5%]	[40-50%]	[40-50%]
Optimus	[15-20%]	-	-
Cabovisão	[5-10%]	[5-10%]	[5-10%]
Vodafone	[0-5%]	[0-5%]	[5-10%]
Other Alternative Operators	[5-10%]	[0-5%]	[0-5%]

Source: ICP-ANACOM

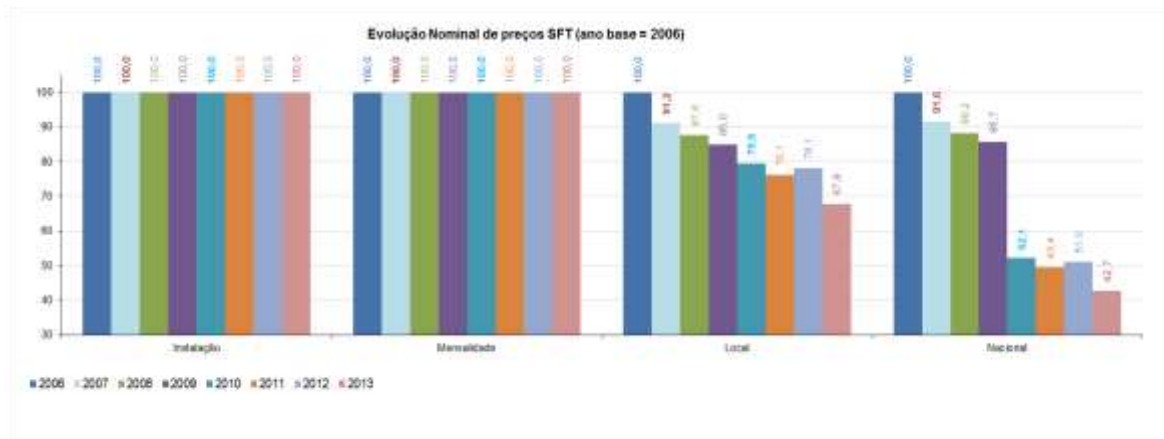
Note: as from 2013, the joint share of ZON Optimus (which aggregates NOS, TV Cabo Madeirense and TV Cabo Açoreana) was taken into consideration.

4.4.2.2. Price trends

One of the most relevant factors of markets under consideration is the launch of tariff plans, on the part of alternative operators, with different structures than those in traditional offers, and at relatively low prices for telephone services at a fixed location, as referred below in this section.

On the other hand, it is noted that the historical operator has chosen to reflect price changes required so it is able to meet the price cap it was imposed, especially in the communications component, with relevant price reductions in national communications - from 2006 to 2013, prices decreased by 57% in nominal terms.

Chart 28 – Nominal evolution of prices of PTC’s US tariff plan, applicable by default, per component



Installation Monthly charge Local National

Source: ICP-ANACOM

However, international comparisons with prices applied in Portugal - again, just like in the case of the access market, on the basis only of publicly available offers of incumbents in 19 countries of the European Union - for the residential segment show a different reading, as it can be seen from the table below.

Table 14 – International comparisons with prices applied in Portugal for the residential segment (November 2012)

		Baixo consumo	Médio consumo	Alto consumo
Chamadas fixo-fixo	Despesa mensal com chamadas fixo-fixo	4,60 €	0,0 €	0,0 €
	Desvio em relação à média	58,0%		
	Ranking UE19	15	1	1
Chamadas fixo-móvel	Despesa mensal com chamadas fixo-móvel	1,26 €	6,64 €	17,88 €
	Desvio em relação à média	-39,4%	64,0%	76,9%
	Ranking UE19	7	16	16
Chamadas internacionais	Despesa mensal com chamadas internacionais	3,38 €	2,71 €	4,12 €
	Desvio em relação à média	42,4%	41,6%	-32,5%
	Ranking UE19	15	16	8

Low consumption Average consumption High consumption

Fixed-to-fixed calls	Monthly expense with fixed-to-fixed calls Deviation from average EU19 ranking
Fixed-to-mobile calls	Monthly expense with fixed-to-mobile calls Deviation from average EU19 ranking
International calls	Monthly expense with international calls Deviation from average EU19 ranking

Source: Teligen, OECD, ICP-ANACOM (data published in ICP - ANACOM's "2012 Communications Sector")

Specific tariff plans have been launched in the market, with free calls to a wide range of calls terminated in foreign fixed networks, as well as virtual cards with international calls at lower prices than those made available in standard tariff offers. In addition, one in four bundled offers that integrate the FTS provide free calls to the fixed network of more than 30 countries⁹⁷. These offers are effectively addressed to market segments where sensitiveness to the price of this type of communications is likely to be higher, expanding the options available, and lowering Portugal's unfavourable average relative ranking in this type of communications as far as two segments are concerned.

⁹⁷ According to data referred in the study "Caraterização da Adoção e do Consumo de Pacotes de Serviços de Comunicações Eletrónicas", dated August 2013, issued by ICP-ANACOM, (http://www.anacom.pt/streaming/Estudo_ANACOM_consumo_pacotesCE.pdf?contentId=1173917&field=ATTACHED_FILE)

With respect to national fixed-to-fixed communications, as the table above shows, it must be noted that there are currently several tariffs which do not charge for this type of communications. In addition, it is noted that apart from offers made available by the historical operator, PTC, there are other tariff plans, which are not reflected in the table under consideration, and which are provided by alternative operators, which include free calls. This is the case of some tariffs of homezone products, as well as many tariffs of bundled offers that include the FTS. As an illustration⁹⁸, the ZON DUO 4 channels and ZON Triple Light packages, with associated monthly charges of 10.49 and 35.99 Euros (in 2013), respectively, included 24h free national fixed-to-fixed communications. Talk and M30 packages of the MEO brand (provided by the historical operator) with associated monthly charges of 22.49 (promotion) and 64.99 Euros (in 2013), respectively, also include 24h free national fixed-to-fixed communications. Another example, based on GSL/UMTS technology, is Vodafone's "Vodafone voz fixa" tariff plan, which for the additional subscription of the "24h additive", has an associated monthly charge of 10.99 Euros and includes around the clock free calls to the national fixed network and a price of 15.9 cents per minute to Vodafone's mobile network (31.9 cents to other mobile networks).

In the business segment, as demonstrated by the table below, the relative position of national prices applied by the historical operator also shows a mixed reading. However, especially as far as the corporate segment is concerned, the existence of tailor-made contracts must be stressed, which are not taken into account in estimated values.

Table 15 – International comparisons with prices applied in Portugal for the business segment (November 2012)

		SOHO	PME
Chamadas fixo-fixo	Despesa mensal com chamadas nacionais	11,05 €	18,16 €
	Desvio em relação à média	65,2%	71,9%
	Ranking UE19	15	15
Chamadas fixo-móvel	Despesa mensal com chamadas fixo-móvel	4,96 €	5,29 €
	Desvio em relação à média	-39,2%	-43,0%
	Ranking UE19	8	7
Chamadas internacionais	Despesa mensal com chamadas internacionais	5,42 €	16,85 €
	Desvio em relação à média	69,3%	67,6%
	Ranking UE19	17	17

SOHO SME

⁹⁸ Some of these offers, which existed by the end of 2013, were subject to changes in 2014, namely at the level of prices applied, and of the name under which such offers are made available to the public. National communications, and in some cases part of international communications have remained however free of charge.

In the case of ZON, further to the merger with Optimus and the emergence of NOS, offers may be consulted at

<http://www.nos.pt/particulares/pacotes/todos-os-pacotes/Paginas/pacotes.aspx#tab4>.

No caso da PTC, as ofertas podem ser consultadas em <http://meo.pt/pacotes/mais-pacotes/todos-os-pacotes-meo/adsl/tv-voz>.

As regards Vodafone, current offers are available at <http://www.vodafone.pt/main/particulares/tv-net-voz/pacotes/>.

Fixed-to-fixed calls	Monthly expense with national calls Deviation from average EU19 ranking
Fixed-to-mobile calls	Monthly expense with fixed-to-mobile calls Deviation from average EU19 ranking
International calls	Monthly expense with international calls Deviation from average EU19 ranking

Source: Teligen, OECD, ICP-ANACOM (data published in ICP - ANACOM's "2012 Communications Sector")

4.4.2.3. Barriers to expansion

As referred in the analysis of the three criteria on the market for access (vide chapter 3.4.2.4), there seem to be no significant barriers to expansion, given the current coverage of mobile networks and also of cable and optical fibre networks. Switching costs, although relevant, are not deemed to be sufficiently high to deter competition in markets under consideration.

4.4.2.4. Potential competition

Given the existence of carrier pre-selection and of wholesale offers such as SLRO and RUO, which enable the provision of telephone services even by companies that do not hold an infrastructure of their own, the entry in these markets is not subject to significant obstacles.

In this context, it must be considered also to what extent could potential competition of the mobile telephone service be a relevant factor to weight the market trend towards a situation of effective competition, namely as regards certain segments of customers who may deem that there is some degree of substitutability between the fixed service and the mobile service, according to the respective usage profiles of services concerned.

It is necessary to take into account specific characteristics of network effects mediated by tariff plans prevailing on the national mobile retail market, which show a significant difference between prices of calls terminating on the same network (on-net) and of calls terminating in other networks (off-net). Average on-net prices are very competitive in Portugal - in a significant number of tariff plans, these calls are even free - which could place pressure, even if a marginal one, on prices of calls originating in the fixed telephone service, in case communicating parties are clients of the same mobile network and at least one of them uses a tariff plan that includes free on-net calls.

In early 2011, mobile operators holding their own network launched the so-called "free" tariff plans, including free on-net calls and free calls to the fixed network. For subscribers of these tariff plans, it is reasonable to assume that national fixed-to-fixed calls will only be made if the respective price is zero or relatively low. The recent entry in the market of two full-MVNO mobile operators -

Lycamobile and Mundio Mobile -, who apply low retail prices for international calls, is also noted. There are also some mobile operators with their own networks, who also provide tariff plans focused specifically on international calls, such as the “Mundo” tariff.

Additionally, and for customers holding mobile telephone equipment with internet access, it is further noticed that modern operating systems allow the installation of applications which allow customers to send short messages, in SMS or chat format, to other customers, regardless of their geographic location, insofar as these customers also have these applications installed on their own terminal equipment. Moreover, in case mobile tariffs allow, there are also applications that enable VoIP-based voice calls to be made, over mobile networks. In case voice communications are made within the same application, calls are sometimes free of charge. These factors may influence the price of fixed-international calls.

Without prejudice to what was stated above on mobile services, it must be highlighted that any competitive pressure applied is limited by the fact that services under consideration are not in general substitutes for mobile services.

Finally, the influence of the use of voice over Internet services is also noted, based on personal computer applications such as Skype or Google Talk. However, this influence is relatively low, as its use in Portugal is not significant, as referred in section 3.1.1. This could be due, among other factors, to the existence of several FTS offers where the price of calls originating in the national fixed network and terminating in national and international fixed networks is zero.

At the level of retail services of calls to non-geographic numbering, it is noted also that providers of the mobile telephone service have progressively assumed a larger role in this market.

4.4.2.5. Universal Service

Similar to the analysis made in chapter 3.4.2.6, the fact that PTC recently stopped providing the US concerning the publicly available telephone service is also relevant for markets under analysis. NOS, the new US provider, is subject to a set of conditions that were defined in the scope of the tender for the designation of new US providers, among which the provision of uniform tariff offers throughout the country, that ensure compliance with the principle of affordability.

On its turn, PTC, although it is no longer the provider of the US of publicly available telephone services, and consequently ceased to be subject to obligations to which it was previously subject, will remain constrained in the scope of the provision of the telephone service due to the competitive pressure exerted by NOS.

Consequently, the constraints to which PTC was directly subject for being the US provider and an operator with SMP continue to be indirectly exerted on this company, notwithstanding the fact the company is no longer regulated.

4.4.2.6. Conclusion on the market structure which does not tend towards effective competition within the relevant time horizon

Similar to what was stated on the market for access, operators in markets of telephone services at a fixed location have been able to enter into the market and to hold an important share of routed traffic, reducing the market power held by the PT Group for a long period of time. The sector thus shows frequent successful entries, and price sensitiveness on the part of consumers makes the threat of new successful entries likely, in the future, and will necessarily constrain the price established in the market under consideration. The fact that PTC ceased to be the US provider of publicly available telephone services, remaining subject to the competitive pressure exerted by NOS, will also contribute to this end.

In the light of the above, it is thus concluded that the structure of this market tends towards effective competition within the relevant time horizon.

4.4.3. Insufficiency of competition law

According to the European Commission, *“the decision to identify a market as susceptible to ex ante regulation should also depend on an assessment of the sufficiency of competition law to address the market failures that result from the first two criteria being met. Competition law interventions are unlikely to be sufficient where the compliance requirements of an intervention to redress a market failure are extensive or where frequent and/or timely intervention is indispensable.”*

As with the two preceding criteria, factors suggested by ERG’s document shall be taken into account:

- a) Degree of generalization of non-competitive behaviour;
- b) Degree of difficulty to address non-competitive behaviour;
- c) Non-competitive behaviour bringing about irreparable damage in related or connected markets;
- d) Need of regulatory intervention to ensure the development of effective competition in the long run.

The analysis in this section is entirely identical to the one carried out for the market for access. Competition law, or *ex post* regulation, is sufficient to address effectively and in a timely manner any competition distortions that may occur in the markets of telephone services provided at a fixed location and of telephone services for non-geographic numbers, given the limited capacity of operators to act independently of its competitors and final users, for the reasons mentioned earlier. In particular, there is a low chance of behaviours with irreversible impact on the market, in view of the existence of a degree of competition, based both on regulated offers, such as indirect access, and on the prevalence of competition in self-owned infrastructures, that decreases the practical effectiveness of restrictive behaviour. However, in case such practises do occur, it is easy to collect in a timely way the required information to detect any deviation from healthy competition balance, and to address it effectively on the basis of general competition law.

4.4.4. Conclusion on the application of the three cumulative criteria

The separate analysis of the three cumulative criteria leads to the conclusion that, for each one, requirements that make the markets of telephone services at a fixed location and of calls to non-geographic numbering subject to *ex ante* regulation have not been met.

It should be stressed that this conclusion is in line with the 2007 Recommendation on Relevant Markets, which does not include retail markets of telephone services at a fixed location in the list of relevant markets for the purpose of *ex ante* regulation.

4.5. Analysis of significant market power

Under article 60, paragraph 1, of ECL, “*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*”. As such, SMP may be held by a single company in the market (individual dominance) or by more than one body (joint dominance).

Consistently with conclusions reached in the preceding chapter, as far as the assessment of SMP in markets under consideration is concerned the following must be referred:

In markets under consideration, the PT Group shows market shares that present a downward trend, varying, by the end of the first quarter of 2014, between 39% in the case of traffic to non-geographic numbers, and 50%-51%, in the case of the telephone service at a fixed location.

There are also other factors which are essential to assess the existence of significant market power, which were analysed in the scope of the 3-criteria test, over the last few chapters, and which confirm that the PT Group no longer holds SMP. The conclusions reached by ICP -

ANACOM with the analysis carried out are relevant in this scope, namely as regards the presence of high and non-transitory barriers to entry (chapter 4.4.1.), in terms of barriers to entry (chapter 4.4.1.1), potential competition (chapter 4.4.2.4.), factors associated to the US provision by a company which is no longer PTC (chapter 4.4.2.5.). Conclusions on sunk costs and control of infrastructure not easily duplicated, technological advantages or superiority, economies of scale, of scope and of experience and vertical integration (chapter 3.4.1.) and dimension of the leader (chapter 3.4.2.), are also relevant.

As regards the possibility of existence of joint dominance, similar to what was referred as regards the market for access, and for the same reasons, indicators of coordinated conduct have not been found in these markets.

In the light of the above, ICP - ANACOM reaches the conclusion that there are no operators with significant market power in these markets.

5. ASSESSMENT OF THE NEED TO IMPOSE OBLIGATIONS ON MARKETS FOR ACCESS TO THE PUBLIC TELEPHONE NETWORK AT A FIXED LOCATION, OF TELEPHONE SERVICES PROVIDED AT A FIXED LOCATION AND OF NON-GEOGRAPHIC CALL SERVICES

Previous sections focused on the identification and analysis of the market for access to the public telephone service at a fixed location, retail markets of publicly available telephone services at a fixed location and the retail market of non-geographic call services, having been concluded, on the basis of the analysis of criteria on the presence of high and non-transitory barriers to entry, the state of competition behind the barriers to entry and insufficiency of competition law, that markets under consideration do not present the conditions required to be identified for the purpose of *ex ante* regulation, which also support the assessment of SMP, having been found also that the PT Group ceased to hold SMP in all analysed markets.

In this context, ICP - ANACOM is required to impose one or more regulatory obligations on markets where there is SMP, or to maintain or amend these obligations, where they are already in place. On the other hand, the Authority must withdraw obligations that have been imposed on markets where SMP no longer exists or markets which are no longer deemed to be relevant for the purpose of *ex ante* regulation⁹⁹.

According to the Guidelines (§113), “*if an NRA finds that a relevant market is subject to effective competition, it is not allowed to impose obligations on any operator on that relevant market under Article 16. If the NRA has previously imposed regulatory obligations on undertaking(s) in that market, the NRA must withdraw such obligations and may not impose any new obligation on that undertaking(s). As stipulated in Article 16(3) of the framework Directive, where the NRA proposes to remove existing regulatory obligations, it must give parties affected a reasonable period of notice.*”

This provision has also been laid down in paragraph 3 of article 59 of ECL. In this context, ERG is also of the opinion that when an NRA removes an obligation or replaces one obligation with another, it should give an appropriate period of notice before the change takes effect, in order to avoid undue disruption to the market players¹⁰⁰.

This Authority thus takes the view that, in the light of a situation of withdrawal of obligations currently in force in markets for access, of telephone services provided at a fixed location and of

⁹⁹ Cf. Guidelines §21 and §114 and articles 56 e) and 59, paragraph 4 of ECL.

¹⁰⁰ Cf. “Revised ERG Common Position on the approach to appropriate remedies in the ECNS regulatory framework”, section 5.6.2.

call services to non-geographic numbers, it is important to take account of how obligations in force may be removed in an appropriate manner, so that this withdrawal does not harm final users and the various market operators.

5.1. Current obligations

By determination of 14 December 2004, approval was given to obligations to be imposed on narrowband retail markets, on undertakings of the PT Group, which were identified as holding significant market power (SMP) in each of the markets under consideration: narrowband access to the public telephone network at a fixed location for residential customers; narrowband access to the public telephone network at a fixed location for non-residential customers; publicly available local and/or national telephone services provided at a fixed location for residential customers; publicly available local and/or national telephone services provided at a fixed location for non-residential customers; publicly available international telephone services provided at a fixed location for residential customers; publicly available international telephone services provided at a fixed location for non-residential customers; publicly available telephone services for non-geographic numbers provided at a fixed location.

Obligations imposed at national level are as follows:

- To ensure transparency through the publication of tariff plans, levels of quality of service and other offer conditions;
- Not to show undue preference to specific end-users;
- To ensure cost-orientation of prices;
- To maintain a cost accounting system;
- To provide for accounting separation;
- To maintain price affordability (with price-cap);
- To publish a subscriber line resale offer (SLRO) reference proposal;
- To implement carrier selection and pre-selection.

The table below presents further details on obligations imposed, and identifies markets where they were introduced.

Table 16 – Obligations imposed on operators identified with SMP in each relevant market

Markets	Obligations							
	To ensure transparency through the publication of tariff plans, levels of quality of service and other offer conditions	Not to show undue preference to specific end-users	To ensure cost-orientation of prices	To maintain a cost accounting system	To provide for accounting separation	To maintain price affordability	To publish a subscriber line resale offer (SLRO) reference proposal	To implement carrier selection and pre-selection
Retail market for access to the public telephone network at a fixed location - residential customers	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable (with price – cap) ¹⁰¹	Applicable	Applicable
Retail market for access to the public telephone network at a fixed location - non-residential customers	Applicable	Applicable	Applicable	Applicable	Applicable	Not applicable	Applicable	Applicable
Market of publicly available local and/or national telephone services provided at a fixed location - residential customers	Applicable	Applicable	Applicable	Applicable	Applicable	Applicable (with “price – cap” in the case of intra-network, cost-orientation in fixed-mobile retention and maintenance of the current rule for inter-fixed network calls)	Not applicable	Not applicable
Market of publicly available local and/or national telephone services provided at a fixed location - non-residential customers	Applicable	Applicable	Applicable	Applicable	Applicable	Not applicable	Not applicable	Not applicable
Market of international telephone	Applicable	Applicable	Applicable	Applicable	Applicable	Not applicable	Not applicable	Not applicable

¹⁰¹ The indicated price-cap comprises installation, monthly charge, and local, regional and national calls, combining the guarantee of affordability with an appropriate tariff flexibility, applying to markets of a residential nature (markets 1 and 3).

services for non-residential customers								
Market of international telephone services for residential customers	Applicable	Applicable	Applicable	Applicable	Applicable	Not applicable	Not applicable	Not applicable

Source: ICP-ANACOM

Table 17 – Obligations imposed on operators identified with SMP in the market of publicly available local and national non-geographic call services provided at a fixed location

Market of non-geographic telephone services				
To ensure transparency through the publication of tariff plans, levels of quality of service and other offer conditions	Not to show undue preference for specific end-users	Management of the Numbering Plan according to ICP - ANACOM determinations	To provide for accounting separation	To maintain a cost accounting system

Source: ICP-ANACOM

5.2. Treatment of obligations imposed on PTC which arise from the provision of access and telephone services, as well as of US public pay-phone service

The 2004 decision that approved obligations to be imposed on each of the relevant markets identified in this analysis, in addition to having set out obligations resulting from the existence of SMP in markets concerned, also established specific obligations on the US provider in the scope of the provision of access to the network and of the fixed telephone service, and of the provision of the public pay-phone service, taking into account that the US provider and the company holding SMP were the same company.

As far as the provision of public pay-phones is concerned, ICP - ANACOM determined, without prejudice to other obligations imposed on PTC in the scope of the US provision of the public pay-phone service *“that the ratio between the price of a FTS communication, in the public pay-phone modality and subscriber modality, will remain subject to specific requirements, in line with the current regulatory practise, so as to ensure affordability of services provided. The price ratio remains the same as currently provided for between calls originating in PTC’s public pay-phones and in subscriber points (of 1 to 3), which is deemed to be appropriate at the moment, it may however be modified in the light of the evolution of costs and FTS price in the subscriber modality.”*

ICP - ANACOM also imposed on PTC, in the US scope, the compliance with a price-cap, for the provision of access to the public telephone network at a fixed location for residential customers and of publicly available local and/or national telephone services provided at a fixed location to

residential customers, having referred that “*in line with current regulatory practise (price-setting rules of the Price Convention lay down the price regime applicable to US telecommunication offers, at the level of FTS in the subscriber modality, for the installation of the analogue network line, subscription of the analogue network line and telephone communications in the country)*”, it was considered that a price-cap comprising installation, monthly charge and local, regional and national calls (originating and terminating in PTC’s network) combined the guarantee of affordability with an appropriate tariff flexibility.

Still in the scope of the US provision of local and/or national telephone services at a fixed location for residential customers, as regards calls to other providers of the telephone service provided at a fixed location, this Authority deemed that there were grounds to maintain obligations that fell on PTC on this matter, so that prices of calls originating in PTC’s network and terminating in the network of other providers were the same as prices of calls originating and terminating in PTC’s network. Prices could be corrected for the difference, duly quantified and justified, between termination of calls in PTC’s network and in the network of each FTS provider.

As regards calls to mobile networks, ICP - ANACOM considered that a price-cap equivalent to that applicable to intra-network calls would not be sufficient, due to the differences between termination prices in fixed networks and in mobile networks and the various levels of retail prices, thus companies of the PT Group were required to present a duly substantiated justification for the retention value, on the basis of economically efficient costs.

The obligation on the value of retention achieved in the fixed-mobile traffic was later specified¹⁰², having ICP - ANACOM determined upon PTC to gradually decrease this amount, in order to bring it closer to costs and to current European practices, stipulating that this value should not exceed 6.30 Euro cents as from 1.10.2006.

Without prejudice to conclusions referred herein on markets for access to the public telephone network at a fixed location and on retail markets of telephone services provided at a fixed location, and without prejudice to other decisions on the US, obligations mentioned in the preceding paragraphs, concerning:

- Ratio of 1 to 3 between the price of the FTS communication, in the public pay-phone modality and in the subscriber modality;
- Price cap applicable to access and calls originating and terminating in PTC’s network;

¹⁰² Determination of ICP - ANACOM of 01.09.2005, available at http://www.anacom.pt/render.jsp?contentId=406283#fnt_5

- Equality of prices between intra-network calls and calls to other fixed networks, corrected for the difference between prices of call termination in PTC's network and of call termination in the network of each FTS provider;
- Cost-orientation of the retention amount in fixed-to-mobile calls;

imposed on PTC, as the US provider, remained in force until the commencement of the service provision under conditions set out in the "Tender limited by pre-qualification for the selection of a company or companies to be designated for the provision of the universal service of connection to a public communications network at a fixed location and of publicly available telephone services" and in the "Tender limited by pre-qualification for the selection of a company or companies to be designated for the provision of the universal service of public pay-phones", respectively by NOS (which already occurred on 1.06.2014) and by PTC itself (as regards the public pay-phone service), which has also already taken place.

It follows from the above that PTC has ceased to be bound to compliance with obligations listed in the preceding paragraphs.

5.3. Withdrawal of obligations in retail markets for access, of telephone services at a fixed location and of non-geographic call services

As referred in a previous section of this document, in order to minimise or to remove competitive obstacles in a specific market, this Authority must analyse the imposition, maintenance, amendment or withdrawal of obligations, choosing obligations which directly or indirectly affect the strategic variables of companies with SMP.

Ex ante regulatory obligations may only be imposed on operators identified as holding a dominant position. Without prejudice, the identification of companies with SMP is only possible in a market deemed to be relevant for the purpose of the imposition of *ex ante* obligations, and to the extent that the market concerned cumulatively meets the three criteria imposed by the Commission.

As such, and given that markets for access to the network and of telephone services provided at a fixed location and of non-geographic call services, as concluded in a previous section hereof, do not meet the three criteria required for the imposition of *ex ante* regulation, and having also been concluded that no operators with SMP exist in these markets, it is considered that obligations previously imposed on companies of the PT Group, as the body designated as holding SMP in markets concerned in the scope of the preceding market analysis, should be withdrawn.

The following obligations are thus deemed to no longer apply to companies of the PT Group:

- i) To ensure transparency through the publication of tariff plans, levels of quality of service and other offer conditions;
- ii) Not to show undue preference to specific end-users;
- iii) To ensure cost-orientation of prices;
- iv) To maintain a cost accounting system;
- v) To provide for accounting separation.

These obligations cease to apply as from the date of approval of ICP - ANACOM's final decision on these markets.

However, it is noted that the PT Group remains subject to *ex ante* regulatory obligations in several other markets, in the scope of which PTC, in particular, is required to maintain a cost accounting system and accounting separation, being also subject to cost-orientation obligations in several wholesale markets.

It is stressed that the setting of maximum retail prices for some ranges of non-geographic numbering was carried out in the scope of ICP - ANACOM's NNP management assignments (article 17 of ECL) and not in the scope of market analyses, an issue which was mentioned in the 2004 decision under which *ex ante* regulatory obligations were imposed on PTC, having been stated that maximum prices set out applied to all providers and not only to PTC. As such, maximum retail prices applicable to non-geographic numbering ranges remain in force¹⁰³.

Lastly, a specific reference to selection and pre-selection and SLRO obligations must be made.

Selection and pre-selection obligations consist in the provision by a company (the provider of direct access) to its subscribers of the possibility of having access to publicly available telephone services provided at a fixed location by another company (the provider of indirect access) with which the former is interconnected, by routing their calls from the terminal point where the call is originated to the interconnection point of the selected indirect access operator, with whom the customer is not directly connected. Indirect access takes place on a call-by-call basis, by dialling a company's

¹⁰³ Maximum retail prices of non-geographic numbering ranges (which had been approved within the scope of ICP - ANACOM's tasks concerning the definition of allocation rules and of the way how numbering resources should be used, as well as the protection of consumer interests) thus remain in force, namely prices on the "707" and "708" (Universal Access Services) and "809" (shared cost call service) ranges, set out by determination of 16.01.2004, the "760" range, set out by determination of 28.01.2004, the "761" and "762" ranges set out by determination of 04.04.2007, and the "800" and "808" ranges, resulting from the National Numbering Plan.

In the specific case of added-value services (audio-text services), as they are not deemed to be electronic communications services *per se*, according to Decree-Law No. 177/99, of 21 May, they remain subject to compliance with applicable legislation.

selection identification code, or via a pre-selection modality, with a facility to override any pre-selected choice on a call-by-call basis, by dialling a company's selection identification code.

On the other hand, the SLRO consists in a wholesale offer, at a specific price, of the right to bill PTC's telephone line, which allows other companies to make available their own retail offers, that integrate the resale of the line and telephone traffic services.

These offers, which were imposed on 2004 in the scope of retail markets of access to the public network at a fixed location, no longer apply to these markets. However, as wholesale obligations, their imposition will be weighted in the scope of the wholesale market of call origination in the public telephone network at a fixed location, in the scope of which consideration shall be given to their structuring role in ensuring the competitiveness of retail markets, as follows from conclusions of this document.

5.4. Conclusion

Based on the analysis made above, it was found that markets of access to the public telephone network at a fixed location, retail markets of publicly available telephone services at a fixed location and the retail market of non-geographic call services are not relevant for the purpose of *ex ante* regulation.

In addition, the PT Group, the operator that was found to hold SMP in these markets in the last market analysis procedure, no longer has SMP and consequently ceases to be bound to compliance with obligations that were imposed on it in this scope.

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List of acronyms and abbreviations

ADSL	Asymmetric digital subscriber line
BCI	Beginning of confidential information
BTS	Base transceiver station
CATV	Community Antenna Television
CLI	Calling line identification
CPI	Consumer Price Index
DL	Decree-Law
DOCSIS	Data over cable service interface specification
DSL	Digital subscriber line
ECI	End of confidential information
ECL	Electronic Communications Law
EURODOCSIS	European data over cable service interface specification
FTS	Fixed Telephone Service
FTTB	Fibre to the building
FTTH	Fibre to the home
FWA	Fixed Wireless Access
GSM	Global system for mobile communications
GPRS	General packet radio service
HFC	Hybrid fibre coaxial
HHI	Herfindahl-Hirschman Index
IP	Internet Protocol
ISDN	Integrated Service Digital Network
ITED	Regime that governs the design and installation of telecommunication infrastructures in buildings and respective connections to public telecommunication networks
ITUR	Telecommunication infrastructures in housing developments, urban settlements and concentrations of buildings
LLRO	Leased Lines Reference Offer
M2M	<i>Machine-to-machine</i>
MoU	Memorandum of Understanding
MTS	Mobile Terrestrial Service
MVNO	Mobile virtual network operator

NAN	New access networks
NGN	Next-Generation Networks
NNP	National Numbering Plan
OSP	Other non-PT Group operators
PPCA	<i>Posto privado de comutação automática</i> (Private Automatic Branch Exchange)
RCAO	Reference Conduit Access Offer
RELLO	Reference Ethernet Leased Lines Offer
RUO	Reference Unbundling Offer
SOHO	Small office / home office
SLRO	Subscriber Line Resale Offer
SME	Small and Medium-sized Enterprises
SMP	Significant Market Power
SMS	Short message services
SSNIP	Small but significant non-transitory increase in price
US	Universal Service
UMTS	Universal mobile telecommunications system
VAT	Value-added tax
VOB	Voice over broadband
VOI	Voice over internet
VOIP	Voice over Internet Protocol

List of operators

Colt Telecom	COLT Technology Services, Unipessoal, Lda.
G9SA	G9 SA - Telecomunicações, S.A.
Parfritel Group	Group composed of Bragatel, Pluricanal Leiria and Pluricanal Santarém
PT Group	Portugal Telecom Group
Lycamobile	Lycamobile Portugal, Lda.
MEO	Meo – Serviços de Comunicações e Multimédia, S.A.
Mundio Mobile	Mundio Mobile (Portugal) Limited
NOS	NOS – Comunicações, S.A.
NOVIS	Novis Telecom, S.A.
ONITELECOM	OniTelecom – Infocomunicações, S. A.
OPTIMUS	Optimus – Telecomunicações, S. A.
Orange	Orange Business Portugal, S.A.
PT PRIME	PT Prime - Soluções Empresariais de Telecomunicações e Sistemas, S.A.
PTC	PT Comunicações, S. A.
Tele2	Telemilénio – Telecomunicações Sociedade Unipessoal, Lda.
TMN	TMN – Telecomunicações Móveis Nacionais, S.A.
TV Tel	TV Tel Grande Porto - Comunicações, S.A.
VODAFONE	Vodafone Portugal – Comunicações Pessoais, S.A.
ZON	ZON TV Cabo Portugal, S.A.
ZON Group	Group composed of ZON TV Cabo Açoreana, S.A., ZON TV Cabo Madeirense, S.A. and ZON TV Cabo Portugal, S.A.
ZON Optimus	NOS – Comunicações, S.A., ZON TV Cabo Açoreana and ZON TV Cabo Madeirense

List of other bodies/organizations

AdC	Autoridade da Concorrência (Competition Authority)
BEREC	Body of European Regulators for Electronic Communications
EC	European Commission
ECB	European Central Bank
Ecorys	ECORYS Nederland BV
ECSI	ECSI Portugal – National Index of Customer Satisfaction
ERG	European Regulators Group
EU	European Union
ICP-ANACOM	ICP - Autoridade Nacional das Comunicações
IMF	International Monetary Fund

Indera	Indera – Estudos económicos, Lda.
ITU	International Telecommunication Union
NRA	National Regulatory Authority
OECD	Organisation for Economic Cooperation and Development
PT	Portugal
Teligen	Teligen tariff and benchmarking knowledge centre