ANACOM AUTORIDADE NACIONAL DE COMUNICAÇÕES

WHOLESALE MARKET FOR CALL ORIGINATION ON THE PUBLIC TELEPHONE NETWORK PROVIDED AT A FIXED LOCATION

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

– Final Decision –

Public Version

August, 2014

Contents

1. Introduction

1.1. Conclusions of the last market analysis

By determination of 8 July 2004[1], the Management Board of ICP - Autoridade Nacional das Comunicações (ICP - ANACOM) approved the definition of wholesale markets for call origination on the public telephone network provided at a fixed location (market 8 of Commission Recommendation 2003/311/EC[2], of 11 February, hereinafter former Recommendation) and for call termination on individual public telephone networks provided at a fixed location (market 9 of the former Recommendation) and the corresponding market analysis and identification of operators with Significant Market Power (SMP).

In this scope, ICP - ANACOM's analysis concluded that the relevant market corresponded to the market for call origination on the public telephone network provided at a fixed location, of a national scope, which included narrowband voice and data call origination at a fixed location (other than dial-up Internet) to geographic and non-geographic numbers and call origination in the access to dial-up Internet services, at the various network levels.

Companies of the Portugal Telecom Group (PT Group)[3] were found to have SMP in this market.

Determination of 17 December 2004[4] approved obligations to be imposed on the referred market, as shown in the table below.

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[1] http://www.anacom.pt/streaming/mercados8e9.pdf?contentId=212253&field=ATTACHED_FILE

[2] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:114:0045:0049:PT:PDF

[3] At that time, such companies 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 later changed its name to MEO – Serviços de Comunicações e Multimédia, S.A. (MEO).

[4] http://www.anacom.pt/streaming/decisao_final17122004.pdf?contentId=246822&field=ATTACHED_FILE

Table 1 – Obligations imposed on the PT Group, as operator with SMP in the wholesale market for call origination on the public telephone network provided at a fixed location

Obligation for transparency in the publication of information, including reference proposals	Obligation for non-discrimination in the offer of access and interconnection and respective provision of information	Obligation for accounting separation regarding specific activities related to access and/or interconnection	Obligation to meet reasonable requests for access	Price control obligation and cost accounting obligation
▪ Obligation to publish a reference offer (RO); ▪ Obligation to publish prices, terms and conditions; ▪ Obligation to publish technical information; ▪ Obligation to publish information on quality of service.	▪ Obligation not to unduly discriminate in the provision of access to the network, including flat-rate interconnection tariff offer.	▪ Costing system and accounting separation.	▪ Obligation to provide network access under fair and reasonable conditions to operators of public electronic communications networks - obligation to meet reasonable requests for network access.	▪ Obligation to establish prices on the basis of costs and price control.

Source: ICP-ANACOM determination of 17.12.2004

1.2. European Commission Recommendation

On 17 December 2007, the European Commission (EC) published a reviewed Recommendation on relevant markets - Recommendation 2007/879/EC[5], which replaced Commission Recommendation 2003/311/EC, on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC[6] of the European Parliament and of the Council, on a common regulatory framework for electronic communication networks and services (hereinafter Recommendation).

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[5] Published in the Official Journal of the European Union(OJEU)on 28 December 2007: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:344:0065:0069:PT:PDF.

[6] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:108:0033:0050:pt:PDF

The current recommendation provides for seven relevant markets[7], one at retail level[8] and the other six at wholesale level[9].

Just like the former Recommendation, the current one is accompanied by an "Explanatory Note"[10] in which EC justifies the definition of new markets.

The market now under consideration, current market 2 (market 8 of the "former Recommendation") is now known as:

- Market 2: Call origination on the public telephone network provided at a fixed location.

1.3. Market analysis procedure

Law No. 5/2004[11], of 10 February, as amended and republished by Law No. 51/2011[12], of 13 September (hereinafter Electronic Communications Law - ECL)[13], approved the legal regime applicable to electronic communications networks and services and to associated

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[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] "Explanatory Note" available at: https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/sec_2007_1483_2_0.pdf .

[11] http://www.dre.pt/pdf1s/2004/02/034A00/07880821.pdf

[12] http://dre.pt/pdf1sdip/2011/09/17600/0438304461.pdf

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

services, and defines the assignments of the National Regulatory Authority (NRA) in this field.

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 (article 18 of ECL).

This procedure takes place according to the following stages (articles 55 to 61 of ECL)[14]:

- Definition of relevant markets (article 58 of ECL)

The NRA is charged with defining the relevant product and service markets 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 EC Guidelines[15] for market analysis and assessment of significant market power under the Community regulatory framework for electronic communications networks and services (hereinafter referred to as the "Guidelines").

- Analysis of relevant markets (article 59 of ECL)

The NRA is charged with carrying out an analysis of the 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 it is possible to identify companies with SMP[16].

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[14] Cf. Framework Directive, articles 7 and14 to 16.

[15] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2002:165:0006:0031:PT:PDF.

[16] 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[17] 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.

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

Where ICP - ANACOM finds that a market is effectively competitive, it must refrain from imposing 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.

Obligations imposed:

- 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 justified 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.

This process of analysis of the wholesale market for call origination on public telephone networks provided at a fixed location draws from conclusions reached as regards related

[17] 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*."

retail markets - retail markets for access to the public telephone network at a fixed location and markets for telephone services provided at a fixed location - to identify measures that are required at wholesale level in order to remedy any competition problems that exist in the referred retail markets. Note that the Explanatory Note mentions that market definition is not an end in itself but is a means required in order to reach a certain end.

This market analysis takes the utmost account of positions taken by EC and the European Regulators Group (ERG), which is now known as Body of European Regulators for Electronic Communications (BEREC). The analysis and definition of obligations to be imposed (or withdrawn) take into consideration the principles established in the scope of the ERG Common Position on the imposition of obligations in electronic communications[18] markets.

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 guarantee an effective competition and compliance with public interest objectives.

According to the methodology adopted in the Recommendation, the starting point for the identification of wholesale relevant markets is the characterization of related retail markets, of their geographic scope and of competitive pressure they face, both on demand-side and supply-side, from a forward-looking perspective. This analysis is undertaken in the document "Analysis of markets for access to the public telephone network at a fixed location and of markets of public telephone services provided at a fixed location", submitted to public consultation together with this document.

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 on related wholesale markets. Relevant wholesale markets of the same dimensions - product market(s) and geographic market(s) - are consequently defined, being assessed whether in these markets SMP exists. Lastly, the document focuses on

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[18] "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.

regulatory obligations to be imposed on companies holding SMP in wholesale markets concerned or, in the absence of SMP, how obligations formerly imposed should be withdrawn.

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 that it agrees with the definition of relevant product and geographic markets, and mentions that the maintenance/imposition of obligations on this wholesale market is fully justified.

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 04.08.2014, EC submitted its observations to ICP - ANACOM, 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.

As regards the wholesale market for call origination provided at a fixed location, EC notes that different groups of companies are analysed, such as the PT Group and the ZON group, referring that ICP - ANACOM "*follows such approach in order to comply with the notion of undertaking foreseen in the relevant provisions of Portuguese competition law*".

In this context, EC refers that, "*under the EU Regulatory Framework, however, it is individual undertakings that are required to be identified for the purposes of ex ante regulatory intervention*", and given that ANACOM's SMP designation incorporates undertakings within the PT Group which operate in the wholesale fixed call origination market, without specifying which undertakings are precisely referred to, EC "*invites ANACOM to fully clarify in its final adopted measure the specific undertakings within the PT Group that have SMP*".

EC further makes observations under the heading "*Monitoring the market for wholesale fixed call origination*". In this scope, it mentions that retail market shares of the PT Group, while still higher than 50%, have been falling, and "*requests of access seekers for both CS/CPS and WLR services have been decreasing*". It states also that ICP - ANACOM highlights that "*the evolution of ANOs' market positions over recent years has contributed to the lowering of barriers to entry and expansion, although they remain high*."

EC further declares: "*with regard to ANACOM's finding that the market for wholesale fixed call origination remains, for the time being, susceptible to ex ante regulation, the Commission acknowledges ANACOM's clarifications, notably its reference to the fact that, despite the abovementioned fewer requests for CS/CPS services, smaller operators with less investment capacity, using the PTC network due to its ubiquitous nature and capillarity, would in the short to medium term still contribute to the competitive forces necessary to safeguard an effectively competitive retail market. In this respect, ANACOM explains that regulated CS/CPS and WLR, because they enable, in the meanwhile,* *competitive retail offers, notably for customers with multi-site locations, are for the moment proportionate measures to preserve the achieved level of retail competition*."

Lastly, given the background "*of the diagnosed growing importance of pro-competitive developments relating to the relevant market*", the Commission concludes by insisting "*that ANACOM makes every effort to closely monitor the market and, depending on the latter's further evolution, to assess whether a new market review (for the relevant market) would be required prior to the (standard) review period of three years having passed*."

1.4. Developments occurred in the market

Since mid-2004, when analyses referred earlier were published, the following events, with relevance at the level of markets defined, took place in the electronic communications market:

- The acquisition in 2007 by Sonaecom – Serviços de Comunicações, S. A. (Sonaecom)[19] of the sole control of total share capital of Telemilénio - Telecomunicações, Sociedade Unipessoal, Lda.[20];
- The acquisition in 2007 by Sonaecom of the sole control of a set of assets that correspond to the residential and small office home office (SOHO) segments of the retail fixed network communications business (Voice and Internet) held by OniTelecom - Infocomunicações, S. A. (Onitelecom);
- The spin-off of PT Multimédia – Serviços de Telecomunicações e Multimédia, SGPS, S.A., (ZON Multimédia – Serviços de Telecomunicações e Multimédia, SGPS, S.A.) from Portugal Telecom, SGPS, S.A., which took place on 7 November 2007;
- The acquisition in 2008 by ZON Multimédia – Serviços de Telecomunicações e Multimédia, SGPS, S. A. (ZON Multimédia) of the sole control of Bragatel - Companhia de Televisão por Cabo de Braga, S.A., Pluricanal Leiria –

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[19] Renamed Optimus – Comunicações, S. A. (Optimus) as from 1.07.2010.

[20] For the purpose of statistical processing, in this analysis, ICP - ANACOM considered aggregated data as of July 2007.

Televisão por Cabo, S.A., Pluricanal Santarém – Televisão por Cabo, S.A. and TVTEL Comunicações, S.A.[21];

- The definition by the Government, in July 2008, of strategic guidelines for the development of Next Generation Networks (NGN) and the implementation of new policies arising therefrom, namely the conclusion in January 2009 of a protocol between the Government and several operators, including PT Comunicações, S. A. (PTC), ZON TV Cabo Portugal, S.A. (ZON) and Sonaecom in a first phase, and after that, DST/DSTELECOM and Onitelecom. This initiative resulted in investments in a multi-services platform, which despite being more significant at the level of access networks, in a forward-looking perspective may also have an impact at the level of the core network;
- By the end of 2010, Optimus – Telecomunicações, S.A. (Optimus) and Vodafone Portugal – Comunicações Pessoais, S.A. (Vodafone) concluded a sharing agreement concerning next generation fibre network infrastructures in the urban areas of Lisbon and Oporto, which extended the commercial offers of both operators in those areas. On the basis of this agreement, that access network has been developed with impact at the level of accesses that support the telephone service at a fixed location or nomadic telephone service using the Voice over Internet Protocol (VoIP) technology, as a part of triple play service offers;
- During 2010 and 2011, several operators continued to develop their integrated Internet Protocol (IP) multi-service network, some of them having shown in the respective reports and accounts that they currently hold a fully-integrated IP network, 100%-based on international standards;
- On 5 January 2012, PTC informed ICP - ANACOM that, on 29 December 2011, it registered the merger of PT Prime - Soluções Empresariais de Telecomunicações e Sistemas, S. A. (PT Prime) into PTC;
- On 2 August 2013[22], AdC approved a decision not opposing the merger between Onitelecom and Altice, the owner of Cabovisão;

[21] For the purpose of statistical processing, in this analysis, ICP - ANACOM considered aggregated data as of the beginning of 2009.

[22] Available at: http://www.concorrencia.pt/vPT/Noticias_Eventos/Noticias/Paginas/CCENT_2013_19_Dec.aspx

- Lastly, AdC issued, on 26.08.2013[23], a decision not opposing the merger between Optimus and ZON, which was subject to conditions and obligations. Further to this decision, 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 May 2014, 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).

1.4.1. Characterisation of the market for call origination on the public telephone networks provided at a fixed location

The wholesale call origination service enables the operator to provide the final user with its own services in the retail market, allowing also the provision, by their party operators, of the following retail services:

- Indirect access service - allows final users to use a provider other than the one supplying access to the telephone service provided at a fixed location, by having calls routed 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;
- Special services provided by a different operator or provider via non-geographic numbering, such as customer support services, directory enquiry services, free call services for the caller, shared-cost call services, universal access services and flat rate call services, virtual call card services, televoting services, dial-up Internet access services[24], among others.

It is noted that, in the two cases identified, the traffic is not owned by the operator that originates the call, but rather by the selected indirect access provider, in the case of the indirect access service, or by the holder of the non-geographic number, in the case of

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[23] Available at: http://www.concorrencia.pt/vPT/Noticias_Eventos/Comunicados/Paginas/Comunicado_AdC_201318.aspx

[24] In this regard, a wholesale offer with specific characteristics is available - ORAI (*Oferta de referência de acesso à Internet* - Reference Internet Access Offer). The service under consideration may also be provided through RIO (Reference Interconnection Offer).

special services, reason for which these providers acquire the origination service from the operator that originates the call. It is the traffic owner that determines prices which the final user is charged.

By the end of the first quarter of 2014, there were 19 bodies qualified to provide the FTS, 15 of which were in operation[25]. From these 15 active bodies, 7 provided the service exclusively via direct access, and the remaining 8 via the two types of access (*vide* Table 2).

Table 2 – FTS providers

	2008	2009	2010	2011	2012	2013	1Q2014
Qualified providers	24	25	25	24	19	19	19
Active providers	17	17	17	15	15	15	15
Providers with direct and indirect access traffic	11	10	9	9	9	8	8
Providers with direct access traffic only	5	6	7	6	6	7	7
Providers with indirect access traffic only	1	1	1	0	0	0	0

Units: Number of providers

Source: The Communications Sector 2012 and FTS report for the 1st quarter 2014, available at: http://www.anacom.pt/render.jsp?contentId=1241432

As regards the nomadic VoIP service, by the end of the 1st quarter of 2014, there were 24 providers qualified for the provision of this service, but only 14 were actually in operation.

Resale providers of voice telephone traffic should also be mentioned, and by the end of the 1st quarter of 2014, only 5 of the 18 qualified providers for the provision of that service were actually in operation.

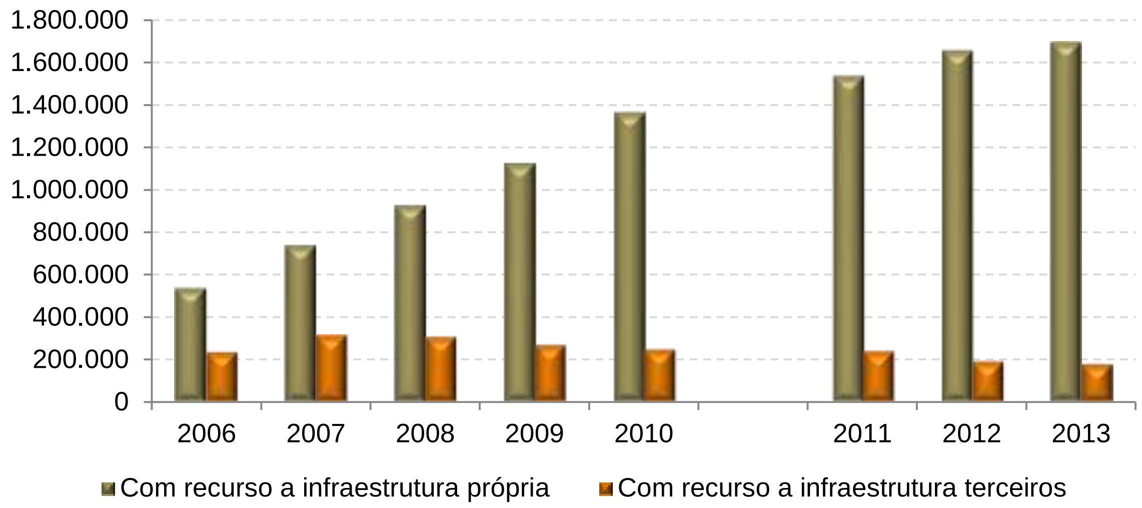
Among companies referred, only companies of the PT Group are under the obligation to provide to third parties the wholesale call origination service so as to allow the provision of the indirect access service. On the contrary, as regards the call origination service at a fixed location for non-geographic numbers, it is provided by all providers of the direct access FTS service, given that they are all providers of access to special services provided by other operators and supported on non-geographic numbering.

[25] Bodies that, according to available statistical information, registered traffic in the period under analysis.

Retail markets associated to this wholesale market - markets for access and of telephone services provided at a fixed location for residential customers and non-residential customers - are analysed in a separate document.

The relevance of the call origination service has been decreasing, both in terms of traffic volume and of revenues (Chart 3), which reflects the positive evolution of the number of direct accesses held by alternative operators and the consequent reduction of indirect access traffic, as can be seen from charts below.

Chart 1 – Evolution of the number of direct accesses of alternative operators



Using self-owned infrastructure Using infrastructure owned by third parties

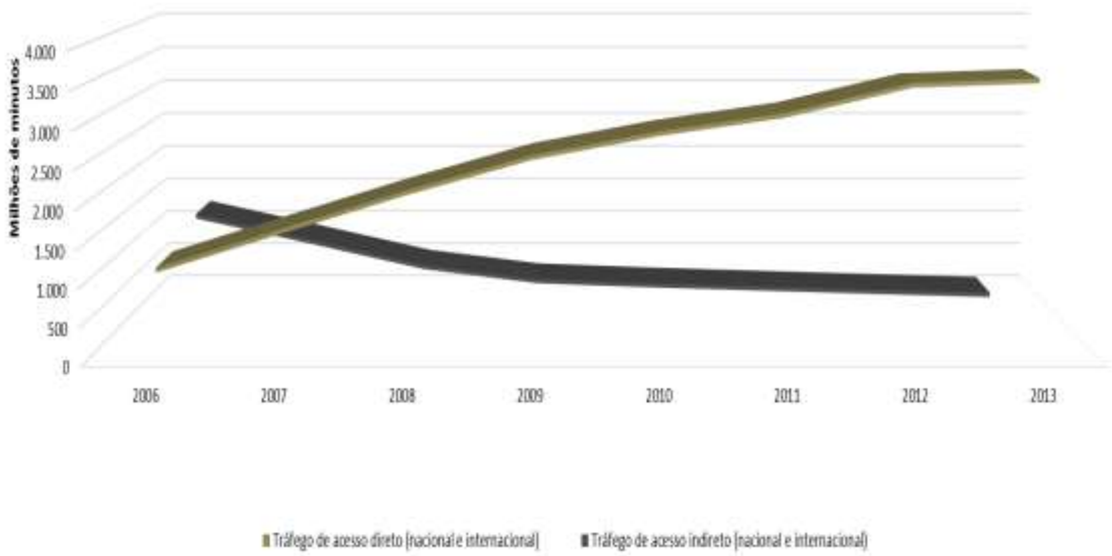
Source: Responses of providers to statistical questionnaires and ICP - ANACOM

Note: Between 2010 and 2011, a change in reporting requirements for this information was introduced, which led to a disruption of the statistical series.

Information provided in this document generally corresponds to data submitted by service providers to ICP - ANACOM for the end of 2013. Information now provided was collected from operators/ providers, and may have been amended, although slightly, as a result of reviews or updates made by operators/ 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.

Chart 2 – Evolution of national and international retail voice traffic (fixed-to-fixed and fixed-to-mobile traffic) of alternative operators

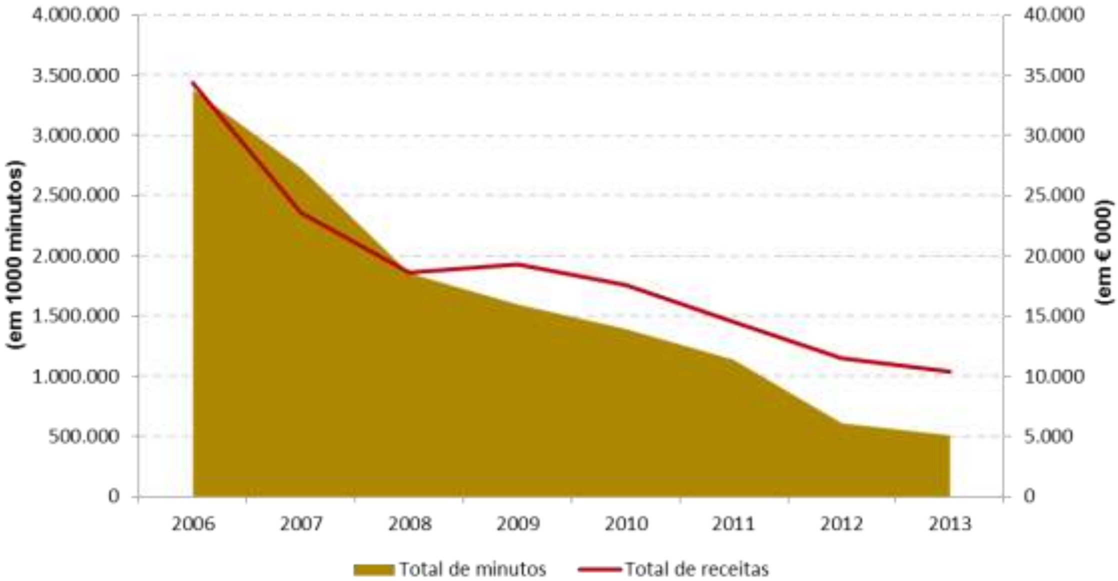


Million minutes Direct access traffic (national and international) Indirect access traffic (national and international)

Source: Responses of providers to statistical questionnaires and ICP - ANACOM

The chart below illustrates the very significant decrease of traffic and revenue volumes associated to the wholesale origination market. Between 2006 and 2013, the volume of routed minutes decreased by more than 80% and the value of revenues decreased by nearly 70%.

Chart 3 – Evolution of the wholesale call origination market



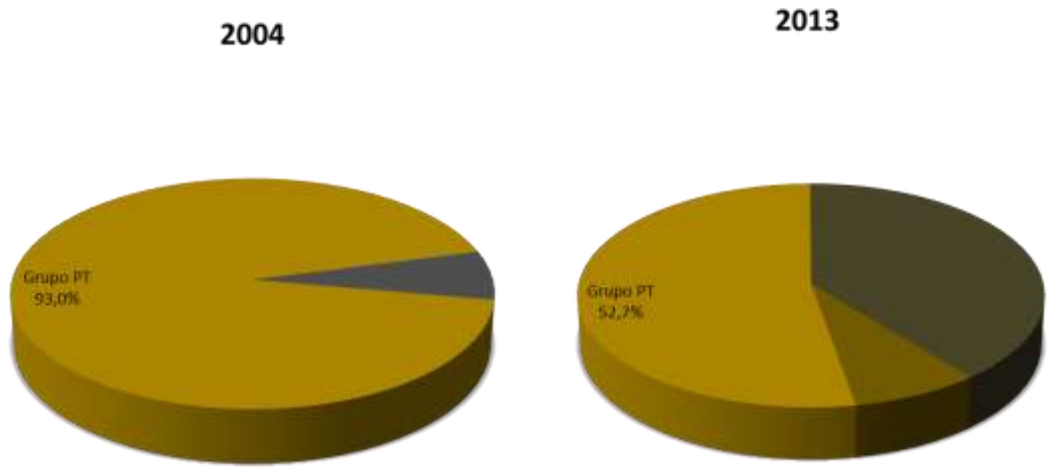
(in 1000 minutes) Total minutes Total revenues (in € 000)

Note: Includes traffic and revenue estimates of PTC's capacity-based interconnection offer. Origination minutes and revenues in the modality of capacity-based interconnection were estimated on the basis, in each year, of the weight of origination in the total time-based traffic. Self-supply not included.

Source: Responses of providers to statistical questionnaires and ICP - ANACOM.

In parallel with the significant decrease of the number of wholesale minutes originated in the public telephone network at a fixed location and also with the increase in the number of direct accesses of alternative operators, the rate of traffic originated in each network also registered a considerable change since the last market analysis in 2004, with a significant reduction of the weight of the PT Group in this market. Chart 4 illustrates this rate in 2004 and in 2013.

Chart 4 – Rate of wholesale origination traffic routed over the public telephone network at a fixed location of each operator

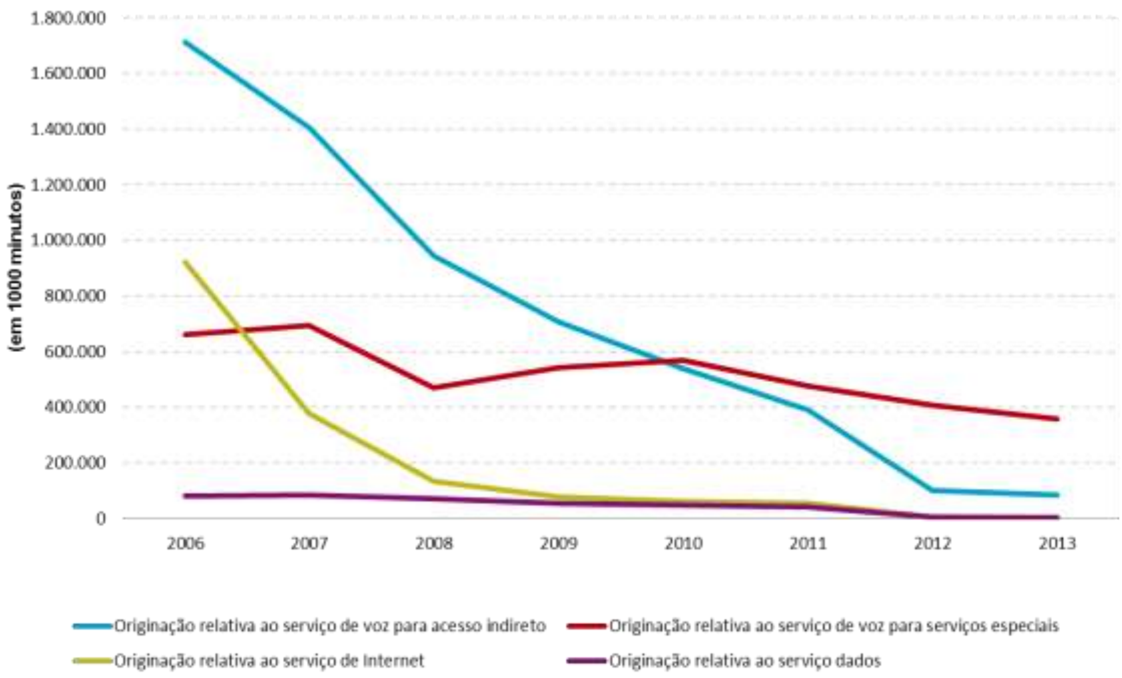


Note: includes traffic estimate associate to PTC's capacity-based interconnection offer. Self-supply not included.

Source: Responses of providers to statistical questionnaires and ICP - ANACOM.

Given the different characteristics of retail calls enabled via the purchase of wholesale call origination services, the evolution of this service will be analysed in detail in the light of the differences that exist in retail services. It is noted in this scope that call origination traffic for retail services has generally registered a significant decrease, except as regards origination for special services, as can be seen from the chart below.

Chart 5 – Evolution of the call origination market according to the type of retail service



(in 1000 minutes)

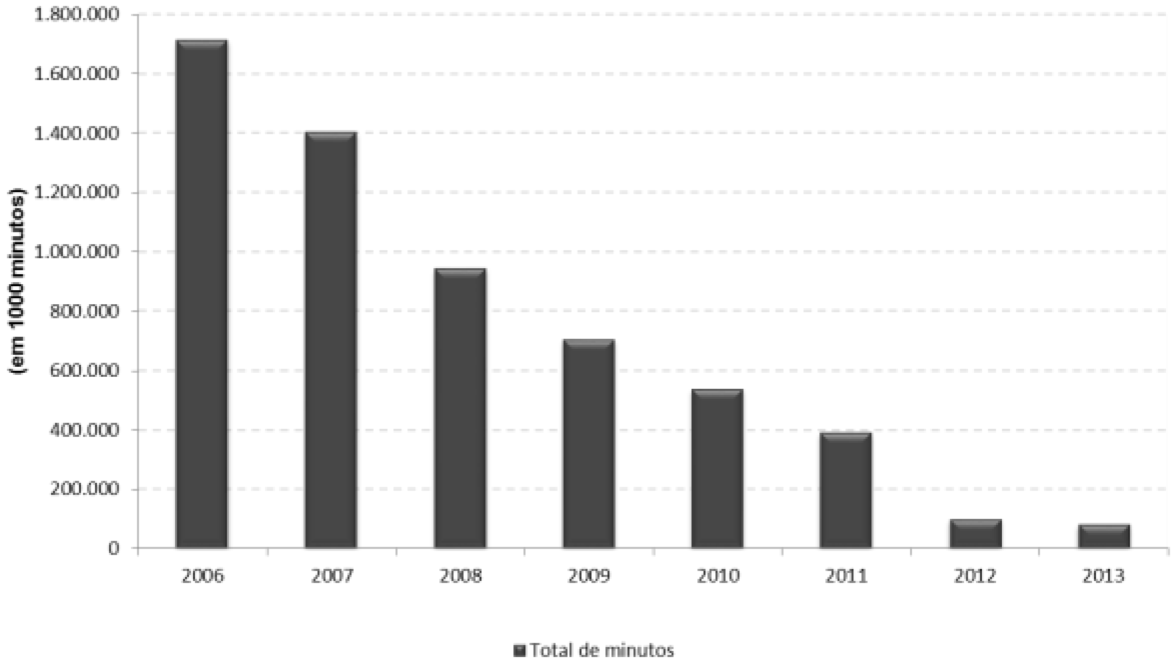
Origination concerning the indirect access voice service   Origination concerning the voice service for special services

Origination concerning the Internet service   Origination concerning the data service

Source: Responses of providers to statistical questionnaires and ICP - ANACOM.

The next chart shows the evolution of traffic associated to voice call origination services for indirect access operators, which has registered a significant decrease in recent years.

Chart 6 – Evolution of wholesale call origination traffic for the indirect access service

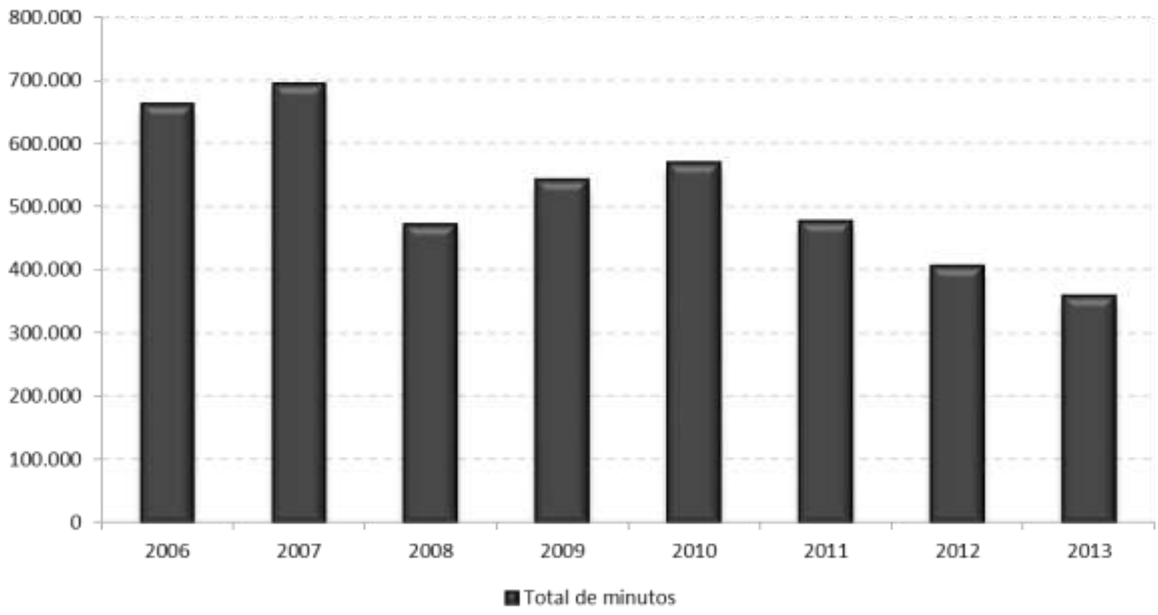


(in 1000 minutes) Total number of minutes

Source: Responses of providers to statistical questionnaires and ICP - ANACOM.

The evolution of call origination traffic for special services provided via non-geographic numbering of other providers has shown some changes, given than between 2007 and 2008 and between 2010 and 2013 this traffic registered a decrease, whereas in the remaining periods traffic increases were registered.

Chart 7 – Evolution of wholesale call origination traffic for special services



Total number of minutes

Source: Responses of providers to statistical questionnaires and ICP - ANACOM.

Origination concerning the provision of narrowband Internet access services is provided in the wholesale market by four bodies, the PT Group included, the traffic marketed by the latter representing nearly the whole of traffic. As regards origination services for data services, three operators provided the service by the end of 2013. It was found that the origination traffic associated to these services showed a decrease and that it is merely residual in the context of total origination traffic (Chart 5).

2. Definition of the wholesale market for call origination on public telephone networks provided at a fixed location

Under the Community regulatory framework applicable to electronic communications, which complies with Community competition law, relevant markets are defined by crossing 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 use[26].

The exercise of defining the relevant product or service market, which must be carried out in the light of national circumstances and taking the Recommendation on Relevant Markets and the "Guidelines" into account, commences by grouping together products or services that are used by consumers for the same purposes/end use[27], that is , according to demand.

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

In this context, there are two main competitive pressure: (i) demand-side substitution; and (ii) supply-side substitution[28].

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

In theory, the degree of substitutability or complementarity between two products may be estimated on the basis of the cross-elasticity of demand. However, in practise, this is a complex analysis and available data are scarce, thus one possible way of assessing the

[26] Cf. Guidelines §44.

[27] Cf. Guidelines §44.

[28] 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.

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)[29].

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 areas[30].

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 pressure on demand and supply-side substitutability.

2.1. Boundaries between wholesale interconnection services

In its Recommendation, EC refers the following definition for the market for call origination on public telephone networks provided at a fixed location:

- Call origination on the public telephone network provided at a fixed location “is taken to include call conveyance, delineated in such a way as to be consistent, in a national context, with the delineated boundaries for the market for call origination and the market for call transit on the public telephone network provided at a fixed location”[31].

EC also provides that the boundaries between call origination and call termination services and transit services may change depending on network topology, being incumbent on NRAs to define the elements that constitute each segment[32].

In the scope of analyses carried out in 2004 and 2005, concerning the definition of relevant markets and SMP assessment in markets 8, 9 and 10 identified in the previous Recommendation (*vide* Determination of 08.07.2004, on wholesale call origination and termination markets, and of 25.05.2005, on the market of transit services in the fixed

[29] Cf. Guidelines §40-43.
[30] Cf. Guidelines §56.
[31] Cf. Recommendation, (*vide* in the annex the definition of market 3)
[32] Cf. Recommendation - Explanatory Notes, page 27.

public telephone network), three interconnection markets were defined, with the following boundaries:

- Call origination on the public telephone network at a fixed location

  Origination consists of the service whereby an operator and/or provider conveys a call originated on a terminal point of its network up to a specific interconnection point of another operator. In the case of PTC's offer, it comprises local origination, single transit origination and double transit origination, where applicable (*vide* Figure 1 below).

- Public telephone network transit services

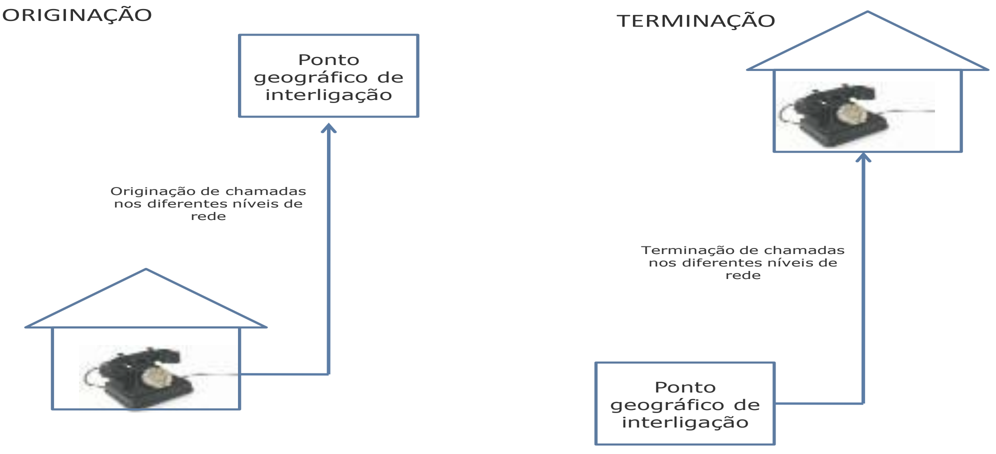
  Transit is defined as the service provided by an operator when conveying calls originated and terminated in networks other than its own (*vide* Figure 2 below).

- Call termination on the public telephone network at a fixed location

  Termination corresponds to the service whereby an operator and/or provider terminates on its own network a call to a terminal point of its network that has been conveyed by another operator. In PTC's case, it comprises local termination, single transit termination and double transit termination, where applicable (vide Figure 1 below).

The analysis performed in 2005 led to the conclusion that the transit market was competitive; this market, in fact, is no longer covered by the Recommendation.

Figure 1 – Origination/Termination definition adopted by ICP - ANACOM



Origination
Call origination at the various network levels
Point of interconnection

Termination
Call termination at the various network levels
Point of interconnection

Source: ICP-ANACOM

Figure 2 – Transit services definition adopted by ICP - ANACOM

Customer of Operator A   Operator A   POI   Transit Operator   POI   Operator B   Customer of Operator B

Source: ICP-ANACOM

ICP - ANACOM believes that the referred boundaries for the three interconnection markets are the starting point for the definition of interconnection markets.

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2.2. Interconnection architecture

The current situation of electronic communications networks in Portugal differs from one operator to another. The switched network of the historical operator follows a traditional topology and sizing for a network whose construction started many years ago. For this reason, the Reference Interconnection Offer (RIO) identifies the following hierarchical levels[33]:

- Level 1 - National Transit Switches;
- Level 2 - Regional Transit Switches or Network Group Centre (*Centro de Grupo de Redes* - CGR);
- Level 3 - Local Digital Switches.

Figure 3 briefly presents PTC's network structure, and it may be seen that there are some direct meshes (between same level or different level switches).

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[33] In the scope of RIO, PTC defines the origination service as "*the service whereby PT Comunicações conveys a call originated on a terminal point of its network to a specific interconnection point of another OSP*."

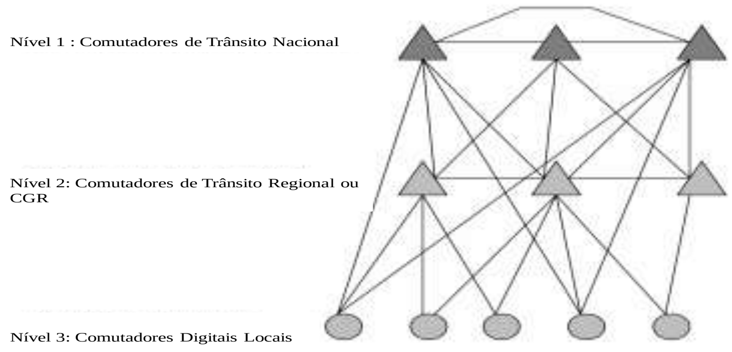
Types:

Local - where the call to be conveyed by PT Comunicações has been originated on a terminal point of its network whose numbering level belongs to the Local Point of Interconnection where it is conveyed to.

Simple Transit - where the call to be conveyed by PT Comunicações has been originated on a terminal point of its network and conveyed to an OSP at a Regional POI whose numbering level belongs to the same Network Group Centre or the same Distribution Centre in the Lisbon or Oporto Network Groups.

Double Transit - where the call to be conveyed by PT Comunicações has been originated on a terminal point of its network and conveyed to an OSP at a POI whose numbering level belongs to a different Network Group Centre or a different Distribution Centre in the Lisbon or Oporto Network Groups. National POI (except those in Funchal and Ponta Delgada) are not deemed to belong to any Network Group Centre.

Figure 3 – Schematic diagram of PTC's network structure[34]



Level 1: National Transit Switches

Level 2 - Regional Transit Switches or CGR

Level 3 - Local Digital Switches

Source: ICP-ANACOM

As described in RIO[35], PTC's network is made up of six national transit switches (Level 1), 51 simple transit switches or CGR (Level 2) and 110 local digital switches (Level 3), which provide geographic Points of Interconnection (POI) which may be of a national, regional and/or local type.

In the scope of RIO, the interconnection between PTC's POI and an OPS's POI continues to operate on the basis of signalling system No. 7 (SS7) [36], using the ISUP (ISDN User Part) protocol, over the public switched telephone network (PSTN). As such, IP voice traffic conveyed to an interconnection point, in case an IP interconnection is not available, will have to be converted so that it is conveyed to the wholesale provider under the appropriate protocol.

[34] Where CGR corresponds to *centro de grupo de redes* (network group centre).

[35] RIO V2.1/ 2013 of 2013.12.30 (PTC), available at: http://ptwholesale.telecom.pt/GSW/PT/Canais/ProdutosServicos/OfertasReferencia/ORI/Ori.htm

[36] The following elements are defined at the level of the network architecture based on the SS7: signalling points (SP) which corresponds to a signalling network addressing node, and signalling transfer point (STP) which corresponds to a node with signalling network transit functions. Both functions may be included in the same node.

Nevertheless, in this context of network architecture, the evolution of networks and their implications at the level of the interconnection architecture itself must be taken into account. In fact, the offer of services based on the Internet Protocol (IP) has registered significant developments, large investments having been announced and engaged. It is likely that the introduction of NGNs bring about relevant efficiency gains with an impact on the market under analysis. In recent years, networks of all operators, including PTC, have developed to be able to be operated in an IP environment. This entails a network with a very high capacity while requiring lower investment and maintenance costs, maintaining similar reliability characteristics as the historical network and additionally allowing the provision of other services that are considerably more demanding in terms of the required capacity.

As far as structure is concerned, in NGN, switches are not necessarily subject to a pyramid scheme given that each local switch may be connected to one or more switches at different levels. Voice packages for a given call between final users may take different routes, just like the signalling itself and call contents may take different routes.

In more detail, in all-IP networks[37], interconnection for the purpose of ensuring the provision of telephony service depends on some specific elements. The call control server (traditionally softswitch) performs call control functions in IP networks. This server analyses the recipient's address - which may be an E.164 address (telephone number) or an IP address (for example a Session Initiation Protocol (SIP) address) - conveying it to the IP network (where the destination is a user of the same network or a provider with whom an IP connection is available) or to a gateway where the destination is the PSTN network.

In the IP-PSTN or PSTN-IP interconnection, the gateway is the element that codifies and encapsulates voice traffic in IP packages, using, among others, the Real Time transport protocol (RTP), under the control of the call control server.

Interconnection between the public switched telephone network and IP networks operates via PSTN-IP gateways, using on the PSTN side protocols such as SS7 or Digital Subscriber Signalling System No. 1 (DSS1), and on IP side SIP or H.323 protocols,

[37] Networks where not only the core part, but also the access and interconnection parts are supported on IP.

whereas interconnection between IP networks may be operated directly, gateways being required only where signalling systems used are not compatible.

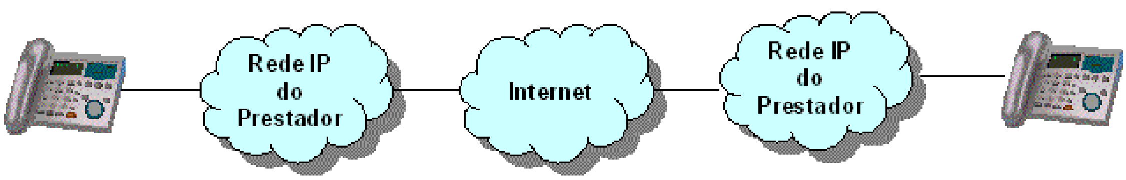
The two following figures illustrate interconnection operated between an IP network and a switched telephone network, and between IP networks.

Figure 4 – Typical setup of an IP-PSTN or PSTN-IP interconnection

Provider IP network Internet PSTN

Source: ICP-ANACOM

Figure 5 – Typical setup of an IP-IP interconnection



Provider IP network Internet Provider IP network

Source: ICP-ANACOM

It should be noted, as far as IP-IP interconnection is concerned, that the most appropriate interconnection architecture will naturally still have to be indicated by the operator providing the termination service, but will also depend on networks of other operators with whom interconnection is to be established, and this situation may evolve according to relations between operators. One of the major points in the definition of the IP interconnection architecture consists in the definition of the required number of interconnection points (and respective location), a number which at the moment is likely to be significantly low compared to what is currently actually required for interconnection purposes with PTC's switched network. However, in the scope of the definition of this number, the security and resilience of interconnections are issues to be taken into consideration.

The regulation of wholesale services must abide by the principle of technological neutrality, and it is essential that it monitors the technological transition of networks to IP technology, particularly as far as interconnection architecture and protocols are concerned. For this reason, hand-in-hand with the necessary consideration of the switched network structure, new networks and respective architectures shall also be taken into consideration in this document, to the extent that they are relevant in the scope of the provision of wholesale interconnection services.

2.3. Definition of the product market

According to EC, "*the relevant market is considered to comprise call origination for telephone calls and for the purpose of accessing dial-up Internet service provision*"[38].

In the first market analysis, carried out in July 2004, ICP - ANACOM, on the basis of EC's definition, investigated the possibility of including, in the product market definition, direct access, retail communications, call origination on the mobile network, call origination for access to dial-up Internet services, call origination services in the various network levels, call origination to geographic numbers and to non-geographic numbers and call origination for residential customers and for non-residential customers.

Further to this analysis, ICP - ANACOM concluded that the market for call origination on the public telephone network at a fixed location included the narrowband voice and data call origination service to geographic numbers and to non-geographic numbers at a fixed location and call origination for access to dial-up Internet services, at the various network levels.

ICP - ANACOM believes that it is useful to review products and services analysed in 2004, as well as others deemed to be relevant on account of the natural market evolution, taking a technology neutral-approach. Accordingly, building on definitions of retail product

[38] Cf. Recommendation – Explanatory Note page 26.

markets for access to the public telephone network at a fixed location for residential customers and non-residential customers, for telephone services provided at a fixed location and for call services to non-geographic numbers, ICP - ANACOM will define the wholesale product market.

In this context, it is next discussed whether:

(i) Wholesale services provided using different technologies and interfaces;
(ii) Call origination from customers of the nomadic VoIP service (range “30”);
(iii) Call origination to non-geographic numbers;
(iv) Direct access;
(v) Call origination on mobile networks;
(vi) Call origination at a fixed location by using access networks based on GSM/UMTS frequencies (homezone products);
(vii) Call origination for access to dial-up Internet services;
(viii) Call origination at the various network levels;
(ix) Call origination for residential customers and for non-residential customers;
(x) Self-supply of call origination services,

are part of the market for call origination on the public telephone network at a fixed location, using for the purpose the methodology described in this chapter.

2.3.1. Wholesale services provided using different technologies and interfaces

In the specific scope of the definition of the origination market, where the analysis focuses on the service provided by an operator to another (or to itself) whereby a call originated on a terminal point of its network is conveyed to a specific point of interconnection with another operator, it is deemed that the way how this call is technically produced is not relevant. Products included in this market should be defined according to their function (services provided) and not to the technology or the type of supporting network, a principle which reflects the customer perception of the retail service provided.

As such, and although the current call origination relevant market integrates only SS7-based interfaces for interconnection of wholesale traffic, the interconnection between the public switched telephone network and IP networks, or between IP networks, is likely to become more important, namely in a context of the growing trend of VoIP offers[39].

It must be stressed in this regard that traffic services (voice communications) are provided indiscriminately, regardless of the type of access to the fixed network, and final customers do not perceive the difference between a traditional telephone service and a service based on VoIP technology.

Note also that operators in general have invested in IP networks, and it is expected that in a relatively near future, the currently predominant network architecture, based on circuit switching and SS7 protocol, is gradually replaced by the IP protocol. On the other hand, there are operators who provide traditional telephone services at a fixed location in parallel with IP services. In fact, by the end of 2013, there were around 1.5 million accesses supporting the IP voice service provided at a fixed location (that is, accesses other than analogue access or Integrated Services Digital Network access - ISDN), which are used for the provision of a multiple-play service package, corresponding to around 33% of total equivalent accesses.

In summary, it is deemed that the conditions required to allow operators to be provided, to a smaller or larger degree, with the necessary elements to convert the two types of traffic (TDM – Time Division Multiplexing and IP), are currently in place, whereby the different types of interconnection may be used. Additionally, it is stressed that regardless of whether interconnection occurs via interfaces or via IP, the differences between these two services at wholesale level are also not perceived by the final customer.

Within the framework of the principle of technological neutrality, marketed products are not defined according to the way how they are produced or to the technology involved, but according to characteristics that are visible to the purchaser. Along the same lines, it is noted that wholesale services that are conveyed using new interconnection interfaces, including IP-IP, enable operators to supply products in the retail market similar to those supported on existing wholesale offers (origination), which is why they belong in fact to the same relevant market. In particular, the fact that traffic may be conveyed, before and after

[39] Consistently with the analysis carried out in the following section, these offers exclude simple VoI offers, and always involve the allocation of numbering resources.

the delivery, over TDM network or IP network, should remain neutral in the definition of the product from a consumer's point of view, as it will be indifferent to the latter which conveyance technology is used by the operator providing the wholesale service.

As such, and again taking into account investments that most operators have made in IP networks and the relative ease of the conversion between the two types of traffic (TDM and IP), although some additional costs may be involved, it is deemed that call origination services over the public telephone network at a fixed location, supported on SS7 or on alternative interfaces, belong to this market.

2.3.1.1. Call origination from customers of the nomadic VoIP service (range "30")

Under point hh) of article 3 of ECL, the publicly available telephone service is defined as "a service available to the public for originating and receiving, either directly or indirectly, national calls or national and international calls through a number or numbers included in a national or international numbering plan".

Without prejudice, and although voice services based on the VoIP technology, in compliance with the referred definition, are clearly telephone service offers[40], it must be verified whether all offers may be included in this market.

In this context, three possible forms of use of the VoIP technology can be distinguished, namely:

(i) **Fixed**, where the use is always made at the same location or address;

(ii) **Nomadic**, where the connection may take place in different locations of the country (different geographic areas), or even abroad;

(iii) **Mobile**, in case it is possible to maintain a moving voice session throughout the national country.

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[40] It is noted that this definition does not include voice services provided over the Internet, where information on the voice signal is supported mainly over computer-to-computer connections. In this case, at the level of quality, the priority between the various packages that convey that signal is identical to 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; the VoI service presents features that are clearly different from those made available by offers of traditional telephone services.

In the case of mobile VoIP services, this analysis is included in the assessment made in the specific chapter on call origination on mobile networks - vide chapter 2.3.4.

As regards fixed and nomadic VoIP, ICP - ANACOM defined on 23.02.2006[41] the outlines of the regulatory approach for VoIP services. In this determination, 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, where the telephone service was provided at a fixed location, the responsibility for compliance with this requirement (use at a single fixed location) falling on the VoIP provider.

The same decision determined also the opening of a new non-geographic numbering range - “30” -, in order to distinguish nomadic-use VoIP from fixed telephone services, having been stressed the need for immediate implementation of portability within the “30” numbering range by providers of nomadic VoIP services. As regards VoIP services supplied by a provider based broadband access owned by third parties or of typically nomadic use, ICP - ANACOM considers that the use of a non-geographic numbering range is deemed to be appropriate, so as to distinguish such services from the telephone service provided at a fixed location (with a geographic numbering range).

In this way, not only was access of these providers to numbers of the National Numbering Plan (NNP) enabled, allowing the respective customers to receive PSTN calls in any location of the country using non-geographic numbering, but an efficient use of numbering resources was also safeguarded.

In conclusion, in Portugal VoIP services may use both geographic numbering ranges and nomadic non-geographic numbering ranges (the referred “30” range), according to whether services provided are fixed or nomadic. However, taking into account that characteristics of the VoIP service provided at a fixed location and nomadic VoIP services are similar, in most cases, from the final customer’s perspective, services provided using the “30” range or geographic numbering are not perceived as being different.

In this context, while at retail level there may be substitutability between VoIP services at a fixed location and nomadic VoIP services, at wholesale level, the VoIP origination service has been provided using PSTN-PSTN interconnection, with the possibility of being

[41] http://www.anacom.pt/render.jsp?contentId=449726

provided via IP interconnection, and it is noted that network elements that are used do not change whether VoIP traffic provided at a fixed location or nomadic VoIP traffic are concerned.

It is noted also that, in several countries where telephone service offers based on VoIP technology are available, no nomadic numbering is available, as nomadism is ensured by offers with geographic numbering, and cannot be distinguished from the latter.

As such, it is concluded that the wholesale market for call origination on the public telephone network at a fixed location includes call origination in accesses identified both via geographic numbering and nomadic numbering[42].

2.3.2. Call origination to non-geographic numbering

According to the analysis carried out in July 2004, ICP - ANACOM concluded that the market included call origination to geographic and to non-geographic numbers[43].

As referred in chapter 1.4.1 above, wholesale origination services enable the conveyance of several types of calls. These services allow operator A to convey traffic to a second operator B, routing the call of a final user physically connected to its network, who selected operator B to originate calls (indirect access), regardless of the destination of such calls.

Moreover, call origination services also enable access by final users to special services provided by operators/providers other than the direct access operator, typically voice and data calls to non-geographic numbers, including, among others, customer support services, enquiry services, calls free of charge to the caller or shared cost call services.

[42] Most NRA included services based on VoIP technology in the relevant market.

[43] At retail level, ICP - ANACOM defined in the scope of the former Recommendation the market of publicly available telephone services for non-geographic numbers at a fixed location (market 19), having referred that calls to non-geographic numbers involve the conveyance of a non-geographic number to a network termination point, that is, the translation of a non-geographic number into a geographic number, thereby enabling the number to be routed to a specific location. Services provided over non-geographic numbers include sales services, marketing, customer support, enquiry services, among others, and depending on associated services, they may be free of charge (ex. freephone numbers) or be associated to a local or national tariff or even be charged as added-value services.

In this section, it must be analysed whether services described above are included in the same relevant market.

Considering that at retail level the various types of calls may not be substitutes for each other, it could be inferred that the same situation was true at wholesale level.

However, from a wholesale market supply viewpoint, the service provided is the same. Both services use the same network resources, thus an operator providing origination to geographic numbers is provided with all production factors required to supply origination services to non-geographic numbers.

As such, given that an operator that provides the wholesale service for call origination on the public telephone network at a fixed location to geographic numbers is also able to supply at the same time call origination on the public telephone network at a fixed location to non-geographic numbers, and effectively does so, it is deemed that both origination services integrate the same relevant market.

A priori, additional costs borne with the latter service will be related to the provision of the billing, charging and risk of non-recovery service, which is remunerated independently of the origination service, although it may be an essential element for the provision of the service, in the case of retail calls with an associated price. In the case of the provision of services where calls are free-of-charge for the caller (such as calls to the “800” range), the call origination service provided to the operator holding the non-geographic number is not associated to the billing, charging and risk of non-recovery service.

Bearing in mind that the call origination service implies, under specific circumstances, as referred above, the joint provision of the billing, charging and risk of non-recovery service, the latter is deemed to be an essential element of the general provision of the call origination service, and as such it must be integrated in the same relevant market.

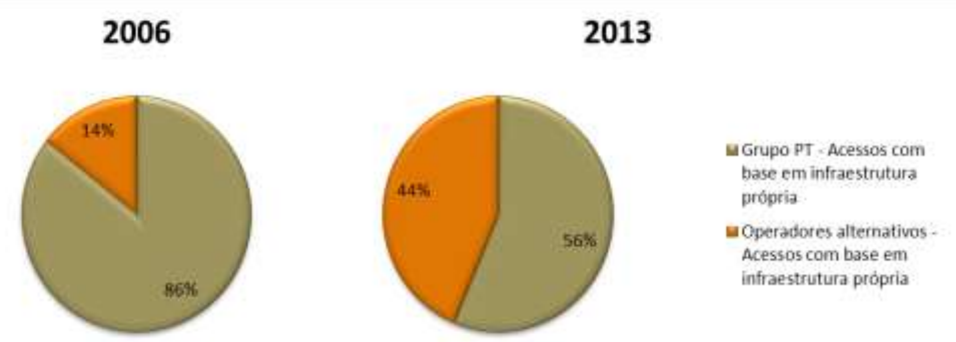
2.3.3. Direct access

According to the analysis carried out in July 2004, ICP - ANACOM concluded that the construction of a network for access to the final customer at a fixed location and/or the take-up of the Reference Unbundling Offer (RUO) could not be deemed to be substitutes for call origination on the public telephone network at a fixed location.

From a demand-side perspective, possible alternatives to the purchase of call origination on the public telephone network at a fixed location would require that the operator purchasing this service built its own alternative means of access, regardless of the technology used (for example: cable, copper, fibre, fixed wireless access (FWA), etc.) or purchased or accessed a pre-existing network (by taking up RUO for example).

The construction or purchase of infrastructure for access to the final customer involves considerable and slow investments. Notwithstanding investments made by alternative operators in recent years, which led to a significant increase of direct accesses of these operators by using self-owned infrastructure (an increase by over 200% since 2006, *vide* Chart 1), companies of the PT Group still held, by the end of 2013, more than 50% of all accesses supported in self-owned infrastructure, as illustrated by the chart below.

Chart 8 - Total accesses supported on self-owned infrastructure according to operator



PT Group - accesses based on self-owned infrastructure

Alternative operators - accesses based on self-owned infrastructure

Note: Between 2010 and 2011, a change in reporting requirements for this information was introduced, which led to a disruption of the statistical series, year 2006 not being directly comparable to 2013.

Values presented are based on non-equivalent accesses.

Source: Responses of providers to statistical questionnaires and ICP - ANACOM

The alternatives, the use of a connection to a pre-established network for access to the final user, either via leased lines or via RUO, also have proven not to be viable substitutes for the purchase of the call origination service, as both imply important levels of investment.

As regards the connection to a pre-established network via leased lines, given the differences of investment and prices as well as functional differences between this service and fixed origination services, it is deemed that these services are not close substitutes. In fact, operators would hardly substitute, in a timely way, the call origination service for the provision of end-to-end retail services supported on the leased lines service, in order to meet a small but significant non-transitory increase in prices of wholesale call origination.

With regard to RUO, which has allowed OSP to provide final customers with narrowband or broadband services, it is considered that, faced with small but significant non-transitory increase in prices of wholesale call origination, an alternative operator would hardly substitute the demand of origination services for the provision of the call service via RUO, as this would not be economically viable.

On the other hand, even if the substitution of call origination for the lease of the full complete line was economically viable, the current take up level of RUO, which is around 4% of the total number of FTS accesses, is not sufficiently relevant to restrict the behaviour of a hypothetical monopolist in the provision of the call origination wholesale service.

The analysis of substitutability on the supply-side is not relevant, bearing in mind that all operators who are in a position to supply the voice call origination service also own their own networks.

As such, ICP - ANACOM maintains its position that the construction of an alternative network for access to the final customer or purchase of access to an established network connection (namely via RUO) are not viable substitutes for the acquisition of call origination, as this involves considerable investments, in some cases slow ones. This position is also shared by EC[44].

[44] Cf. Recommendation – Explanatory Note, section 4.2.1, page 26: "*One direct alternative to the purchase of call origination is to establish an access network (cable, fibre, wireless connection etc.) to the end-user*

2.3.4. Call origination on mobile networks

In 2004, ICP - ANACOM analysed substitutability between call origination on individual public telephone networks at a fixed location and origination on mobile networks, having concluded that the latter is not a substitute for call origination on individual public telephone networks at a fixed location.

This section analyses whether today and in the context of this market, a mobile telephone call is able to substitute a call originated at a fixed location or whether access to the public telephone network at a fixed location may be substituted by mobile access for the purpose of making voice and data calls (SMS and Internet access).

The described situation is viable for customers of telephone services provided at a fixed location who are also customers of telephone services provided at a mobile location[45]. However, even in this situation, there are factors, such as mobility and the highly personal nature associated to the provision of the mobile service, in addition to tariff structures which are usually differentiated, that justify the different way how these two services, fixed and mobile, are used, and which in fact lead to different usage profiles. As such, when the potential of networks and terminal equipment is fully harnessed in the provision of mobile services, specific characteristics associated to mobility are presented, which help the final user to have a different perception of accesses at a fixed location and of mobile accesses, and consequently a different perception of fixed and mobile telephone services.

location. Another alternative is to purchase or lease an established network connection to the end-user location (for example through local loop unbundling). Both alternatives entail considerable time and investments, a large proportion of which are sunk. Incumbents continue to enjoy, as regards the local access network, absolute cost advantages due to economies of scale and density. The market for fixed call origination consequently continues to exhibit high and non-transitory barriers to entry. Both the development of alternative access networks (cable, fibre, wireless, etc.) and the degree of local loop unbundling remain, for the time being, limited on a European scale."

[45] According to Marktest data (Telecommunications Barometer study), most individuals with access to the telephone service, around 70%, are provided with both types of access (mobile and fixed).
Technical note: the Telecommunications Barometer is a regular study carried out by Marktest for the telecommunications sector. The Telecommunications Barometer - Mobile Network pool includes individuals over 10 years of age residing in the Mainland and in the Autonomous Regions of Madeira and Azores, where every month a proportional sample of the pool, and representative thereof, is collected, amounting to 1350 interviews per month.

These characteristics entail different functionalities at the level of mobility and quality of the service provided which are reflected in tariff proposals presented by the various operators to final customers.

In addition to differences at retail level, there are also some considerable differences at wholesale level, namely as regards the price charged for origination. The price of origination on mobile networks can be at least 10 times higher than the corresponding price of origination on fixed networks.

Consequently, an operator that intends to purchase the wholesale call origination service to supply voice calls in the retail telephone market provided at a fixed location will not use the mobile network call origination service, given the different functionalities of the service at retail level and the price differential at wholesale level. Moreover, call origination at a mobile location is only available for the purpose of accessing non-geographic numbering.

Bearing in mind that wholesale market demand depends on retail market demand, and in the light of specificities of both services, it is concluded that call origination on the public telephone network at a fixed location cannot be substituted by origination on mobile networks, given that, in case of a small but significant and non-transitory increase of prices imposed by a hypothetical monopolist operator in the former market, the resort to the wholesale service on mobile networks is not likely to be sufficiently high so as to make this price increase unprofitable.

2.3.5. Call origination at a fixed location over access networks supported on GSM/UMTS frequencies (homezone products)

In 2005, offers of telephone services at a fixed location supported on the GSM (Global System for Mobile Communications) and UMTS (Universal Mobile Telecommunication System) technology and network for access to final customers started to emerge on the market. These offers, commonly known as homezone offers, allow access to the public telephone network at a fixed location in a way which is comparable to offers based on fixed networks.

By determination of 25.02.2005[46], ICP - ANACOM authorized such as offer for the first time, having granted NOVIS the authorization to use GSM frequencies of OPTIMUS'[47] 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 did not go beyond what was 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 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).

Subsequently, other operators, such as Vodafone and MEO - Serviços de Comunicações e Multimédia, S.A. (MEO), also launched products with similar characteristics.

Due to their characteristics, the way how they work, tariffs and even the way how operators advertise their offers, these products are perceived by users to be substitutes of the telephone service provided at a fixed location and supported on fixed networks.

At interconnection level, and more specifically at the level of call origination service, operators who have been providing these offers charge for voice call origination at homezone customers an equivalent amount to that charged for origination on fixed networks. In this regard, it must be noted that, on the demand-side, both for the wholesale customer and for the retail customer originating the call, the type of network over which the call is originated or terminated is indifferent, as the price to be paid is the same. In fact, the provision of a retail service at a fixed location, subject to a tariff corresponding to that provision and identified by the respective numbering range, is here under

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[46] Available at: http://www.anacom.pt/template31.jsp?categoryId=207203

[47] Without prejudice to the merger between ZON 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.

consideration, and as such, the associated wholesale interconnection service is the origination service at a fixed location.

As such, although it is crucial for the retail provider to know if the call made is associated to the telephone service provided at a fixed location, so it may purchase the respective call origination wholesale service, this provider may not be aware of the type of access network that was used to originate that call (in case the operator providing the call origination wholesale service holds both a fixed network and a mobile network).

Consequently, demand-side substitutability also exists at wholesale level between call origination services provided at a fixed location through the use of traditional access networks and the same services provided at a fixed location and supported on GSM/UMTS frequencies.

On the supply-side perspective, it must be verified whether, further to a small but significant and lasting price increase of origination at a fixed location, mobile operators would enter this market to provide origination services at a fixed location. This is in fact a situation which already occurs, given that all mobile network operators in the market make available homezone offers, supported on the respective radio networks, providing the call origination wholesale service at a fixed location on the basis of GSM/UMTS networks.

Having regard to the level of demand-side substitutability at retail level between homezone telephone services and telephone services provided at a fixed location and supported on fixed networks, and of demand-side substitutability at wholesale level, it is deemed that at wholesale level the call origination service provided by mobile networks at a fixed location integrates the same product market than the wholesale call origination service provided by fixed networks at a fixed location.

2.3.6. Narrowband Internet access call origination

According to the analysis carried out in July 2004, ICP - ANACOM concluded that voice call origination and call origination for access to dial-up Internet services were part of the same relevant market.

Boundaries of this wholesale market take into account the provision of telephone services in the retail market. As such, it could be considered that telephone services included not only traditional voice calls but also narrowband data services, such as the dial-up Internet service.

It is noted that at wholesale level, the narrowband dial-up access service is provided both via RIO and via the Reference Internet Access Offer (ORAI - *Oferta de referência de acesso à Internet*).

Contrary to RIO, where POI are the physical interface for interconnection between the OSP network and PTC's network, this interconnection being supported on 2 Mbps interconnection circuits, or multiples thereof, with SS7, for the dial-up Internet access call origination service provided via ORAI, PTC makes available the list of Aggregation Points (AP). AP allow Internet Access Providers (IAP) to connect directly to a set of pre-defined switches through remote primary accesses of those switches, as well as, through local primary accesses, to switches that serve the same aggregation point. Internet access services, in this case, are conveyed through the ISP physical interface, called Point of Presence (POP), which is installed in the AP.

Notwithstanding differences registered between these two types of interconnection, which are also visible at the level of prices of the two interconnection offers (RIO and ORAI), both fulfil the same function of providing access to the retail dial-up Internet service supplied by third party operators, although with different technical implementation.

Accordingly, the retail dial-up Internet service may be provided through both wholesale services, customers not perceiving at retail level the supporting wholesale service. As such, it may be concluded that on the demand-side there may be some substitutability between both services.

At wholesale level, voice call origination services and call origination for access to dial-up Internet services are both provided by PTC.

In the light of the above, it is deemed that both services integrate the same relevant market, but this definition does not have any relevant implications at the level of market analysis and of conclusions on SMP, taking into account the increasing lack of importance of the dial-up Internet service since 2005. Between 2005 and 2013, the number of minutes marketed through ORAI decreased by more than 99%.

2.3.7. Call origination at the various network levels

In the market analysis carried out in 2004, ICP - ANACOM concluded that call origination services at the various network levels: local, simple transit, double transit, were provided simultaneously, and integrated the same relevant market, although differences between networks of the various operators were pointed out.

From a demand-side perspective, the operator that purchases a wholesale origination service may “receive” traffic at different network levels, choosing between: i) using the interconnection offer provided by the direct access operator at the first interconnection level or; ii) interconnecting at a higher network level. In the case of PTC, this company provides call origination services at local level, in simple transit and in double transit.

In practise, an operator may use different interconnection steps simultaneously, depending on the respective network architecture, and as such it may be deemed that the various interconnection steps show a high degree of complementarity.

Demand-side substitutability may however be limited by differences that exist in the various network levels as far as origination is concerned, both as regards prices and network infrastructure required to use alternative interconnection steps.

Substituting a higher level origination for a first level interconnection origination does not occur without substitution costs. In fact, substituting a higher level origination for a first level interconnection origination depends on whether the price difference compensates the cost of developing a self-owned network up to those lower-level points or of leasing means owned by other operators, or even the cost arising from the purchase of transit services from third party operators so as to enable that substitution. However, it is clear from the table below, which shows call origination price deviations at the various network levels, that, notwithstanding identified differences, it may not be concluded unequivocally that substitutability does not exist.

Table 3 – Price deviation between call origination at the various network levels

	Peak hours	Off-peak hours
Simple Transit Origination compared to Local Origination	24%	20%
Double Transit Origination compared to Local Origination	44%	40%
Double Transit Origination compared to Simple Transit Origination	16%	17%

Note: Price deviations were calculated on the basis of average prices per minute for an average three-minute call.
Peak hours - working days from 9 am to 6 pm.
Off-peak hours - working days from 6 pm to 9 am, all day on week-ends and holidays.
Source: ICP - ANACOM based on RIO V2.1/ 2013 of 2013.12.30.

From a supply-side perspective, the historical operator already provides the three types of origination simultaneously and although infrastructure and interconnection levels of other operators (providing interconnection services) are different (generally presenting a lower degree of network capillarity and not providing necessarily the same levels of interconnection), the latter operators also provide origination services (at least as regards the provision of special services using non-geographic numbering) which generally correspond to services made available by PTC.

As such, in the light of the simultaneous offer of the various types of origination and the complementarity that exists both on the demand and supply-side, it is deemed that local origination, simple transit origination and double transit origination integrate the same relevant market.

2.3.8. Call origination for residential customers and for non-residential customers

In the market analysis carried out in 2004, ICP - ANACOM concluded that call origination services for residential customers and for non-residential customers integrated the same relevant market.

In fact, even at the level of retail markets, although some differentiation may exist as regards access or telephone services per type of customer, this is not sufficient to consider the existence of separate markets.

At wholesale level, although it could be considered that operators with a larger presence in the retail corporate segment could be especially dependent on call origination services, this fact does not justify also the establishment of two separate markets.

In fact, the wholesale product (the call origination service) used in both cases is the same. In the supply-side perspective, a provider supplying the call origination service only to retail providers that supply services to residential customers is easily able to supply the service to retail providers who supply services to corporate customers, the opposite being also true. The wholesale provider may even find it hard, or impossible, to identify if the service being provided is intended in the retail market for a residential customer or a corporate customer, which makes the distinction at wholesale level between the corporate segment and the residential segment unlikely.

Moreover, in wholesale markets the offer conditions (prices and resources) are the same, as the service provided is exactly the same whether the retail customer is a residential customer or a non-residential customer.

At demand level, providers purchasing the call origination wholesale service also use it regardless of whether retail services are provided to residential or to corporate customers.

As such, given the substitutability on the supply and demand-side, it is deemed that call origination for residential customers and for non-residential customers are part of the same relevant market.

2.3.9. Self-supply of call origination services

In the scope of each operator's self-supply, the application of the so-called "Modified greenfield approach" must be taken into consideration, which entails an analysis approach which aims to avoid circularity in obligations that are defined, where the process of definition and analysis of a market is based on a scenario where no regulatory obligations are in place in the market under analysis.

As such, on the basis of the "Modified greenfield approach", it is necessary to weigh whether in the absence of imposed wholesale obligations, companies holding SMP - companies of the PT Group - would provide the wholesale origination service. In this case, wholesale inputs are used with two different purposes, on the one hand they are intended to enable indirect access services provided by other operators, and on the other, they are intended to enable special services provided by another operator using non-geographic numbering. Given the large market share of companies of the PT Group, at the level of direct accesses, is does not seem plausible to assume that, in the absence of a specific obligation concerning the wholesale call origination service, this service would be provided at least to enable indirect access of other operators, as this provision would increase the level of competitiveness faced by the dominant provider at retail level.

In these circumstances, the NRA must take into account a conceptual wholesale market made up of each operator's self-supply, given that, in the absence of regulation, no wholesale offers would exist (in this specific case, if no call origination services existed, it would not be possible to implement call selection or pre-selection, or subscriber line resale offer (SLRO), nor would operators be able to use these offers in the market.)

In fact, as indicated by EC in the Explanatory Note that accompanies Commission Recommendation on Relevant Markets:

"*In many cases the incumbent is the only firm that is in a position to provide a potential wholesale service. It is likely that there is no merchant market as this is often not in the interest of the incumbent operator. Where there is no merchant market and where there is consumer harm, it is justifiable to construct a notional market when potential demand exists. Here the implicit self-supply of this input by the incumbent to itself should be taken into account.*

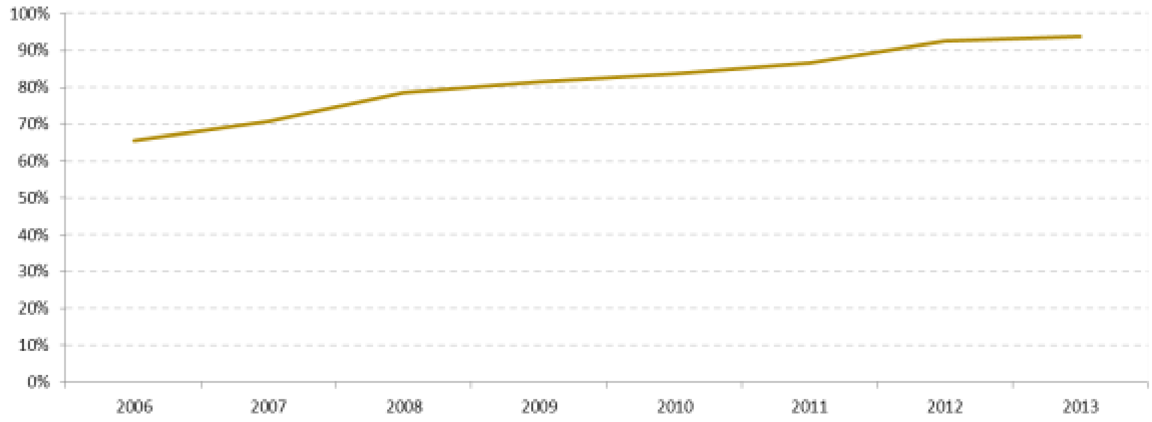
In cases where there is likely demand substitution, i.e. where wholesale customers are interested in procuring from alternative operators, it may be justified to take the self-supply concerned into consideration for the sake of market delineation. However, this is not justified if alternative operators face capacity constraints, or their networks lack the ubiquity expected by access seekers, and/or if alternative providers have difficulty in entering the merchant market readily"[48].

The case today is that companies of the PT Group, being vertically integrated, provide the wholesale call origination service to enable its own retail offers (as self-supply input) as well as third party offers. Other operators with self-owned networks in the market also provide an origination service, mostly to allow their own retail products to be made available.

[48] Cf. Recommendation – Explanatory Note page 15.

This self-supply is responsible for a significant part of the market, which measured in terms of traffic represents over 90% of total traffic (*vide* Chart 9), showing an upwards trend, as operators increasingly support themselves on direct accesses.

Chart 9 - Weight of direct access traffic (national, international and public pay-phones) in total originated traffic (wholesale and retail)



Source: Responses of providers to statistical questionnaires and ICP - ANACOM

As such, self-supply is in fact the main source of competitive pressure in the provision of retail services. It is thus relevant to take this provision into consideration as regards the definition of the wholesale call origination service, namely for the purpose of the calculation of market shares. A different approach could penalise the operator with SMP - the PT Group -, given that, as it is subject to obligations imposed on this market, it could ultimately be the only company to provide the origination service and consequently have a 100% share. This is in fact a situation close to reality, if only the origination traffic enabling the provision of indirect access services is taken into account.

As such, bearing in mind that network access is provided under a model of vertical integration, as the same bodies - network operators - are active in wholesale and retail markets, the concept of self-supply must be used.

In the light of the above, it is deemed that self-supply must be included in the definition of relevant market.

2.3.10. Definition of the product market - Conclusion

Against the background of the previous sections, ICP - ANACOM concludes that the product market comprises voice call origination services on the public telephone network at a fixed location, to geographic numbers and to non-geographic numbers, for residential customers and non-residential customers, including self-supply, as well as call origination for access to dial-up Internet services, conveyed at the various network levels and regardless of the transport technology and the interconnection interface used, integrating the interconnection supported on TDM networks and IP interconnection, both for PSTN calls and VoIP calls (of a fixed or nomadic use), and also for calls provided by mobile network operators at a fixed location (homezone services).

2.4. Definition of the geographic market

Having the relevant product market been identified, it is now necessary to define its geographic dimension.

In the first market analysis carried out in 2004, ICP - ANACOM considered, as regards the wholesale call origination service at a fixed location, that the relevant geographic market corresponded to the national territory. This conclusion took into consideration the geographic scope of FTS licenses, national coverage of transmission networks of most operators, national coverage of services and the geographic uniformity of origination prices.

In the electronic communications sector, the geographic scope of the relevant market has been traditionally defined according to two main criteria:

- The existence of legal and regulatory instruments, namely, restrictions concerning licenses/authorizations, tariff obligations and service provision obligations.

- The area covered by a network.

ICP - ANACOM considers that, taking into account criteria mentioned above, competitive conditions that affect the provision and access to the call origination service are homogeneous throughout the entire national territory, as no specific legal and regulatory instruments are applied according to geographic areas.

Operators may access call origination services under equal conditions, whether of a technical, economic or regulatory nature, regardless of their location in the national territory. A market of a smaller size than the national territory would harm operators in the defined downstream markets, namely those that depend on the existence of a wide wholesale offer that is available in the entire country and that enables the provision of indirect access retail services.

ICP - ANACOM thus takes the view that the geographic market of the call origination service at a fixed location corresponds to the national territory.

2.5. Conclusion

In the light of the analysis above, it is deemed that in Portugal, the wholesale market for voice call origination on the public telephone network at a fixed location is national and integrates calls both for geographic numbers and for non-geographic numbers, conveyed at various network levels and regardless of the transport technology and interconnection interface used.

3. Markets susceptible to ex ante regulation

EC considers that markets identified for the purpose of ex ante regulation must meet cumulatively the three following criteria[49]:

- Barriers to entry and to competition development: persistence of high entry barriers, either of a structural, legal or regulatory nature;

It is deemed, as far as these markets are concerned, that this criterion is met, as explained in chapter 4 of this document.

- Dynamic aspects: market characteristics which do not tend towards effective competition within the relevant time horizon, ex ante regulatory intervention being required. The application of this criterion involves the examination of the state of competition behind the barriers to entry;

This criterion is met as regards this market, as explained in chapter of this document, thus being concluded that without ex ante regulatory intervention there will be no effective competition in the short/medium term.

- Relative effectiveness of competition law and supplementary ex ante provisions: insufficiency of competition law alone to adequately address the market failure(s) concerned.

As follows from the opinion published at ICP - ANACOM's website[50] on articulation between ICP - ANACOM and AdC, available information and the various existing instruments, frequency, detail and urgency of interventions and the fact that SMP exists in these markets (vide chapter 4 of this document) determine that ex ante regulation is essential to mitigating the effects of market failures.

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[49] Cf. Recommendation – Explanatory Notes 2.2 (page 6).

[50] Available at: http://www.anacom.pt/streaming/parec_anacom.pdf?contentId=128075&field=ATTACHED_FILE.

It is also stressed, and irrespective of the analysis carried out in chapter 4 hereof, that the product market defined in the scope of the market for call origination on the public telephone network at a fixed location is equivalent to the relevant market recommended by EC. According to EC, markets listed in the Recommendation were identified on the basis of the three above-mentioned cumulative criteria[51], thus it is deemed that the market defined in the analysis procedure is relevant for ex ante regulation purposes. For this reason, the existence of SMP therein is weighted, the previous and specific analysis of the three criteria test not being required.

The evolution of the market, which already shows signs of reduction of barriers to entry, due to the existence of networks other than those held by the historical operator, especially in the framework of NGN, will naturally be monitored by ICP - ANACOM, so as to assess whether, in a forthcoming revision, its maintenance is pertinent in the scope of regulated markets.

4. Assessment of SMP in the wholesale market for call origination on the public telephone network at a fixed location

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

SMP may be held by a single company in the market (individual dominance) or by more than one body (joint dominance)[52]. Additionally, where a company has SMP in a specific relevant market, it may be deemed that it has SMP also in a closely related market, where connections between the two markets are such that the market power held in a market

[51] Cf. Recommendation – Explanatory Notes, page 11: "*For those markets listed, the Recommendation creates a presumption for the NRA that the three criteria are met and therefore NRAs do not need to reconsider the three criteria.*"

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

leverages into the other market, thus strengthening the company's market power (SMP leveraging).

SMP analysis assumes the examination of whether or not some regulatory intervention is required. For this reason, SMP assessment in this market requires that a hypothetical market, where no ex ante regulation (or the "threat" of SMP regulation) exists, is assumed.

As regards criteria for assessing SMP, according to EC Guidelines, "a dominant position is found by reference to a number of criteria and its assessment is based, (...) on a forward-looking market analysis based on existing market conditions"[53].

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

However, as referred by EC in the Guidelines[56], the existence (or absence) of a dominant position cannot be established on the sole basis of large (or low) market shares. As such, NRA should use a combination of other criteria, among those referred in the Guidelines.

4.1. Individual dominance

In ICP - ANACOM's view, the relevant criteria to assess individual market power in the market for call origination on the public telephone network provided at a fixed location are as follows:

- Market shares;
- Level of concentration;
- Size of the market leader;
- Evolution of origination prices;

[53] §75

[54] §75.

[55] In the Commission's decision-making practice, single dominance concerns have usually arisen in the case of undertakings with market shares over 40%, although in some cases there may be concerns about dominance even with lower market shares, or cases of companies with higher market shares which are not deemed to be dominant undertakings.

[56] §78.

- Barriers to expansion;
    - Legal barriers;
    - Economies of scale and of scope;
    - infrastructure not easily duplicated and sunk costs ;
    - Vertical integration;
- Countervailing buying power.

This analysis takes into consideration the definition of company provided for in the Competition Law currently in force[57]. Accordingly, in terms of competition analysis, companies that integrate the PT Group were jointly analysed. In line with chapter 1, the PT Group integrates PTC and MEO, PT Prime, which merged into PTC, no longer integrating the group. Companies of the ZON OPTIMUS Group (which aggregates NOS Comunicações S.A., ZON TV Cabo Madeirense and ZON TV Cabo Açoreana)[58] were also analysed. Without prejudice, in certain circumstances, namely on account of differences in network architectures and tariff structure, specific references to each of the companies integrating these groups may be justified.

4.1.1. Analysis of effective competition

As was done in the scope of the previous market analysis, the analysis of effective competition will start with the calculation of market shares. In a first stage, candidates to operators with SMP will thus be identified.

In must be stressed, as referred above, that the existence of a dominant position may not be determined exclusively on the basis of market shares. Consequently, NRA must carry out a thorough and overall analysis of economic characteristics of the relevant market before reaching a conclusion on the existence of SMP.

In order to undertake the referred market economic analysis, ICP - ANACOM will analyse the degree of competition between established companies.

[57] Law No. 19/2012, of 8 May, available at: http://www.anacom.pt/render.jsp?contentId=1126280.

[58] 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, 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.

4.1.1.1. Market shares

Taking into account information made available to ICP - ANACOM[59] by providers of the telephone service provided at a fixed location, and taking into account the market definition in chapter 2, relevant market shares were calculated for the purpose of the analysis of the wholesale market for call origination on the public telephone network at a fixed location.

For this purpose, market shares of retail markets must be particularly considered, namely in terms of direct accesses, given that only operators who own infrastructures, and who as such provide direct access, are in a position to provide wholesale call origination services.

In this scope, in terms of overall direct accesses (on the basis of equivalent accesses), companies of the PT Group have been losing market share, however still registering rates exceeding 50% (56% by the end of 2013, and remaining at that value by the end of the first quarter of 2014).

Nevertheless, it is noted that, if only direct accesses supported on self-owned infrastructures are considered, that is, if all accesses supported on third party infrastructures are excluded, including accesses associated to SLRO - which in this latter case only exist due to the fact that the PT Group was imposed an obligation to provide a subscriber line resale wholesale offer, in the scope of the retail market of access to the public telephone network at a fixed location - this market share would increase slightly, to reach 57%[60].

It must also be referred that not only is the PT Group the operator with the largest market share in terms of accesses, but it is also the operator who originates at retail level the largest proportion of voice traffic. As such, at the level of direct access voice traffic[61], its market share by the end of 2013 was 53%. The PT Group's market share in this scope only decreases slightly in case indirect access traffic is also taken into consideration,

[59] Providers of the Fixed Telephone Service (FTS) regularly submit to ICP - ANACOM a set of statistical information on retail services and on fixed interconnection services for the purpose of the definition and analysis of the respective markets.

[60] The specific market share concerning accesses supported on self-owned infrastructures is calculated on the basis of non-equivalent accesses.

[61] National and international direct access traffic and traffic originated in public pay-phones.

depending on the existence of carrier pre-selection or call-by-call carrier selection. In this case, the PT Group holds a 52% market share (by the end of 2013).

Notwithstanding the fact that there is no significant difference in market shares of the PT Group as regards retail traffic based on direct accesses or taking indirect access traffic also into consideration, it is noted in any case that some alternative operators still bear a relevant part of the respective indirect access traffic (reaching around 10% for two of the main alternative operators), thus it is deemed that this access modality is important to enable the entry (and maintenance) in the market for the provision of telephone services and the provision of overall offers throughout the national territory, which are particularly relevant in order to serve non-residential customers with multiple locations and to foster increased competition conditions in this market segment.

This is also a relevant access modality for providers of virtual calling cards.

In the light of the decrease of market shares of companies of the PT Group, market shares of OSP have naturally registered some level of increase. In this context, attention must be drawn in particular to the market shares of some OSP who have been involved in merger operations, such as ZON and Optimus, and Cabovisão and Onitelecom, who are among the main competitors of companies of the PT Group. Although these merger operations are quite recent, and their impact is not yet visible at present, as there is still too little knowledge of what will be in the future the commercial strategy of the referred companies, which businesses will be privileged, and how will these options operate as regards the reinforcement of their competitive capacity, this analysis, in its forward-looking approach, already takes into account joint market shares of companies referred.

Without prejudice to the impact of merger operations, it is verified that the market share held by ZON OPTIMUS, by the end of 2013, was indeed already significant.

In fact, ZON OPTIMUS already held 31% of the retail access market, Cabovisão/Onitelecom holding 6%. However, it is noted, as far as these two groups are concerned, that the proportion of accesses supported on infrastructures owned by third parties[62] is lower than 10%, a part of which is supported specifically on SLRO accesses.

[62] In terms of non-equivalent accesses.

As such, in a scenario where SLRO did not exist, their share would necessarily be even lower.

Strictly at wholesale level, excluding self-supply, it is verified that as regards origination traffic volume (minutes), the PT Group holds by the end of 2013 a market share of 53%, as a result of its broad majority position in the provision of call origination services to allow third party operators to provide indirect access.

It is noted that the sharp decrease of the share held by companies of the PT Group at the level of wholesale origination services provided to third-party operators is registered between 2011 and 2012, and seems to be the result of the merger of PT Prime into PTC. This situation arises from the fact that, up to 2011, the shares of the PT Group integrated some level of double-counting of traffic values, given that a part of PTC's wholesale call origination traffic corresponded to PT Prime's indirect access retail traffic and also to PT Prime's retail traffic concerning its own non-geographic numbering. As such, having PT Prime merged into PTC, the referred wholesale call origination traffic became self-supply for the provision of retail services and as such ceased to be reported as a wholesale call origination traffic supplied to third party operators.

Table 4 – Market share evolution of the wholesale origination market (in minutes)

	2008	2009	2010	2011	2012	2013
PT Group	88%	80%	73%	74%	55%	53%
ZON OPTIMUS	---	---	---	---	---	[30-40%]
ZON	[0-5%]	[5-10%]	[10-20%]	[10-20%]	[20-30%]	---
Optimus	[5-10%]	[10-20%]	[10-20%]	[5-10%]	[10-20%]	
Cabovisão	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Vodafone	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Onitelecom	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Others	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]

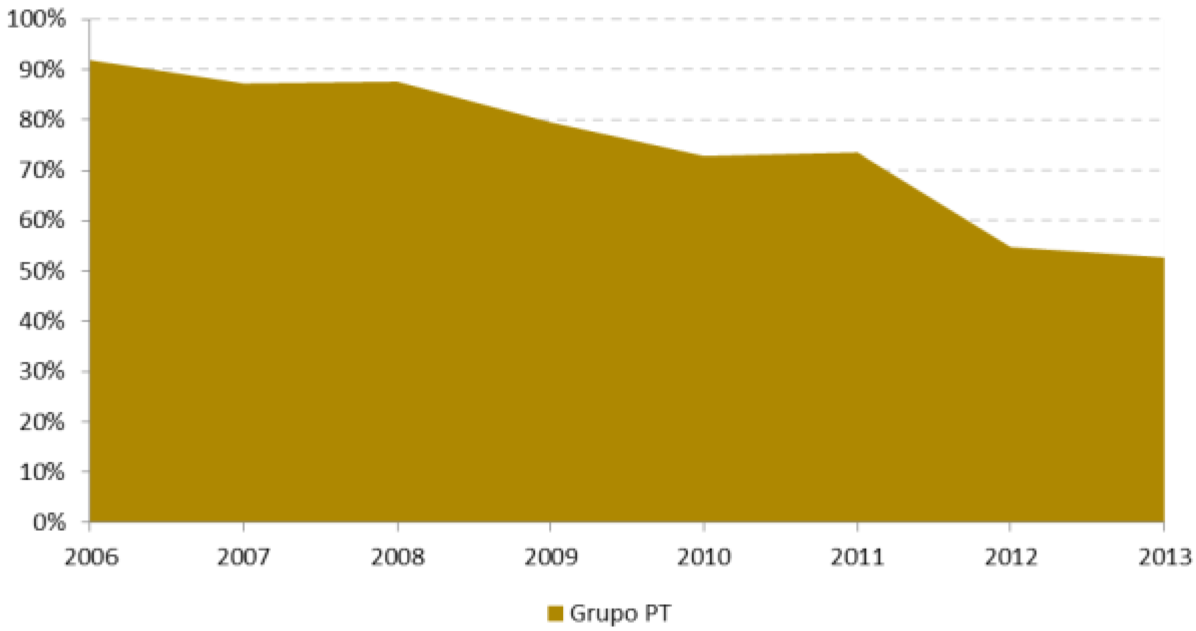
Note: Owing to rounding, the total may not correspond to the sum of all figures shown; self-supply not included.

Market shares presented include a traffic estimate associated to the capacity-based interconnection offer.

Source: ICP - ANACOM based on information submitted by operators.

PTC's market share, at wholesale level, self-supply included, is slightly larger than the respective wholesale share not including self-supply.

Chart 10 – PT Group's market share evolution, in the wholesale origination market (in minutes), compared to services provided to third party operators



PT Group

Note: includes a traffic estimate associated to PTC's capacity-based interconnection offer.
Source: ICP - ANACOM

As far as alternative operators are concerned, in particular considering ZON OPTIMUS, although its weight at wholesale level is increasing, due to the provision of the wholesale call origination service for special services provided via non-geographic numbering of other providers, after the merger a similar situation to that described for PTC and PT Prime may occur, with a likely impact on the reduction of market shares of ZON OPTIMUS, which however will only be visible in 2014.

Without prejudice, it is stressed that, in any case, by the end of 2013, the market share of ZON OPTIMUS in retail markets for access and of telephone services provided at a fixed location is much lower than the PT Group. This is also true for the joint market share of Onitelecom and Cabovisão.

In this analysis, ICP - ANACOM opted for taking into consideration only market shares concerning accesses and traffic, bearing in mind some limitations that exist at the level of the use of shares based on revenues, in particular because it was detected that some operators, when submitting their information, aggregated billing and collection revenues associated to the call origination service for non-geographic numbers, and also because it was difficult to calculate relevant revenues associated to the provision of self-supply. Under these circumstances, it is deemed more appropriate to consider only volume market shares for the purpose of this analysis.

According to EC, and as referred above, “very large market shares — in excess of 50 %— are in themselves, save in exceptional circumstances, evidence of the existence of a dominant position”.

Notwithstanding, and despite the still high market share of the PT Group, the decision on the existence of SMP must be supported on other elements, an analysis which will be carried out in the following sections.

4.1.1.2. Degree of concentration

The existence of a direct relation between the offer concentration degree and market power is generally accepted, and for this purpose, the Herfindahl-Hirschman Index (HHI)[63] is used to weight the degree of concentration that exists in the relevant market.

Concentration in the wholesale call origination market between 2006 and 2013 remained at very high levels. In 2013, the HHI, considering volume market shares previously presented in the wholesale market component, reached 0.43.Despite the decrease of the HHI value compared to 2006, the value obtained for this indicator is still very high, and does not make it possible to rule out the presumption of existence of a dominant position in this market.

Taking into account self-supply, the concentration in the retail market of access and of direct access traffic services, where HHI reached, by the end of 2013, respectively 0.42[64]

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[63] According to EC (vide “Glossary of terms used in EU competition policy” available at: http://ec.europa.eu/competition/publications/glossary_en.pdf), the relation between HHI values (sum of squares of the market shares of firms in the industry concerned) and market concentration is as follows:

1. HHI value	
1. HHI < 1000 (0.10)	Low concentration
1000 (0.10) < HHI < 1800(0.18)	Moderate concentration
HHI > 1800 (0.18)	High concentration

and 0.41[65], must be analysed, already taking into account concentration operations that involved ZON OPTIMUS and Cabovisão/Onitelecom.

4.1.1.3. Size of the market leader

PTC is the largest company in the market for call origination on the public telephone network. This network. This company is integrated in the largest electronic communications group in Portugal, the Portugal, the PT Group, which is responsible for around 44% of turnover of companies of the the electronic communications sector (vide Table 5 - Size indicators for the main operators (in 2012)

5).

Even after the merger operations which involve ZON OPTIMUS and Cabovisão/Onitelecom, the size of these operators falls short of the size of the PT Group, and even in the case of ZON OPTIMUS, which became the PT Group's largest competitor, the respective turnover is still around 50% lower (using as reference the sum of total turnover of the two companies) than PT Group's turnover.

[64] The market share considered for the purpose of HHI calculation is calculated on the basis of equivalent accesses.

[65] National and international direct access traffic, traffic originated on public pay-phones and VoIP traffic (excluding short numbers and non-geographic numbers).

Table 5 - Size indicators for the main operators (in 2012)

	Turnover	Number of collaborators
AR TELECOM	**9.367.141**	**58**
CABOVISÃO	**118.223.468**	**331**
ONITELECOM	**118.754.265**	**135**
OPTIMUS	**730.895.923**	**786**
PT Group	**2.927.627.744**	**7.206**
PTC	1.774.317.741	6.150
MEO	1.153.310.003	1.056
VODAFONE	**1.199.276.357**	**1.484**
ZON MULTIMÉDIA	**700.006.876**	**756**
Zon TV Cabo Açoreana	18.855.569	30
Zon TV Cabo Madeirense	28.035.614	52
Zon TV Cabo Portugal	653.115.693	674
Overall income [66]	**6.614.333.000**	-

Source: ICP - ANACOM, Directory of Companies in the Communications Sector 2013 and Communications Market in the National Economy (2008-2012)

The size of the market leader and the difference between the size of the PT Group and that of its competitors do not contradict the presumption of dominance that arises from the calculation of market shares.

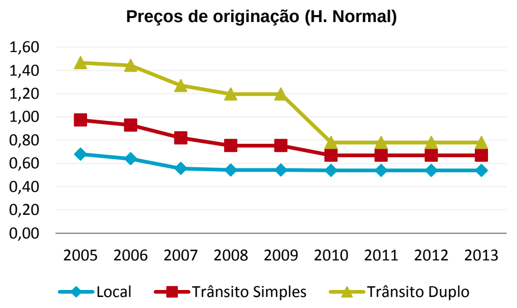
4.1.1.4. Evolution of origination prices

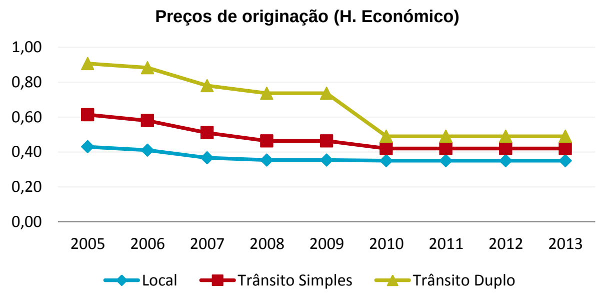
Tariff policy and the evolution of prices over time are also good indicators of the degree of effective competition.

Prices of the incumbent's fixed interconnection are defined in this operator's RIO, and have been falling, for the different levels of local network, simple transit and double transit (*vide* Chart 11).

[66] The overall income value corresponds to the sum of sales and service provision (reports and accounts/annual IES declaration) of all companies that integrate the communication sector in Portugal (companies qualified by ICP - ANACOM to pursue electronic communications activities).

Chart 11 – PTC's call origination price





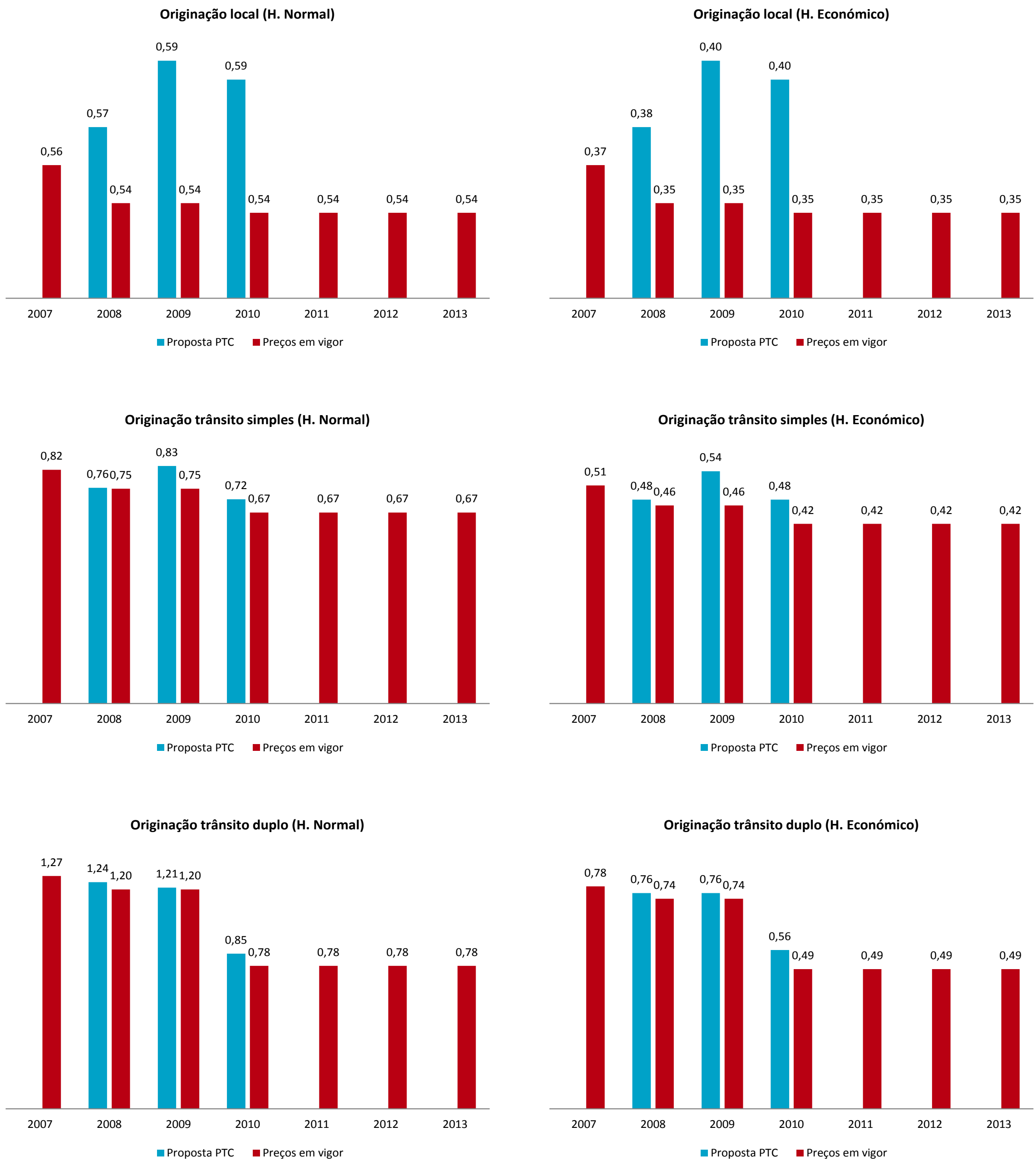
Origination prices (peak hours)
Local simple transit double transit

Origination prices (off-peak hours)
Local simple transit double transit

Note: On the basis of a call with an average duration of 3 minutes.
Source: PTC's RIO.

The analysis of this operator's price definition process leads to the conclusion that price reductions are the result of regulatory intervention only. In case of a strong competitive pressure, the historical operator would show interest in proposing a downward revision of prices, which has not been the case so far. Price proposals made by PTC, which must take into account the principle of cost orientation of prices, are generally characterized by an increase of prices of the call origination service for all network levels and all schedules, except for the price proposal for 2010, in the scope of which this operator proposed a decrease in the double transit origination price and the reduction of the simple transit origination price during peak hours (vide Chart 12).

Chart 12 – Call origination prices proposed by PTC[67]



Local origination (peak hours) Local origination (off-peak hours)
Simple transit origination (peak hours) Simple transit origination (off-peak hours)
Double transit origination (peak hours) Double transit origination (off-peak hours)
PTC proposal Prices in force

Note: Average prices of a call with an average duration of 3 minutes.
Source: RIO and reviewed prices proposed by PTC.

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[67] PTC presented two tariff proposals for 2009, one taking into account costs estimated on the basis of capital cost calculated on values involved in the company's privatisation phases, and the other taking into account estimated costs based on the valuation of capital cost according to the telephone service book value. Prices considered here reflect the second proposal.

As such, this situation does not indicate a competitive market. In fact, it is likely that an operator with a market share that is very much greater than those of its competitors has incentives, in the absence of regulation and relevant competitive pressure, to set prices above the competitive level.

4.1.2. Barriers to expansion

EC considers that market shares are good indicators of market power only in cases where competitors are not able to expand easily their level of production to meet the increase of demand resulting from an increase of prices imposed by their rival.

In this context, ICP - ANACOM will weight below the possibility of an operator to enter, or to expand its presence, in the call origination market and to limit PT Group's commercial behaviour, analysing barriers to expansion for this purpose.

In situations where barriers to expansion are low, there is a considerable increase of the capacity of a competitor to take advantage of an increase of prices or a production restriction of another competitor. As such, the probability of a company to be able to easily act independently of competitors and customers is considerably low. The risk is even smaller in case switching costs are low.

Main barriers to expansion that exist in the wholesale market for call origination on the public telephone network at a fixed location are analysed below: legal barriers, economies of scale and/or scope and/or experience; infrastructure not easily duplicated and vertical integration.

4.1.2.1. Legal barriers

In the former market analysis, the following factor was identified as a legal barrier to the development of competition: the "difficult relation between new operators and municipalities, namely as regards issues related to licensing fees and municipal space occupation fees, and the promptness of licensing procedures for the performance of works on public roads (...)", having been considered that "(...) the implementation of the new regulatory framework would remove this barrier".

In this context, it is noted that in 2009 Decree-Law No. 123/2009, of 21 May, was published, amended by Decree-Law No. 258/2009, of 25 September, 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.

On 01.01.2010, a new legal framework came into force, with new technical standards[68], 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.

These measures also establish the harmonisation of procedures, particularly as regards the relationship between operators and local authorities, having mitigated the legal barrier here identified.

4.1.2.2. Economies of scale and of scope

Economies of scale occur where the expansion of the production of a company leads to an increase in the total quantity produced which is not accompanied by a proportional increase of total costs of production, that is the average cost of the product decreases as its production increases. Electronic communications services require the installation of infrastructure with significant indivisibilities, which implies that the smaller the average costs borne by an operator, the larger its number of customers, this operator being in an advantageous position compared to smaller operators. Given the ubiquity and capillarity of PTC's network, the fact that this operator was the provider of the universal service for a significant number of years, and the only operator providing direct access to the network and telephone services at a fixed location, having already incurred in significant sunk costs, it is deemed that the PT Group benefits from economies of scale. In fact, the results

[68] ITED Manual – 2nd edition and ITUR manual – 1st edition.

of PTC's cost accounting system (CAS) show over the years a decreasing trend of unit costs of call origination to third party operators, associated to an increase of the traffic volume for that service (until 2005).

Chart 13 – PTC's origination unit costs and minutes

(SCI)

CONFIDENTIAL

(ECI) Source: PTC' CAS

Economies of scope occur when average costs of a product are lower, as result of a joint production with another product of the same company. In the case of electronic communications, when an operator is present in a large number of product markets, it is able to share common costs with a wider range of products.

The PT Group is present in a large number of markets and provides a wide range of services over its network, which allows it to pass on costs among its various services in the most effective manner. This situation may operate as a barrier to the entry of new competitors, who would need to enter different relevant markets in order to enjoy economies of scope similar to those of the PT Group. This would contribute, on the one hand, to increase costs of entry and, on the other, to hinder the recovery of those costs in case of exit.

Notwithstanding, the recent merger operations which involved ZON OPTIMUS and Cabovisão/Onitelecom contributed to establishing operators with a truly global dimension, with access to several platforms and the capacity to provide a wide range of services. In any case, the probable impact in the development of economies of scope and of scale for these operators will naturally not be felt immediately, and will depend on several factors which are currently difficult to forecast, related to the business strategies to be adopted.

As such, there are already some operators holding important infrastructures, and the telephone service at a fixed location is increasingly being provided over both coaxial cable and optical fibre infrastructures, and over GSM/UMTS accesses. Several alternative operators have increased their presence in the retail market, through the provision of multiple play offers, and in these cases, at the level of economies of scope, the PT Group does not seem to enjoy significant advantages.

Without prejudice to the above, the PT Group, and PTC in particular, is a truly global player, and has benefited for many years from important economies of scale and of scope, which other operators have not benefited in an equivalent manner, and in this context, the call origination wholesale service provided by PTC to third parties is essential to ensure for several alternative operators the access to a significant number of customers and, consequently, their presence throughout the national territory.

4.1.2.3. Control of infrastructure not easily duplicated and sunk costs

The control of infrastructure for access to the final customer is indispensable for the provision of wholesale services for call origination on the public telephone network. The PT Group's network, especially the one owned by PTC, is strongly implemented throughout the national territory, both in terms of access network and in terms of interconnection. In fact, the network of the incumbent has a geographic coverage which is much wider than networks of other operators.

It must be stressed that alternative operators have been investing in their own infrastructures, and in some cases these operators hold networks which have provided them the conditions to expand their activities to other customers without incurring in further significant sunk costs.

In this context, it must be referred also that the award of the provision of the universal service of connection to a public communications network and of publicly available telephone services to Optimus in the North and Centre areas of the country, and to ZON in the South and island areas (companies which in the meantime merged into NOS), requires the operator under consideration, given the obligations which fall on it in the scope of referred services, to ensure an effective presence throughout the national territory, which is likely to be accomplished via the respective hybrid network made up of fibre, coaxial cable and mobile network, possibly complemented with satellite access.

It is noted that NOS, which already has started the provision of the universal service, 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, throughout the national territory.

In addition, the network connection and the provision of the referred service must also allow, among other items:

a) The establishment and reception of local telephone calls, national telephone calls, namely calls involving geographic and non-geographic numbers, in compliance with the National Numbering Plan, and international telephone calls;

b) The establishment and reception of facsimile communications;

c) The establishment of data communications, at data rates that are sufficient to enable a functional Internet access;

d) The access, through the national emergency number defined in the National Numbering Plan or any other numbers specified by ICP - ANACOM, to the various emergency systems, under applicable national law; and

e) The access to a comprehensive directory enquiry service provided under point c) of paragraph 1 of article 89 of ECL.

The described situation may entail an additional pressure on NOS to increase its network coverage, which is a factor not to be neglected.

Moreover, consistently with what was referred above, in addition to NOS, other operators such as Vodafone and Cabovisão have invested in their own infrastructure, namely to support multiple play offers, enabling the provision of the fixed telephone service, and attention should also be drawn to GSM/UMTS networks, characterized by a very wide coverage, over which homezone services have been provided.

In any case, PTC itself has largely invested in new infrastructures, thus the PTC network still holds the largest coverage, in addition to being the network which integrates the largest number of accesses and customers, and consequently it is also the network over which the highest volume of voice traffic is originated.

In the light of the above, it is deemed that although the PT Group's access network consists in an infrastructure which is difficult to replicate, both in an economic and financial perspective, thus representing a strong barrier to entry and to expansion in the market, the evolution of networks of alternative operators, including the case of NOS, has contributed to the reduction of these barriers. In any case, in the short/medium term, PTC's network, with its comprehensiveness and capillarity, remains fundamental so that smaller operators, with lower capacity for investment in infrastructures, may enter the market.

Additionally, PTC's network, given its size and capillarity, is fundamental so that some of the alternative operators continue to provide retail services. It is noted in this respect that by the end of 2013, around 1 to 2% of retail traffic of alternative operators was still originated by indirect cess (through carrier selection or pre-selection), a rate which increases significantly in the case of some operators of a lower dimension (in the range of 19% considering only selection or pre-selection traffic in the total of voice traffic, excluding traffic originated on public pay-phones), operators who, as stressed earlier, depend on wholesale access to PTC's network and PTC's customer database to provide retail services.

The importance of indirect access in the scope of the provision of the virtual calling card service must also be highlighted, as some of the smaller providers are heavily dependent of traffic generated this way.

4.1.2.4. Vertical integration

Companies of the PT Group are vertically integrated, and they have a relevant presence both at the level of wholesale markets and of retail markets, a situation which may place its competitors, especially those that are not integrated, at a competitive disadvantage, namely when the PT Group, or PTC in particular, supplies to a competitor an essential intermediate production or consumption factor, such as the case of wholesale origination.

Barriers to entry at retail level may increase as a result of difficulties in obtaining wholesale market inputs or in obtaining such inputs at a competitive price. Notwithstanding efforts made by other operators to develop their own access network, which contributed to the relevant reduction of PTC's market share when compared to the previous analysis, PTC still enjoys synergies which are characteristic to a vertically integrated operator. In a scenario of absence of regulation, PTC could stop providing origination services to other providers, affecting several providers, as well as potential new entrants, with detrimental effects on the contestability of the market, making it impossible for operators concerned to have access to a network with national coverage, and with the largest number of retail customers, based on which retail services may be provided.

Maintaining the regulation of call origination services thus remains important to promote the entry and expansion of OSP in the retail market, without forcing such operators to incur in substantial sunk costs of constructing a self-owned network.

4.1.3. Countervailing buyer power

According to EC, countervailing buyer power should be understood as the "ability of large customers within a reasonable timeframe to resort to credible alternatives if the supplier decides to increase prices or to deteriorate the conditions of offer".

In the specific case of this market, the countervailing power of other operators would exist if they were able to switch supplier in case of a small but significant increase in the price of the origination service.

It is deemed that, despite the development by other operators of alternative infrastructures, and in line with the arguments presented in the preceding section, countervailing buyer power is very limited, as possible threats to stop the purchase of access to the PT Group's origination service are not credible, given that dispensing with these services would lead to the reduction of a potential customer database.

In this context, the importance of customers of the business segment for the various retail providers of the telephone service at a fixed location must be stressed. In order to ensure the provision of the retail service to the referred customers, it is crucial that their presence is ensured throughout the entire national territory, which would hardly be the case if operators used only their own networks. Business customers frequently have multiple locations, sometimes scattered across the national territory, thus only the service of providers who are able to ensure a ubiquitous presence is engaged.

As such, it is essential for a provider who wishes to obtain or maintain business customers, who also frequently generate the larger volume of revenues, to be able to reach any point of the territory, which definitely will only occur through the engagement of call origination services from a network operator holding a national presence, that is, the operator who currently has SMP, the historical operator.

Moreover, it is not guaranteed that these other operators could obtain the same services using alternative networks, which despite being reasonably developed, do not show as yet a dimension equivalent to PTC’s network.

It follows from the above that, given that the purchase of wholesale call origination services is essential, buyers in this market do not have capacity to exert sufficient countervailing power to constrain the establishment of call origination prices.

As regards origination for special services, it is deemed also that there are no buyers with capacity to exert a sufficient countervailing power to constrain the establishment of call origination prices. In fact, providers of these services are strongly interested in ensuring that their services are made available to all potential customers, thus the access to wholesale origination services provided by fixed network operators is indispensable, access to the services of the operator with a larger customer database being of particular significance. Accordingly, these buyers would hardly be able to press for a reduction of prices of the origination service, or to threaten not to engage the origination service, given that the provision of their retail services is directly dependent on the engagement of the referred wholesale services.

4.1.4. Individual dominance – conclusion

Taking into account constraints on effective competition between companies - bearing in mind the market shares of companies of the PT Group and prices practised by them -, the dimension of the market leader and the degree of concentration thereof, the existence of barriers to expansion, and the non-existence of countervailing buyer power, it may be concluded that companies of the PT Group acting on his market hold SMP (individual dominance).

In particular, it has already been stressed how important the wholesale call origination service supplied by the SMP operator is for some operators in the retail market, namely taking into account that it allows the provision of a retail service throughout the national territory, which would not be possible on the basis only of retail operators' own electronic communications networks.

The guarantee of presence in various points of the territory, as referred above, is especially important for operators with customers, usually of the business segment, who are located in various points and who only remain as customers of these operators insofar as they are able to access, in any point of the territory, the telephone service provided at a fixed location by a single operator, under a single contract.

Lastly, it is also stressed that the conclusions of the analysis of the market for retail access to the public telephone network at a fixed location and of retail markets of telephone services provided at a fixed location suggest that markets concerned are moving in the short/medium term towards a situation of effective competition. In this respect, it is stressed that this conclusion also draws from the fact that the operator with the largest market share (the PT Group) provides, as required by regulatory imposition, a set of wholesale offers that enable the provision of retail telephone services, namely the offer of carrier selection and pre-selection and SLRO.

In this regard, it is noted that BEREC issued an opinion, in March 2013, in which it declared that the market for retail access (market 1) was a good candidate for deregulation insofar as obligations concerning carrier selection and carrier pre selection, and SLRO, were imposed at the corresponding wholesale level[69]. More recently, in June 2014, BEREC issued a new opinion[70], on the draft Recommendation on relevant markets proposed by EC, having stated as follows:

"*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".

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[69] 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.

[70] Available at: http://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/4438-berecs-opinion-on-the-commission-recomme_0.pdf.

4.2. Joint dominance

Having been concluded that there is individual dominance in this market, it is not appropriate to apply joint dominance criteria on this market.

4.3. Forward-looking analysis

ICP - ANACOM considers that all factors that justify the designation of companies of the PT Group acting on the market for call origination on the public telephone network at a fixed location as companies with SMP will not change in the short/medium term, until the next market analysis and SMP reassessment[71].

4.4. SMP assessment - conclusion

It is deemed that companies of the PT Group (that is PT Comunicações S.A. and MEO – Serviços de Comunicações e Multimédia, S.A.) operating in the market for call origination on the public telephone network at a fixed location hold SMP on this market.

[71] In compliance with article 59-A, of Law No. 51/2011, of 13 September.

5. Imposition of obligations on the market for call origination on the public telephone network at a fixed location

In the preceding sections, the wholesale market for call origination on the telephone network at a fixed location was identified and analysed, having been concluded that companies of the PT Group have SMP in that market. In markets where SMP is deemed to exist, ICP - ANACOM is required to impose one or more regulatory obligations or to maintain or amend these obligations, where they are already in place[72]. In this context, it is stressed that it is important to remedy market failures through measures imposed directly at the source. This principle is in fact laid down in the regulatory framework itself, which gives priority to the imposition of obligations at the level of wholesale markets over their imposition in downstream retail markets. This priority offers the advantage of addressing market failures through measures imposed directly at the root of the problem.

In general terms, when imposing, maintaining, altering or withdrawing obligations, ICP - ANACOM takes into account principles that result from the application of ECL, documents issued by EC and ERG/BEREC, and obviously, regulatory principles and objectives laid down by this Authority.

It is deemed appropriate that such principles are acknowledged by the market and taken into consideration, before any obligation is imposed on the market, and for this reason, such principles are developed in section 5.2 hereof.

5.1. Competition problems identified in this market

This chapter aims to briefly present the main competition problems that may arise in a scenario of absence of regulation and which may entail obstacles to competition in downstream markets, with a clear prejudicial impact on the various players and consumers in general. Without prejudice, throughout the analysis carried out in chapter 5.3, references to specific competition problems deemed to be relevant in the scope of the weighing up of possible obligations to be applied will be made where appropriate.

[72] Cf. Guidelines §21 and §114 and articles 56 d) and 59, paragraph 4, of ECL.

5.1.1. Market power vertical leveraging

The vertical leveraging of the dominant position may arise when a company controls a wholesale input deemed to be essential for the provision of a retail service in a competitive market where it also operates. This possibility may imply a limitation of competition in downstream retail markets where the operator with market power operates and competes with customers of its wholesale service.

As found in the market analysis carried out, customers of wholesale origination services provided by the PT Group compete with the latter in downstream retail markets, at the level of the provision both of the telephone service at a fixed location and of special services that use non-geographic numbering, thus it is deemed that in the absence of regulation, there could be incentives for the SMP operator to adopt behaviours intended to restrict competition in those markets, constraining the access of new entrants.

In this scenario, problems likely to occur would be as follows:

- Refusal to grant access: This could either be an absolute refusal or the use of access-constraining practises, such as the use of delaying tactics in negotiations with entrants, excessive bureaucracy, imposition of discriminatory conditions (costs or quality) and withholding or discriminatory use of information.

  Refusal or delay in the provision of wholesale origination services should be viewed against this background. In certain circumstances, this refusal or the mere use of delaying tactics are able to jeopardize the commercial operation of a provider who depends on call origination services in order to provide retail services to final customers, bearing in mind that, especially for bodies that do not own their own network, call origination is an essential input for the provision of the retail service.

  Although the same wholesale inputs may be obtained from other market operators, the large customer database owned by the SMP operator compared to each of the other operators and even compared to all other operators taken together, makes the provision of the referred wholesale services by the SMP operator essential, otherwise a significant part of the market - corresponding to that operator's direct access customers - may not be served by alternative operators, nor can it access the provision of special services supported on non-geographic numbering.

- Price discrimination: this type of competitive problem may occur where an operator establishes such a wholesale input price that it limits the action of another operator on the downstream retail market where both compete, removing from this operator the capacity to remain in the market in a profitable fashion. In the absence of regulation, an in a market where an operator with SMP exists, it is deemed that there would be incentives for prices of the wholesale call origination service to be set at very high levels, which could force the operator using wholesale origination services to increase retail prices so as to reflect high wholesale prices, thus loosing competitiveness compared to the SMP operator who also plays on the retail market.

  In this scenario of potential margin squeeze, in addition to the immediate impact on operators who use call origination services, consumers are also harmed in the medium and long term, given that this practise leads to the market exit of operators, even of effective ones, limiting and constraining competitive dynamism, and consequently increasing the market power of the already dominant company.

  Competitive problems associated to discrimination may also operate at levels other than prices, namely at the level of quality of service and provision of information, as referred earlier.

  Although less likely, situations of external discrimination at the level of prices (or possibly other factors, such as quality of service and deadlines for supply of service) may also occur, as a result of the unequal, albeit low, countervailing buyer power, which may create an uneven playing field for smaller operators, or operators with an embryonic presence in the market, vis-à-vis other operators.

5.1.2. Distortions caused by excessive origination prices

Given the dominant position of the historical operator, the existence of high barriers to entry and the limited countervailing buyer power - *vide* chapter 4 - it is deemed that, in a context of absence of regulation, that operator will have incentives to apply high origination prices (possible associated to high billing, charging and risk of non-recovery prices). High origination prices also contribute to the existence competition distortions in this market and in downstream markets - vide section 5.1.1 - by making it impossible for other operators to purchase origination services at prices that allow the development of competitive retail prices, to the detriment of their own economic effectiveness, and that of the final consumer.

In the specific case of call origination to non-geographic numbers, excessive pricing would affect providers of non-geographic services, bodies using non-geographic numbering ranges to support their economic activity (for example, the provision of enquiry services to their customers) and, ultimately, final users using these services.

5.2. Principles to be considered when imposing, altering and withdrawing obligations

In order to mitigate or remove competitive problems in a certain market, in application of paragraph 2 of article 66 of ECL, to remove competitive problems and to reduce their impact, this Authority must impose on companies with SMP obligations deemed to be the most appropriate, insofar as such obligations comply with specific requirements, namely that they:

- Are appropriate to the nature of the identified competitive problem, and are proportional and justified in the light of the basic regulatory objectives set forth in article 5 of ECL (article 55, paragraph 3 a) of ECL);

- Are objectively justified in respect of the networks, services or infrastructure to which they refer (article 55, paragraph 3 b) of ECL);

- Do not result in undue discrimination in respect of any other entity (article 55, paragraph 3 c) of ECL);

- Are transparent in regard to their purposes (article 55, paragraph 3 d) of ECL).

ICP - ANACOM must thus, in strict compliance with national regulatory provisions and the Community directive framework, adopt a proportional and duly justified intervention, imposing a minimum level of obligations to overcome identified competitive problems, which effectively contribute to an evolution towards a competitive situation.

ICP - ANACOM's ultimate regulatory objective consists in promoting competition in the provision of electronic communications networks and services and associated facilities and services, contributing to the development of the internal market of the European Union (EU) and promoting the interests of citizens (ECL, article 5). It is especially incumbent on ICP - ANACOM to ensure that users derive maximum benefit in terms of choice, price, and quality, to ensure that there is no distortion or restriction of competition in the electronic communications sector and to promote efficient investment and innovation in new and enhanced infrastructures.

For this purpose, under articles 67 to 76 of ECL, obligations which may be imposed on an operator with SMP in relevant identified markets are:

- To meet reasonable requests for access to and use of specific network components and associated facilities, including to allow carrier selection and pre-selection and/or SLRO;

- Transparency in relation to the publication of information, including the provision of reference offers (RO);

- Non-discrimination in relation to the provision of access and interconnection and the respective provision of services and information;

- Price control and cost accounting;

- Accounting separation in respect of specific activities related to access and interconnection.

Under article 76-A, where the NRA concludes that obligations imposed under articles 67 to 76 have failed to achieve effective competition and that there are important and persisting competition problems or market failures identified in relation to the wholesale provision of certain access product markets, the Authority, as an exceptional measure, may impose on vertically integrated undertakings an obligation for functional separation.

In the analysis and definition of obligations to be imposed (or withdrawn), and as referred earlier, principles established in the scope of ERG Common Position on this issue shall also be taken into consideration, as laid down in the "*Revised ERG Common Position on the approach to appropriate remedies in the ECNS regulatory framework*", dated May 2006.

On the basis of competitive problems identified above and of regulatory obligations currently in force, imposed under the former market analysis, ICP - ANACOM will now identify obligations which should be maintained, altered or withdrawn, and any new obligations whose imposition is deemed to be justified.

5.3. Regulatory obligations currently in force and analysis of future obligations to be imposed on the market for call origination on the public telephone network provided at a fixed location

On 8.07.2004, ICP - ANACOM approved a final decision on the analysis of the wholesale origination market, having reached the conclusion that companies of the PT group had SMP thereon. Further to this decision, a set of regulatory obligations was imposed on the PT Group on 17.12.2004. Such obligations are listed in Table 1 – Obligations imposed on the PT Group, as operator with SMP in the wholesale market for call origination on the public telephone network provided at a fixed location

As explained in the scope of principles listed above in section 5.1 as regards the need to adjust measures adopted to the resolution of identified problems, the following sections focus on the analysis of regulatory obligations currently in force so as to weigh whether they should be maintained, altered or withdrawn, being also assessed whether additional obligations, among those which may be imposed in this wholesale market, are required.

5.3.1. Obligation to meet reasonable requests for access (article 72 of ECL)

In the scope of the previous market analysis, ICP - ANACOM imposed the obligation to meet reasonable requests for access, aiming to ensure reasonable and fair ways to meet requests, and also that situations of refusal to negotiate and/or to provide access do not take place, except in objectively substantiated situations.

In the absence of this obligation, operators with SMP could have an incentive to refuse access to the network, or at least to hinder it, in order to harm any competitors in downstream markets. As such, the imposition of an obligation to meet reasonable requests for access is deemed to be necessary to promote competition, to the final benefit of consumers.

It must be weighted if objectives inherent to the imposition of this obligation are maintained. In this context, to assess whether it is justified to maintain the obligation for access, ICP - ANACOM must take into account article 72, paragraph 4 a) to d) of ECL, according to which the assessment of the proportionality of this obligation requires the analysis of: "*a) The technical and economic viability of using or installing competing facilities, in the light of the rate of market development, taking into account the nature and type of interconnection and/or access involved, including the viability of other upstream access products, such as access to infrastructures, namely to ducts; b) The feasibility of providing the proposed access, in relation to the available capacity; c) The initial investment by the facility owner, taking account of any public investment made and the risks involved in making the investment; d) The need to safeguard competition in the long term, with particular attention to economically efficient infrastructure-based competition*".

The maintenance of this obligation was thus weighted against factors identified in paragraph 4 of article 72 of ECL, in particular as regards the feasibility of providing the proposed access, the need to safeguard competition and investments made.

The PT Group, the company with SMP in the wholesale call origination market, and operating in the retail market, has a significant incentive to refuse access to its network, or to refuse to negotiate such access under reasonable conditions with companies that compete with it in downstream markets.

Denying access could thus entail the leveraging of PTC's market power into the downstream market. In this context, given that wholesale call origination services are essential to enable some operators to provide a retail telephone service, or special services based on non-geographic numbering, it is deemed that the maintenance of the obligation for access and use of specific network resources is fundamental, as it prevents the operator with SMP to deny (or to provide under unreasonable conditions) the access to wholesale origination services. The development of an effective and sustainable competition in relevant markets and the maximum benefit for consumers is thus ensured.

Given that this obligation is in force for some years now, its technical and economic viability is not at stake, it has been absolutely demonstrated, and does not imply additional investments as regards TDM interconnection. Moreover, any issues on risks concerning the investment made to provide the offer concerning the wholesale call origination service no longer arise, thus the imposition of this obligation is perfectly feasible, and in addition it does not entail any additional cost for companies of the PT Group.

Any refusal for access on grounds of alleged unreasonableness must be substantiated, within 10 working days from its communication, both to ICP - ANACOM and to the interested party. In connection with this obligation, there is also another obligation, in the scope of market 4 (wholesale market for access to network infrastructure at a fixed location), concerning collocation in exchanges, which will be maintained. Obligations provided for in the scope of RUO, as regards interconnection issues, must naturally continue to be complied with.

As regards IP interconnection, and as referred in the scope of markets for termination at a fixed location, ICP - ANACOM considers that issues identified may affect TDM interconnection and IP interconnection in an equivalent way. In this context, it is deemed that the imposed obligation to meet reasonable requests for access and to allow access under fair and reasonable conditions applies in the same way to both TDM interconnection and IP interconnection.

As far as the IP interconnection obligation is concerned, conditions that in this respect are determined on the PT Group, as the operator with significant market power in wholesale markets for call termination on the public telephone network at a fixed location, must be applied.

Relatively to the wholesale origination service for dial-up Internet access, provided through the provision of AP, in which ISP connect through primary accesses (service provided via ORAI), it is stressed that this is an offer that was introduced in order to create conditions for the sustainability of the dial-up Internet access business and for the launch of diversified and competitive offers, to the benefit of the final user.

However, it is must be recalled that the retail dial-up Internet service has a merely residual weight. In the retail market, broadband Internet access offers have multiplied and, in parallel, the number of customers using a dial-up Internet access has significantly decreased. In fact, by the end of 2004 more than 30% of fixed Internet access customers were dial-up access customers, whereas by the end of 2013, this value was around 1%.

At wholesale level, a very significant decrease in the number of origination minutes marketed via ORAI has also taken place.

Without prejudice, it must also be taken into account that the wholesale provision of the origination services for dial-up Internet access may also be ensured in another way, namely on the basis of 2 Mbps, or multiple, interconnection lines, with SS7. In this context, RIO lays down the system for the access of PTC customers to switched data transmission services (Internet included), made available by data transmission service providers, which may be used by ISP in alternative to ORAI.

In the light of the loss of relevance of the retail dial-up Internet service, and the corresponding loss of relevance of the wholesale origination service for dial-up Internet access provided through the provision of AP, in which ISP connect through primary accesses, and also of the fact that an alternative wholesale service exists, provided in the scope of RIO, which ensures the provision of the retail service, the possibility of terminating this offer on the initiative of PTC is admitted, within a reasonable deadline, at a date agreed with the respective users.

Conclusion

ICP - ANACOM considers that, bearing in mind competitive problems that may occur in this market, and given the existence of SMP, the obligation that falls on the PT Group to meet reasonable requests for access and to allow access to the network under fair and reasonable conditions must be maintained.

Any refusal for access on grounds of alleged unreasonableness must be substantiated, within 10 working days from its communication, both to ICP - ANACOM and to the interested party.

ICP - ANACOM takes the view that the obligation to meet reasonable requests for access, namely at the level of the provision of the call origination service, complies with regulatory objectives defined in article 5 of ECL and meets conditions defined in paragraph 3 of article 55 of the same statutory instrument. In this context, it is deemed that the obligation is justified as it is ultimately intended to promote retail competition, ensuring that alternative providers have access to PT Group's customer database, and are thus able to provide retail services to these customers. If this obligation was removed, competition failures would subsequently arise. It is not discriminatory, as it reflects the dominant position of the PT Group as provider of the fixed origination service to other operators.

ICP - ANACOM believes that this obligation is proportional, as it is required to ensure competition in downstream markets, without demanding that unreasonable requests are met, thus it is the least restrictive obligation which may be imposed to solve the network access problem. It is transparent, as objectives of the proposed measure are identified, and it is clear that it is intended to foster competition and to prevent behaviours that may harm alternative operators and service providers supported in geographic numbering, and ultimately final users.

It is also a proportional obligation, given that, at the level of call origination, it is imposed only on the operator with a dominant position, and transparent because the purposes for which they were intended are clearly identified.

As regards the IP interconnection obligation, conditions that in this respect are determined on the PT Group, as the operator with significant market power in wholesale markets for call termination on the public telephone network at a fixed location, must be applied.

As regards the wholesale origination service for dial-up Internet access provided through the provision of AP, in which ISP connect through primary accesses, ICP - ANACOM admits the possibility of terminating this offer on the initiative of PTC, within a reasonable deadline, at a date agreed with the respective users, for the reasons stated above.

5.3.1.1. Implementing carrier selection and pre-selection

In the scope of the implementation of the obligation to meet reasonable requests for access and to allow access to the network under fair and reasonable conditions, the carrier selection and pre-selection obligation must be analysed. It consists in the provision by a company (the direct access provider) to its subscribers of the possibility of having access to publicly available telephone services provided at a fixed location by another company (the indirect access provider) 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 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.

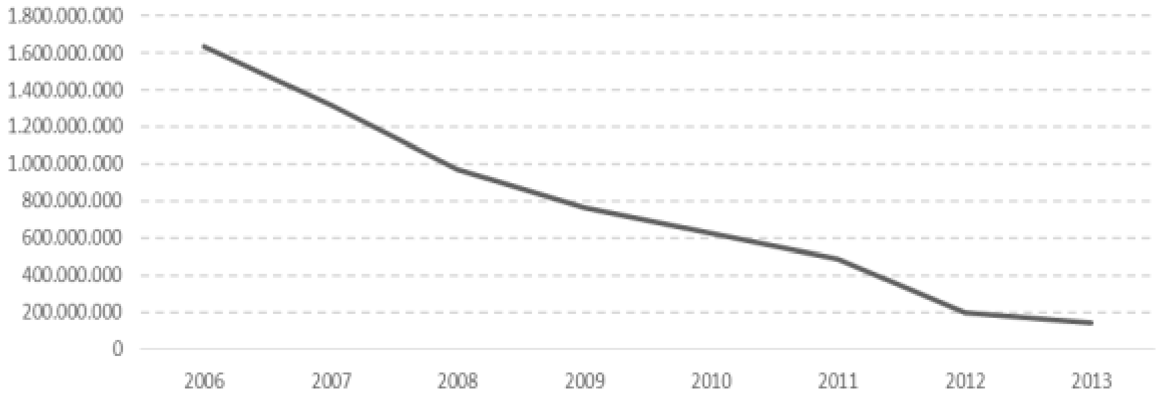
These features may represent a regulatory obligation which may be imposed on companies with SMP in the scope of the obligation for access and use of specific network resources, provided for in article 72 of ECL.

It is noted in this respect that this obligation was imposed in 2004 in retail markets for access to the telephone network at a fixed location, under article 84 of ECL, in the version in force at the time. Conclusions to which ICP - ANACOM has reached in the scope of the analysis of the referred markets, in the scope of which all obligations previously imposed were withdrawn, makes it necessary to impose on PTC the specific obligation on carrier selection and pre-selection in the present wholesale market, for the reasons laid down below.

The imposition of this obligation will ensure that operators without a self-owned infrastructure, or operators who, despite holding their own network, are still not present throughout the national territory, are able to maintain and/or deal with more customers, supporting the provision of retail services on the network of the operator with SMP, owner of a ubiquitous network.

In this context, it is stressed that, although a significant reduction of direct access traffic has been globally registered (as illustrated by the chart below), accompanied by a reduction of the number of pre-selected customers (between 2006 and 2013, the number of such customers decreased by 79%), some alternative operators still base a part of the provision of their voice retail services on the existence of indirect accesses.

Chart 14 – Evolution of indirect access traffic (fixed-to-fixed and fixed-to-mobile traffic)



Source: ICP-ANACOM

As the following table shows, the weight of indirect access traffic in total voice traffic of some operators is still relevant, representing for two of the most important alternative operators around 10% of their total voice traffic.

Table 6 - Weight of indirect access in total voice traffic for each operator

	2006	2007	2008	2009	2010	2011	2012	2013
PT Group	6%	8%	9%	9%	8%	6%	1%	0%
ZON OPTIMUS	---	---	---	---	---	---	---	[10-20%]
ZON Group	---	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	---
Optimus	[20-30%]	[20-30%]	[20-30%]	[10-20%]	[10-20%]	[10-20%]	[10-20%]	---
Vodafone	[60-70%]	[30-40%]	[20-30%]	[10-20%]	[5-10%]	[5-10%]	[0-5%]	[0-5%]
Cabovisão	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]	[0-5%]
Onitelecom	[40-50%]	[30-40%]	[20-30%]	[20-30%]	[10-20%]	[10-20%]	[10-20%]	[5-10%]
Other OSP	[90-100%]	[70-80%]	[40-50%]	[40-50%]	[30-40%]	[30-40%]	[20-30%]	[10-20%]

Note: National and international voice traffic (fixed-to-fixed and fixed-to-mobile traffic), not including national and international voice traffic accessed through calling cards.
Source: ICP-ANACOM

The importance of indirect access as a modality for provision of the telephone service at a fixed location, with coverage at the level of the national territory, must also be highlighted, as a relevant tool of competitive offers to business customers with multiple locations in the country, including rural or remote areas.

It is noted also that this type of access has been the first option taken by several entities in the market to access a large customer database, while other access alternatives, such as other types of wholesale offers, or investment in self-owned infrastructures, are not used. Although there never were many companies in the national market providing the telephone service supported exclusively on indirect accesses, there have been many providers who over the years have supported themselves on a combination of direct and indirect accesses.

ICP - ANACOM thus believes that this obligation, together with the obligation to provide the SLRO, guarantees contestability of retail markets for access and of telephone services provided at a fixed location, being crucial to ensuring the maintenance of the trend for increase of the competitive level of these markets, and contributing to overcome barriers to entry and expansion that exist in retail markets.

Accordingly, ICP - ANACOM deems it appropriate to impose a carrier selection and pre-selection obligation, which is objectively justified and proportional, given the need to ensure increased competition conditions in the provision of retail telephone services at a fixed location; it is non-discriminatory, as it applies only to the operator with SMP, holder of the largest network in the market, with the widest access and customer database, and which originates the highest number of calls. It is also a transparent obligation given that its purpose and the way how it is defined is clear, being intended to allow third party operators to access the customer database of the operator with SMP, so as to allow the provision of retail services to those customers.

This obligation applies only to PTC, given that within the PT Group this is the largest company, holding the highest number of accesses at a fixed location, originating the largest volume of traffic at a fixed location, both at wholesale and retail level, presenting a ubiquitous offer, being thus deemed that its imposition on PTC is sufficient to ensure compliance with objectives underlying its determination.

This obligation entails the provision of carrier selection on a call-by-call basis and of call pre-selection, for various types of calls.

Calls which may be subject to carrier selection or pre-selection include national calls - calls originating and/or ending in national public telephone networks, to geographic numbers and to non-geographic numbers - and international calls - calls made by dialling the "00" prefix. Calls made from public pay-phones or from temporary accesses are excluded from the scope of the obligation, as well as national calls to emergency services, and to the operator's own internal network services, to metered Internet access services and to services free-of-charge to the caller, and also international calls to services free-of-charge to the caller.

Traffic originated on calls subject to selection or pre-selection is owned by the operator that was selected or pre-selected, which determines the retail prices to be paid by the end user.

Pre-selection activation prices must continue to be established in compliance with the principle of cost orientation to which companies of the PT Group are subject.

As regards measures in force concerning the win-back of pre-selected customers, it is recalled that, further to determination of 17.07.2003 and 14.12.2004, a 6-month guard period was established, after pre-selection was activated, during which companies of the PT Group were not allowed to undertake any actions, namely individual contacts, aimed at winning the customer back. Later, on 25.05.2006, having again analysed the win-back issue, ICP - ANACOM considered that there are no grounds to cease the obligation for compliance with a guard period, although it was deemed justified to reduce to four months the length of the guard period.

ICP - ANACOM referred at the time that factors which justified the imposition and subsequent maintenance of the obligation essentially remain, namely those concerning a low level of market competition and the resulting privileged access of PTC to information on data concerning pre-selection contracts, and the fact that the guard period "remains an appropriate means to allow the client a free and informed choice of the service intended, trying it out and remaining free to continue being a client or to release himself from the contract, without being under any external pressure".

Nevertheless, ICP - ANACOM deemed it justified to reduce the length of the guard period to 4 months, and to reinforce the effectiveness of this measure, by changing how the guard period was counted, having determined that it would start at the moment a request for pre-selection activation was made, and not as from the moment the feature was effectively activated.

As from 2006, the market underwent considerable changes, the market share of companies of the PT Group having significantly decreased, and alternative operators showing an increasing presence, although in many cases supported on infrastructures owned by third parties. Additionally, there are in the market several wholesale offers which, requiring lower or higher levels of investment, allow alternative operators to provide competitive offers on the retail market. Moreover, the number of identified win-back situations by PTC has significantly decreased over the last few years.

As such, although it is necessary to maintain the carrier selection and pre-selection obligation, ICP - ANACOM acknowledges that the carrier selection and pre-selection lost a significant weight in the introduction of competition in the telephone service provided at a fixed location for the reasons mentioned above, thus there are grounds to remove the obligation imposed on the PT Group as regards compliance with a guard period during which the companies of the Pt Group are not allowed to undertake win-back actions on pre-selected customers. The withdrawal of this obligation necessarily requires that all associated obligations are removed.

As such, ICP - ANACOM’s determination of 25.05.2006[73], on restrictive measures against action developed by companies of the PT Group designed to win back pre-selected customers, is hereby repealed.

The obligation to provide carrier selection and pre-selection shall be without prejudice to provisions in ICP - ANACOM Regulation No. 1/2006, of 14.12.2005, as amended by ICP - ANACOM Regulation No. 268/2007, of 2.10.2007, on carrier selection and pre-selection, the provisions of which remain applicable, as long as the latter do not conflict with conclusions reached in this analysis.

[73] Available at http://www.anacom.pt/render.jsp?contentId=364965

5.3.1.2. Providing a subscriber line resale offer (SLRO)

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, which integrate the resale of the line and telephone traffic services. SLRO shows advantages at the level of integration of access and services, which are relevant for beneficiary companies, as it allows the provision of bundled services, making their offers more attractive and with greater added value, and which corresponds to the market trend of preferring packages that integrate the access element and the communications element.

SLRO also allows subscribers of a given service provided over the subscriber line to receive in the same bill the amount associated to the network line rental and the amount concerning the services provided by the operator concerned, thus increasing the perception as to the value of services provided, and also entailing advantages in terms of commodity and simplification of the payment. SLRO thus crates incentives to the development of competition, given that the final user is not required to maintain a direct commercial relation with PTC to be provided with an exclusive line offer.

In this context, SLRO is intimately associated to carrier pre-selection, as it may only be provided as regards subscriber lines which have been pre-selected and/or are associated to the broadband Internet access services (PT ADSL Network Reference Offer or unbundled network lines in the shared access modality included in RUO). However, no network lines in this last modality exist.

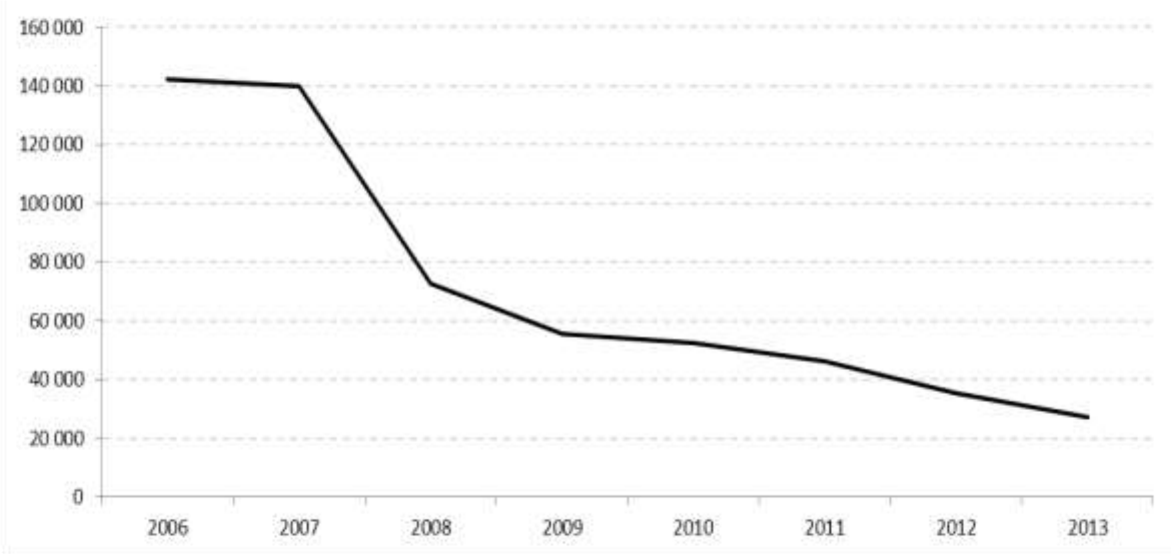
SLRO also presents clear advantages for the market in general, not only for companies that do not own their own infrastructure, but also for those who, although owners of some infrastructures, are not yet present throughout the territory, as it creates a possibility of entry in the market for the provision of voice services at a fixed location, without requiring relevant investments, as mentioned above in the scope of carrier selection and pre-selection.

In the former market analysis, ICP - ANACOM deemed it necessary to impose on the PT Group a SLRO obligation, as it would allow its competitors to develop their own retail offers, adding value for the final customer through the creation of innovative services, and competing with offers made available by PTC that aggregate, in optional packages/plans, the access price and the telephone traffic price.

In addition, this Authority considered that a guard period should be imposed as far as SLRO is concerned, during which companies of the PT Group providing the direct access fixed telephone service would be prevented from undertaking any consumer win-back action. This period was supposed to abide by conditions associated to the guard period imposed in the scope of carrier pre-selection.

SLRO was launched in 2006, and by the end of 2007 a decreasing trend in the number of activation requests, which remains until today, became apparent.

Chart 15 – Evolution in the number of SLRO accesses (non-equivalent accesses)

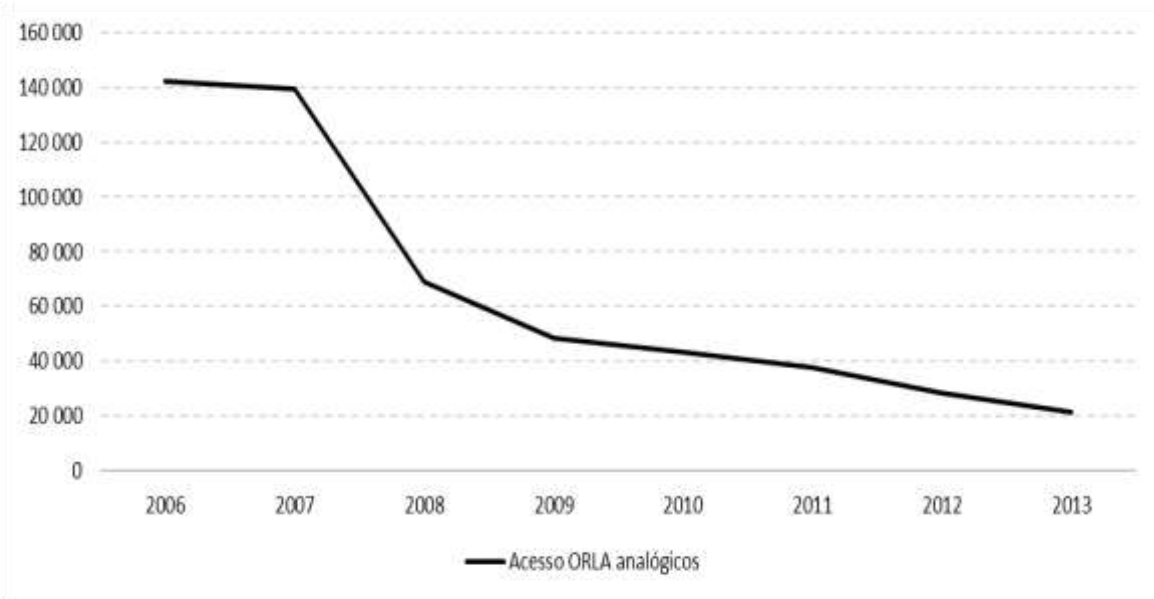


Source: PTC

Considering in more detail the evolution of the offer, it is noted that, by the end of 2013, there were 27.177 accesses with active SLRO (non-equivalent accesses), which included 21.486 analogue accesses, 5.231 basic ISDN accesses, 444 basic plus ISDN accesses, 4 primary ISDN accesses and 12 split primary ISDN accesses.

Specifically as regards analogue accesses with active SLRO, a sharp reduction in the number of accesses has been seen as from the 2nd half of 2007 (*vide* chart below), the peak of accesses with active SLRO having been reached in June 2007. Since that year, the number of analogue accesses with active SLRO has shown significant annual reductions.

Chart 16 – Analogue accesses with active SLRO including activations of the PT Group



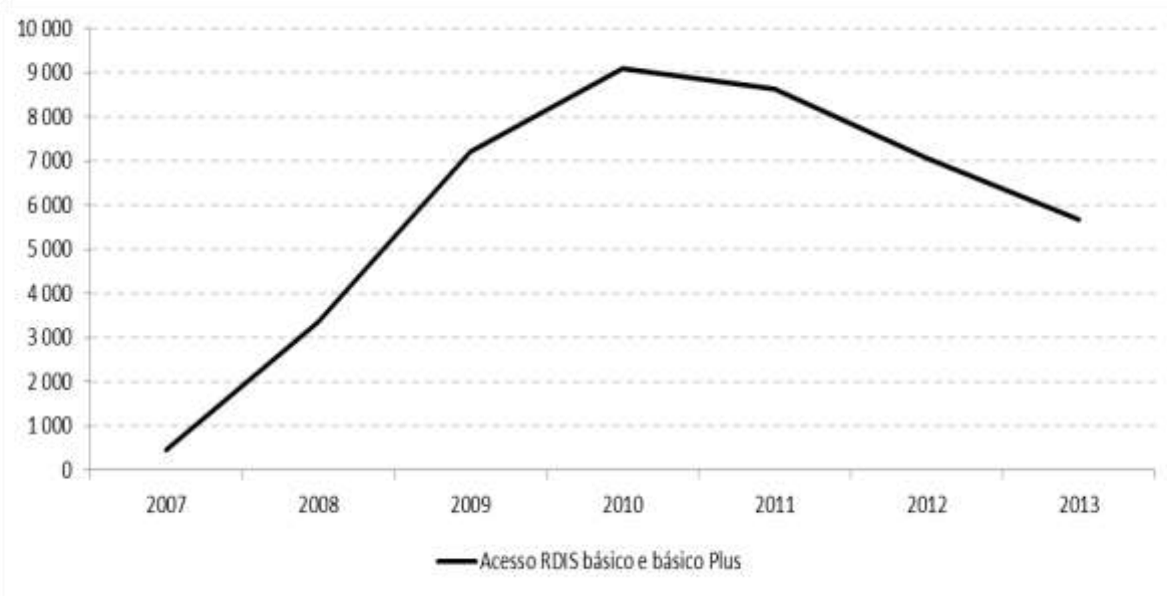
Analogue SLRO access

Source: PTC

As far as ISDN accesses with active SLRO are concerned (basic ISDN and basic plus ISDN), an increased interest on the part of beneficiaries in this type of accesses was registered until 2010/2011.

As from mid-2011, the number of this type of accesses with active SLRO has been gradually decreasing.

Chart 17 – Basic ISDN and basic plus ISDN accesses with active SLRO, including activations of the PT Group (non-equivalent accesses)



Source: PTC

With regard to primary ISDN accesses and split ISDN accesses, they show an unrepresentative number, in terms of non-equivalent accesses.

Notwithstanding the reduction in the number of SLRO accesses since June 2007, as well as of beneficiaries that use the offer (only 4 operators, by the end of 2013), ICP - ANACOM notes that this comes as no surprise, given that, as referred earlier, the SLRO consists in a remedy which allows entry in the market of alternative operators at an early stage of their activity, without requiring huge investments in the development of their own network or the use of other wholesale offers provided by the operator with SMP, although the availability of more infrastructure enabling the appropriate connection to the network of the operator with SMP is necessary. As operators achieve a more sustained market base, it is likely that they will make investments so that they are able to climb the investment ladder, installing self-owned infrastructure that enables the provision of services to the final customer, on a level playing field with the historical operator who owns a fully developed infrastructure network.

Without prejudice to the recent evolution of SLRO, this Authority continues to consider that this offer is of importance as one of the fundamental means enabling a new entrant to provide an integrated offer, acting also as disincentive to the practise of excessive retail pricing by the operator with SMP, as it enables its competitors to develop their own retail offers, with added value for the final customer through the creation of innovative values, and to compete with offers made available by PTC that aggregate, in optional packages/plans, the price of access and of telephone traffic, thus promoting competition in the provision of access and telephone service at a fixed location, associated to carrier selection and pre-selection obligations.

In the light of the above, it is deemed that the maintenance of the obligation to publish a SLRO, associated to carrier selection and pre-selection obligations, is appropriate and objectively justified, meeting requirements laid down in article 55 of ECL, and it is stressed that this is a proportional measure given the market power of companies of the PT Group, which is necessary as it guarantees that markets for access to the public telephone network at a fixed location and of telephone services provided at a fixed location maintain the trend towards competition.

This obligation applies only to PTC, given that within the PT Group this is the largest company, holding the highest number of accesses at a fixed location, originating the largest volume of traffic at a fixed location, both at wholesale and retail level, presenting a ubiquitous offer, being thus deemed that its imposition on PTC is sufficient to ensure compliance with objectives underlying its determination.

As regards applicable prices, principles underlying their determination remain, being stressed that SLRO prices must be sufficiently low to enable an operator using this offer to enjoy an appropriate margin, so as to create its own retail offers and to attract final customers, however they must not be so low as to make the recovery of costs borne by the SMP operator impossible and as to discourage operators from investing in the development of self-owned infrastructure or from using other wholesale offers, less restrictive than SLRO, to establish their own retail offers.

In the light of this principle, at the level of monthly charge, the price must continue to refer to the retail price. ICP - ANACOM considers this option to be the most appropriate, as it is of a relatively easy implementation, incorporating incentives towards greater efficiency, and ensuring the remuneration of costs of the service provision. It is also an option which does not require information with a greater level of detail at the level of costs, in addition to what the SMP operator already provides in its cost accounting system, and avoids margin squeeze situations.

As such, ICP - ANACOM believes it appropriate for the monthly charge associated to SLRO to continue to be set on the basis of the retail minus principle, that is, the price must be calculated by subtracting from the monthly charge of accesses of the telephone service at a fixed location the difference between costs of the provision of the access services at retail level and at wholesale level, namely subtracting retail costs concerning the billing and collection services, and taking into consideration, when relevant, specific costs associated to the offer. There are several European countries who have implemented an equivalent methodology, such as the Netherlands, Ireland, Sweden and Slovenia.

Additionally, as the promotion of increased competition at the level of infrastructures is deemed to be appropriate, and so as not to discourage investment in networks, the setting of the SLRO monthly charge must also take into consideration the monthly charge of the reference unbundling offer (RUO).

As regards the SLRO activation price, the principle according to which it should not exceed the maximum price defined for the pre-selection activation is to be maintained. In this respect, it is deemed that this approach is justified, given that processes associated to SLRO and pre-selection are so close, and that it is likely that in many cases the SLRO and pre-selection are requested at the same time, the savings of which will compensate for the development of a specific computer application for the reception, handling and processing of SLRO implementation requests.

Relatively to provisions on the win-back of pre-selected customers, ICP - ANACOM considers that what was referred above on the section on carrier pre-selection is also valid as far as SLRO is concerned, ceasing to apply any guard period during which companies of the PT Group are not allowed to undertake any action aimed at winning the customer back. As such, ICP - ANACOM's determination of 25.05.2006[74], on restrictive measures against action developed by companies of the PT Group designed to win back pre-selected customers, is hereby repealed.

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[74] Available at http://www.anacom.pt/render.jsp?contentId=364965.

As far as other characteristics of this offer are concerned, without prejudice to future updates deemed to be necessary to pursue objectives on the basis of this obligation (including the review of prices applicable according to principles defined), current characteristics should be maintained, namely at the level of

- Types of access comprised (analogue accesses and ISDN accesses);
- Services comprised and minimum period of engagement of such services;
- Specific procedures associated to service supply, including temporary suspension of the FTS, suspension of the SLRO on account of default in payment on the part of the subscriber, and ease of alteration of the reason for engaging SLRO;
- Management, maintenance and repair operations;
- Quality parameters and penalties for non-compliance;
- Procedures for billing and charging subscribers and for billing and paying SLRO;
- Legal provisions applicable, including those on settlement of disputes and service interruption and suspension.

5.3.1.3. Conclusion as regards carrier selection and pre-selection, and SLRO

In the light of the above, ICP - ANACOM deems it appropriate to impose on PTC a selection and pre-selection obligation, as well as the obligation to provide a subscriber line resale offer (SLRO).

Pre-selection activation prices must continue to be set on the basis of the cost-orientation principle, whereas the SLRO monthly charges must take into account the retail minus principle, as referred earlier.

In this context, ICP - ANACOM determines that provisions preventing companies of the PT Group, for a 4-month guard period, from undertaking customer win-back actions, cease to be applicable.

Obligations at stake guarantee contestability of retail markets for access and of telephone services provided at a fixed location, and are crucial to ensure that the trend towards competition is maintained in these markets.

Such obligations are also fundamental to ensure a continued presence of providers whose customers are mostly business customers, frequently with multiple locations, and who, as such, only engage retail services of providers who are able to maintain a presence throughout the national territory.

These obligations are also objectively justified and proportional, as they are aimed at ensuring increased conditions for competition in the provision of retail services provided at a fixed location.

These are also non-discriminatory obligations, as they apply only to the operator with SMP, holder of the largest network in the market, with the widest access and customer database, and which originates the highest number of calls. Obligations are also transparent given that their purpose and the way how they are defined is clear.

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

The obligation of non-discrimination consists, according to ECL, in particular article 70 thereof, "*of the requirement for an undertaking to apply equivalent conditions in equivalent circumstances to other undertakings providing equivalent services and to provide services and information to third parties under the same conditions and with the same quality as the services and information provided to its own departments or to those of its subsidiaries or partners*".

In the past, this obligation was imposed in order to prevent the PT Group from discriminating in favour of its own retail activities and to ensure that competing operators purchasing wholesale services from the PT Group found themselves in an equivalent position at retail level, thus acquiring the possibility to compete and to replicate PT Group's retail commercial offers. It was also applied in order to ensure that some retail operators were not placed at a disadvantage compared to other retail operators in the framework of the acquisition of wholesale call origination services.

It is deemed that, in the absence of an obligation of non-discrimination, a wholesale company holding SMP has a strong incentive to discriminate, compared with its own services, alternative operators that are active in downstream markets, as regards conditions under which wholesale services are provided when this company is vertically integrated and also operates at retail level, as is the case under consideration, which entails the leveraging of market power in favour of its position in the retail market.

This competition problem may include the discriminatory use of or retention of information, discrimination relatively to quality of service, delaying tactics and undue demands, in addition to the possibility of discrimination at the level of prices.

As such, ICP - ANACOM deems that it is crucial, as a complement to the obligation to meet reasonable requests for access, that the non-discrimination obligation in the offer of wholesale call origination services is maintained, in order to prevent the PT Group - a vertically integrated company - to discriminate in favour of its own retail activities and to ensure that competing operators using services under consideration find themselves in a position equivalent to companies of the PT Group in the retail market.

The imposition of this obligation also aims to prevent undue discrimination among the various operators competing with the PT Group, thus ensuring that all companies have access to equivalent conditions.

In the previous analysis of origination and termination markets, the PT Group was imposed, in the scope of the non-discrimination obligation, the obligation to provide a capacity-based interconnection offer.

In this regards, given the loss of relevance of this modality, PTC shall be applied the determination indicated in the scope of the analysis to wholesale markets of call termination on the public telephone network at a fixed location.

Conclusion

In the light of the above, ICP - ANACOM takes the view that the non-discrimination obligation remains appropriate and should thus be maintained in the time horizon of this analysis, being applied both at internal level and to third parties, involving tariff aspects and other issues of a technical nature associated to the offer of the service, namely in terms of quality of service and supply and repair times.

The non-discrimination obligation meets the regulatory objectives defined in article 5 of ECL, namely to promote competition and to ensure the maximum benefit for users. It allows compliance with conditions laid down in article 55 of the same statutory instrument, as it is proportional and justified, given that it guarantees that companies of the PT Group do not favour their own commercial operations compared to those of third parties, to the disadvantage of operators that compete with the PT Group in downstream markets, thus protecting such operators, and consequently final consumers. It also ensures that there is no difference in treatment given to the various operators who purchase PT Group's call origination service.

This is a transparent obligation, as problems aimed to be solved and purposes to be achieved are identified, related to the need to remove undue discrimination, as well as their effects, and it is non-discriminatory, as it reflects the vertical integration of the PT Group and its size.

As far as the capacity-based interconnection offer is concerned, given the loss of relevance of this modality, PTC shall be applied the determination indicated in the scope of the analysis to wholesale markets of call termination on the public telephone network at a fixed location.

5.3.3. Transparency in the publication of information, including reference proposals (articles 67 to 69 of ECL)

The obligation for transparency "*consists of the requirement to publish in the appropriate form specified information in relation to operator access and interconnection, such as* *accounting information, technical specifications, network characteristics, terms and conditions for supply and use, including prices and any conditions limiting access to or use of services and applications where such conditions are allowed by applicable law or regulations*"[75]. In addition, "*the NRA may (...) determine, in particular to operators which have obligations of non-discrimination, that access or interconnection reference offers be published (...)*"[76], and also how such offers are to be published.

The duty to publish an RIO also follows from the obligation for transparency to which the PT Group is subject, further to the previous market analysis, including the duty to publish specific information related to several issues, such as: (i) pricing; (ii) terms and conditions; (iii) technical information, and (iv) information on quality of service. These measures were set out in order to make available information required by OSP to develop their own offers and services and to promote the development of an effectively competitive market.

The current market analysis requires the examination of whether objectives underlying the imposition of this obligation remain, thus the impact of its removal must be weighted.

The imposition of an obligation for transparency in the market for call origination aims to monitor any anti-competitive behaviour. In fact, the simultaneous awareness of prices and conditions of offers by several competitors of the SMP company allows the quick identification of any practises of that nature, as it promotes the market's own self-control. Moreover, in this context, the publication of a RIO makes the interconnection agreement negotiation procedure swifter.

Additionally, as means for the disclosure of all terms and conditions associated to the provision of the wholesale service, it is also a natural complement to the monitoring of other obligations, especially the obligation for non-discrimination in the interconnection offer.

The imposition of a transparency obligation, implemented by means of the duty to publish information, also fosters greater predictability, security and certainty, associated to the environment in which companies who seek this service develop their activities, promoting the development of a competitive market, to the ultimate benefit of the final user.

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[75] Cf. article 67 of ECL.

[76] Cf. article 68 of ECL.

As such, in case the transparency obligation was removed, the possibility of detecting discriminatory behaviour would be compromised, with adverse effects as regards the effectiveness of the obligation for non-discrimination.

Accordingly, ICP - ANACOM considers that companies of the PT Group must continue to be subject to the obligation for transparency in the publication of information. This obligation must be implemented through the publication at the website of each operator integrating the PT Group of information on network settings, including location of network access points, as well as of information on the tariff structure practised as regards call origination services provided by each of these operators (in the case of PTC, this obligation is implemented through the publication of the RIO, as follows from paragraphs below).

PTC[77], in particular, must remain subject to the obligation to present a RIO, maintaining its publication and update, in the respective website, thus the obligation referred in the preceding paragraph is integrated in this obligation. It is deemed that the information currently available in the scope of this wholesale offer continues to be relevant and appropriate, thus this publication must continue to cover the issues previously defined, as well as to clearly point out the alterations introduced by each version of these offers.

In parallel with the publication of RIO, PTC must remain subject to the obligation to publish on the Internet or in the already available Extranet platform information on the quality of service intended to be provided. As such, and again without prejudice to the identification, on a case-by-case basis, of additional indicators and parameters for which integration in the RIO is deemed to be appropriate, PTC must publish, in an aggregated form, the levels of quality provided for in the RIO, namely the network quality of interconnected operators, the quality of lines for traffic interconnection and for internal extensions for traffic interconnection, and the loss degree for each interconnection beam.

PTC must also publish prices, terms and conditions associated to the provision of the origination service, as well as to the billing, charging and risk of non-recovery service

[77] This obligation applies only to PTC, given that within the PT Group this is the largest company, holding the highest number of accesses at a fixed location, originating the largest volume of traffic at a fixed location, both at wholesale and retail level, presenting a ubiquitous offer, being thus deemed that its imposition on PTC is sufficient to ensure compliance with objectives underlying its determination.

associated to calls originated by its own customers and the retail price of which is not free of charge. The company must also publish technical information, including information on network settings, location of network access points and technical standards (including any restrictions on use and any other security issues). Relevant information on network settings must also include information on the function and connectivity of points of access.

In this context, PTC is still required to communicate any alterations that affect its network structure and which have implications for interconnection principles, at least 12 months ahead, so as to allow operators to undertake the necessary adjustments to their networks. ICP - ANACOM admits that the referred time-limit may be shortened insofar as all interconnected operators are consulted, and none of the beneficiaries of the interconnection offer objects to this. Without prejudice to the preceding obligation, it is deemed that other alterations which may also have an impact on OSP should be notified by PTC at least two months ahead.

Lastly, it is stressed that, in the context of this obligation for transparency, PTC is also subject to an obligation to publish a SLRO, as determined in the scope of the obligation for provision of access to the network.

In the scope of the obligation for transparency, ICP - ANACOM is entitled to require the submission of interconnection agreements concluded between companies of the PT Group and other operators, where deemed to be appropriate, in order to verify compliance with any regulatory obligation or in the scope of the settlement of disputes.

Conclusion

In the light of the above, it is deemed that the obligation for transparency imposed on the PT Group must be maintained, and it should be implemented through the publication at the website of each operator integrating this group of information on network settings, including location of network access points, as well as of information on the tariff structure practised as regards call origination services provided by each of these operators.

On its turn, PTC must remain subject to the obligation to publish and to update a RIO, in the respective website, as well as to publish information on quality of service, in compliance with the obligation to which is has been subject. This is an obligation which has been in force since the last market analysis, and it appears to be entirely feasible, its implementation not imposing any additional relevant costs on PTC.

PTC must also publish prices, terms and conditions associated to the provision of the origination service, as well as to the billing, charging and risk of non-recovery service, and it must also publish technical information, including information on network settings, location of network access points and technical standards, being also required to communicate in advance any alterations that affect interconnection principles with SMP, at least 12 months ahead. Other alterations which may also have an impact on OSP should be notified by PTC at least two months ahead of taking effect. These time-limits may also be altered, in the scope of obligation imposed in the wholesale market for call termination at a fixed location concerning IP interconnection.

Against the background of what was referred above on the obligation to meet reasonable requests for access, ICP - ANACOM admits the possibility of terminating ORAI on the initiative of PTC, within a reasonable deadline, at a date agreed with the respective users.

ICP - ANACOM is entitled to require the submission of interconnection agreements concluded between companies of the PT Group and other operators, where deemed to be appropriate.

ICP - ANACOM takes the view that the proposed obligation for transparency meets the regulatory objectives defined in article 5 of ECL, namely to promote competition and to ensure the maximum benefit for users. It is justified, as it facilitates the assessment of whether the non-discrimination obligation is complied with, and also as it provides operators negotiating with the PT Group, especially PTC, namely through the publication of RIO, all information required in the scope of the interconnection with PTC. Given that this is the largest network in the market, holding the highest number of customers and accesses at a fixed location, in addition to originating and receiving the largest volume of traffic, the provision of this information is thus crucial to ensure greater security and predictability in negotiations, and thus to enable the implementation of interconnection between operators in a timely manner.

The obligation to publish the RIO is proportional and non-discriminatory, as it reflects the scale of PTC's access network and its ranking as provider with SMP in the origination service, and aims to ensure that the non-discrimination principle is not hindered, ensuring the absence of adverse conditions to competition in downstream markets. This is a transparent measure, given that its imposition clearly results from the need to ensure the awareness of conditions for provision of the call origination service, which is essential for the stability of downstream markets.

The obligation to publish the SLRO is also an objectively justified measure as it guarantees the development of competition and contestability in the retail market, to the benefit of users. It does not call into question the principle of non-discrimination, given that it is imposed on the operator both with the largest market share and which provides the highest number of accesses, namely analogue and ISDN accesses. This is also a proportional and transparent obligation, as its intended purposes are clear.

5.3.4. Price control and cost accounting (articles 74 and 76 of ECL)

Article 74 of ECL entitles the NRA to impose obligations relating to cost recovery and price controls, including obligations for cost orientation of prices and cost accounting systems, where a potential lack of effective competition leads to the establishment of excessively high prices or of price squeezes, to the detriment of end-users.

In this context, and still under the same law, ICP - ANACOM must allow a reasonable rate of return on the capital employed, taking into account any risks specific to a particular new investment network project, and must ensure that any mandatory cost recovery mechanism or pricing methodology promotes efficiency and sustainable competition and maximises benefits for consumers; account may also be taken of prices available in comparable competitive markets.

In its decision of 17.12.2004, ICP - ANACOM considered that the obligation for price control, where prices should be cost-oriented on the basis of the evolution of variables with a direct influence on prices and of expectations related to the productive and allocating efficiency of the SMP operator, was appropriate as it would enable competing operators to purchase wholesale services at prices expected to be applied in a competitive market, thereby contributing to the promotion of efficiency and sustainable competition and to maximizing benefits for the final user.

At present, and bearing in mind, on the one hand, that interconnection prices are crucial for the development and maintenance of healthy competition, and on the other, having reached the conclusion, from the competition analysis in chapter 4, that companies of the PT Group continue to hold SMP, there are grounds for maintaining the obligation for price control, especially the obligation for cost-orientation of prices in the setting of call origination prices and of prices of the billing, charging and risk of non-recovery service, where appropriate, as well as of prices of the carrier pre-selection activation. In fact, this is a wholesale market where: (i) there is a lack of competition; (ii) relevant barriers to entry still exist; and (iii) the development of competition in the short/medium term is not likely to occur, reason for which it is deemed that an operator with SMP has incentives to define prices for wholesale offers at a significantly higher level that costs incurred in the provision of the service.

On the other hand, ICP - ANACOM considers that obligations to meet reasonable requests of access, for non-discrimination and transparency, are not sufficient, either on their own or jointly, to prevent the SMP operator from setting prices above the service provision cost. As such, it is concluded that the price control obligation must be maintained in this wholesale origination market.

Prices of the wholesale call origination service, as well as of the billing, charging and risk of non-recovery service, have been regulated according to the principle of cost-orientation, and in the application of this principle to prices concerned, ICP - ANACOM has used results of PTC's Cost Accounting System (CAS), which is a model of "fully distributed costs" based on historic costs, which also has as additional reference European practises as regards the setting of prices and the endorsement of economic efficiency criteria.

As such, if the cost accounting obligation was withdrawn, there would be no guarantee that the information required to establish prices was immediately available, nor would there be any guarantee that wholesale costs were appropriately and consistently allocated to regulated wholesale products, which could lead to an excessive cost recovery. The removal of the cost accounting obligation would imply the loss of an essential instrument for the definition of prices associated to the reference offer under consideration, leading the market to a situation of greater uncertainty as far as wholesale prices are concerned.

As regards the costing method to be used, which currently corresponds to the fully distributed historic costs methodology, ICP - ANACOM considers that it is still appropriate in the scope of the setting of prices in this wholesale market. However, it is deemed that in the medium-term, a possible migration from this methodology to the long-run incremental cost model should be weighted, a process which would always require a public consultation and notification to EC under article 57 of ECL.

It is noted that in the specific case of the billing, charging and risk of non-recovery service, and the carrier pre-selection activation service, ICP - ANACOM engaged the services of a consultancy firm for the development of a simplified cost model in order to understand the costs of providing such services, to use costs produced by models as the basis for the definition of prices of services and to create regular updates to reflect the future evolution of services in Portugal, thereby enabling ICP - ANACOM to take decisions on the basis of a more stable price-definition tool than results from the cost model of the last few years for these services.

As far as SLRO is concerned, as referred earlier, ICP - ANACOM deems it appropriate that the monthly charge continues to be established on the basis of the retail minus principle, that is, the price must be calculated by subtracting from the monthly charge of accesses of the telephone service at a fixed location the difference between costs of the provision of the access services at retail level and at wholesale level, namely subtracting retail costs concerning the billing and collection services, and taking into consideration, when relevant, specific costs associated to the offer.

<u>Conclusion</u>

ICP - ANACOM takes the view that the price control obligation, associated to an obligation for cost-orientation, must continue to be applied on companies of the PT Group.

Prices must be set on the basis of “fully distributed” historic costs, and may be changed further to the approval of this decision, so as to reflect the evolution of costs of the SMP operator. Billing and charging prices as well as pre-selection activation prices must take into consideration results of the simplified costing model which is in the course of completion. SLRO monthly charges must be defined on the basis of the retail minus principle.

Despite the fact that cost accounting and price setting operations are undertaken on the basis of the costing system currently in force, ICP - ANACOM deems that in the medium-term, a possible change in the costing system, towards the forward looking long-run incremental cost model, should be weighted.

In view of the above assessment, ICP - ANACOM considers that the price control obligation is justified and proportional in view of the degree of competition in the analysed market. In fact, regulatory measures imposed contribute decisively to the promotion of an effective and sustainable competition in downstream markets and the maximum benefit for consumers is thus ensured. The price control obligation, associated to an obligation for cost-orientation, allows operators competing with the PT Group to purchase origination services at prices that enable the development of competitive retail services (to the advantage of consumers, as mentioned earlier), and, at the same time, ensures that companies of the PT Group receive an appropriate remuneration for the provision of those services, thereby enabling incurred costs to be recovered.

The price control obligation is also non-discriminatory, as it reflects PTC's scale and its role as an SMP provider of the wholesale call origination service. This is also a transparent measure, as its purpose to ensure that the PT Group prices are based on costs that allow operators to compete in downstream markets, is clear.

As far as the cost accounting obligation is concerned, ICP - ANACOM takes the view that this obligation should all only on PTC[78]. This measure is justified and proportional, as it guarantees the availability of information required for the definition of regulated wholesale prices, ensuring that such information is appropriate, broadly consistent and that it reflect costs incurred by the operator in the provision of services concerned, and in this sense, it is an obligation that, complementing the obligation for price control, effectively contributes for the promotion of competition in retail downstream markets.

[78] This obligation applies only to PTC, given that within the PT Group this is the largest company, holding the highest number of accesses at a fixed location, originating the largest volume of traffic at a fixed location, both at wholesale and retail level, presenting a ubiquitous offer, being thus deemed that its imposition on PTC is sufficient to ensure compliance with objectives underlying its determination.

It is also a non-discriminatory obligation, as it applies only to the company whose presence in the market is the most significant, and whose prices require monitoring, not least so that situations of cross-subsidisation between regulated services are prevented. As this obligation is already in force, and results from the fact that the company holds SMP in several relevant markets, its implementation does not impose additional costs on the company. Lastly, this is a transparent obligation, given that underlying objectives are clear.

Specifically as regards call origination services to non-geographic numbers, it is deemed that such services integrate the same product market as origination services supporting the provision of indirect access retail telephone services. As such, the same obligations also apply, including the obligation for price control.

However, in the light of comments received, namely on the part of the PT Group, on the competitive dynamics associated to the provision of these services, as well as information provided on traffic and wholesale prices practised by several operators, ICP - ANACOM acknowledges that this mater requires re-analysis, so that any specificities which may exist in the provision of wholesale call origination services to non-geographic numbers are taken into due consideration.

Given the need to further deepen the analysis on this subject, a task which will likely not be concluded in the short term, as this involves the assessment of additional information which has yet to be made available, and consequently a critical weighing of all elements is required in order to obtain a comprehensive overview of conditions associated to the provision of the service under consideration, and given also the need to provide all interested parties the possibility to assess the matter, once the referred re-analysis is concluded, the decision on this market remains unchanged from the DD, as far as this specific aspect is concerned.

Notwithstanding, in the light of the above, ICP - ANACOM decides to immediately assess the specific situation of the provision of origination services to non-geographic numbers, and to submit this analysis to public consultation within at the most six months from approval of this decision.

5.3.4.1. Recovery of unrecovered common costs of call termination

As prices of the call termination service are set at a level equivalent to that which results from the application of a pure LRIC costing model, the issue of the recovery of costs, such as common costs, which cease to be recovered through a "pure" LRIC model, may be raised.

It is noted that, in the scope of the most recent decision on the market for mobile termination, decision of 30.04.2012[79] on the specification of the price control obligation on wholesale markets for voice call termination on individual mobile networks, ICP - ANACOM referred, in the scope of the recovery of common costs, as follows:

"*It should be added, in fact, that the central discussion point on the application of a "pure" LRIC or LRAIC "+" model, focused on the accusation that the former does not allow the recovery of common costs, is unequivocally explained[80] in an EC Recommendation, which considers that these costs should be recovered in the scope of services other than call termination services[81]. It is noted that, contrary to the wholesale termination market, which is a monopolist market, other services are subject, at retail level, to price restrictions which arise from competition existing therein. ICP - ANACOM endorses this position and finds no reason why the Portuguese case should depart from this position*.

In fact, from a perspective of static efficiency, the application of a "pure" LRIC value implies a lower distortion of the structure of voice call prices (which tend to reflect the inherent real marginal costs), as and such, of marginal consumer choices and respective total amounts of consumed minutes, as fewer distortions will result from the recovery of common costs, for example, through the fixed element of tariff structures known as two-part tariffs, than from the recovery of common costs through the linear charging of the

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[79] Available at: http://www.anacom.pt/streaming/Decisao_final_obrigacao_controlo_precos30Abril2012.pdf?contentId=1125437&field=ATTACHED_FILE

[80] Article 7 of Directive 2002/21/EC, as amended by Directive 2009/140/EC (http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:337:0037:0069:EN:PDF)

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

wholesale termination price, which is directly included in the composition of the marginal cost of off-net calls."

In the scope of the market for voice call termination on the public telephone network at a fixed location, the decision approved on 27.08.2013[82], referred as follows:

"*It is in particular noted that, if the application of a "pure" LRIC model does not allow the recovery of common costs, as indicated by the Commission in the referred Recommendation, this recovery should occur in the scope of services other than call termination services, namely through non-regulated retail products[83], where, unlike the former, effective competition exists, thus being promoted the efficiency of operators, which would not be the case if this recovery was to take place in the scope of a service of a monopolist nature*."

Without prejudice to considering that the statements above are correct, in markets where wholesale and/or retail products are strongly regulated, it may be difficult to pass on common costs that are not recovered via the termination price. Although this may not be the situation of mobile markets, given that, in general, in these markets only the wholesale termination market is regulated, this may be the case of some fixed markets.

An operator who provides the termination service and which also uses the same service provided by third parties may be able to recover the full cost, or at least part of it, which ceased to be recovered in the scope of termination, with the savings obtained with the reduction of termination prices practised by third parties. A complete recovery will occur in case total traffic symmetry exists and operators concerned practise the same termination price. But even in case of traffic asymmetry, it is likely that at least a part of costs are recovered via savings obtained with the reduction of prices practised by third parties, and the remainder, if any, may be recovered through retail.

As such, in markets where the SMP operator in the market of fixed termination is also subject to a strong retail regulation, for example resulting from the fact that it has SMP in

[82] Available at: http://www.anacom.pt/render.jsp?contentId=1171704.

[83] Cf. page 17 of the Explanatory Note: "(…) *Given the two sided nature of call termination, not all related termination costs must necessarily be recovered from the wholesale charge levied on the originating operator. Even if wholesale termination rates were set at zero, terminating operators would still have the ability to recover their costs from non-regulated retail services*."

the market for access or of telephone services, or that it is the universal service provider, the operator may not be able to set retail prices freely to enable the recovery of common costs, and as such regulatory intervention may be required to allow this recovery.

It must be examined to what extent it can be considered that the national market fits into the referred situations so as to assess the need for regulatory intervention enabling the recovery of common costs for products such as call origination.

Among the various companies in fixed markets, the PT Group and PTC in particular, is the sole company which may fit into the identified situation. However, and despite the fact that PTC has SMP in the wholesale market currently under analysis, it will cease to have SMP in narrowband retail markets, both at the level of access and at the level of telephone service at a fixed location.

Moreover, PTC recently ceased to be the universal service provider in the scope of the provision of access and communications services at a fixed location, as will be explained below.

As far as PTC is concerned, it is stressed, first of all, that this operator, in addition to being the provider of the voice call termination service, also uses the termination service provided by third party operators given its presence in the retail market (being the holder of a great majority of traffic originated in its network). As such, PTC is able to recover common costs which it will cease to recover with the application of prices set at a “pure” LRIC level, due to saving obtained with the removal of the asymmetry of termination prices.

Moreover, having PTC ceased to be the universal service provider for provisions concerning the connection to a public communications network at a fixed location and the provision of a publicly available telephone service through that connection, which are now ensured by NOS (these universal service provisions were awarded in the North and Centre areas of the country to Optimus and in the South and island areas to ZON, having these two companies later merged into NOS), the restrictions to which PTC was subject on account of being the US provider ceased also to apply to it. In parallel, given the deregulation of retail markets for access and for telephone services, PTC also enjoys greater freedom in the setting of prices and conditions of offers concerning access and telephone services provided at a fixed location.

In the light of the above, it is deemed that PTC will be able to recover costs that ceased to be relevant in the setting of termination prices, both via savings obtained with the reduction of prices practised by third parties, and via retail, and it is not necessary to provide for the recovery of these costs through any other means, namely via regulated offers.

5.3.5. Accounting separation in relation to specific activities related to access and/or interconnection (article 71 of ECL)

The obligation for accounting separation consists, in the case of specific activities related to access and/or interconnection, "*of the requirement that operators, and especially those that are vertically integrated, present their wholesale and internal transfer prices in a form that has transparency in order to ensure, inter alia, compliance with the obligation of non-discrimination where applicable or, where necessary, to prevent unfair cross-subsidy*."

The obligation for accounting separation is a natural complement of the obligation for non-discrimination, as the former allows ICP - ANACOM to monitor the proper compliance with this last obligation, which is proposed in this analysis to remain in force. This obligation further allows, also combined with the obligation for transparency, to assess the existence and extension of any behaviour which may be potentially harmful for competition and for final users, namely those resulting from situations that involve cross-subsidisation.

In this context, the obligation for accounting separation is particularly important in cases where the operator with SMP is vertically integrated, providing both wholesale and retail services.

As such, it is crucial to maintain this obligation, which falls on PTC[84], including the obligation to make accounting records available, as provided for in paragraph 3 of article

[84] This obligation applies only to PTC, given that within the PT Group this is the largest company, holding the highest number of accesses at a fixed location, originating the largest volume of traffic at a fixed location, both

71. Given that PTC is already bound to comply with this obligation, which also results from its presence in other markets where it also holds SMP, it is deemed that its maintenance dos not entail higher costs than those currently incurred in.

Conclusion

It is concluded that the obligation on PTC for accounting separation must be maintained so as to ensure an effective monitoring of the obligation for non-discrimination.

The obligation for accounting separation meets the regulatory objectives defined in article 5 of ECL, particularly as regards the promotion of competition and also complies with requirements defined in paragraph 4 of article 55 of the referred Law, as not only is it transparent and non-discriminatory, as it applies only on the largest operator on the market, but it is also an objectively justified measure, as the provision of financial information is required to verify compliance with other obligations imposed on the PT Group, as operator with SMP, and it is proportional, as only information with a level of detail that meets the purpose of verifying other obligations is required, and it is consistent with the size of the operator on whom it is imposed, present in several regulated markets.

In this respect it must also be referred that PTC maintains for many years now a cost accounting system for regulatory costing purposes, of a crosscutting nature and which is perfectly stabilized and subject to annual audits.

5.4. Conclusion

In the light of the above and of conclusions drawn from the analysis of obligations in force in the wholesale origination market, the table below summarizes obligations to be imposed on companies of the PT Group (or on PTC) in the market under consideration over the period covered by this decision.

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at wholesale and retail level, presenting a ubiquitous offer, being thus deemed that its imposition on PTC is sufficient to ensure compliance with objectives underlying its determination.

Table 7 – Obligations imposed on companies of the PT Group, as operator with SMP in the wholesale market for call origination on the public telephone network provided at a fixed location

Obligation to meet reasonable requests for access	Obligation for non-discrimination in the offer of access and interconnection and respective provision of information	Obligation for transparency in the publication of information, including reference proposals	Price control obligation and cost accounting obligation	Obligation for accounting separation regarding specific activities related to access and/or interconnection
▪ To meet reasonable requests for access and to provide network access under fair and reasonable conditions (TDM and IP interconnection) ▪ To substantiate any refusal for access on grounds of alleged unreasonableness within 10 days ▪ As far as the IP interconnection obligation is concerned, conditions that in this respect are determined on the PT Group, as the operator with significant market power in wholesale markets for call termination on the public telephone network at a fixed location, are to be applied ▪ To implement carrier selection and pre-selection (applies only to PTC) ▪ To provide subscriber line resale offer (SLRO) (applies only to PTC)	▪ Not to discriminate (internally and externally) as regards quality of service and supply and repair times ▪ Not to discriminate (internally and externally) as regards pricing	To publish simplified information on network settings, POI and tariff structure. The following obligations apply only to PTC ▪ Obligation to publish a RIO ▪ Obligation to publish prices, terms and conditions, technical information and information on quality of service ▪ To communicate in advance (12 months) any technical changes that affect interconnection ▪ To communicate in advance (2 months) any changes which may have an impact on OSP ▪ To publish a SLRO	▪ Obligation to set prices on the basis of the principle of cost-orientation (for call origination, billing and collection and pre-selection) ▪ Obligation to set prices on a retail minus basis (for the monthly charge of SLRO) (applies to PTC only) ▪ Cost accounting obligation (applies to PTC only)	▪ Costing system and accounting separation (applies to PTC only)

The table below compares obligations imposed in the scope of the Determination taken in 2004 and those now imposed under the ongoing analysis.

OBLIGATION	2004 DECISION	CURRENT DECISION	
	PT GROUP	PT GROUP	PTC
To meet reasonable requests for access [1]			
To meet reasonable requests for access and to provide network access under fair and reasonable conditions • TDM interconnection • IP interconnection	X	X X	
To substantiate any refusal for access on grounds of alleged unreasonableness within 10 days		X	
As far as the IP interconnection obligation is concerned, conditions that in this respect are determined on the PT Group, as the operator with significant market power in wholesale markets for call termination on the public telephone network at a fixed location, are to be applied		X	
To provide subscriber line resale offer (SLRO)	X[2]		X
To implement carrier selection and pre-selection	X[2]		X
To maintain customer win-back restrictions	X[2]		
Obligation for non-discrimination			
Not to discriminate (internally and externally) as regards quality of service and supply and repair times	X	X	
Not to discriminate (internally and externally) as regards pricing	X	X	
To provide a capacity-based interconnection offer	X		
Transparency in the publication of information, including reference proposals [1]			
To publish a RIO	X		X
To publish prices, terms and conditions, technical information and information on quality of service	X		X
To communicate in advance (12 months) any technical changes that affect interconnection	X		X
To communicate in advance (2 months) other changes which may have an impact on OSP			X
To publish information on network settings, POI and tariff structure		X	
To publish a SLRO	X[2]		X
Price control and cost accounting			
Obligation to set prices on the basis of the principle of cost-orientation (call origination, pre-selection and billing and collection prices)	X	X	
Obligation to set the SLRO monthly charge on a retail minus basis	X		X
Cost accounting obligation	X		X
Accounting separation and costing system			
To develop a costing system and accounting separation	X		X

(1) The possibility of terminating ORAI on the initiative of PTC, within a reasonable deadline, at a date agreed with the respective users, is admitted.

(2) Obligation imposed in 2004 in the scope of retail markets for access to the telephone network provided at a fixed location.

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Annex I

List of acronyms and abbreviations

AP	Aggregation Points
BTS	Base Transceiver Station
CbI	Capacity-based Interconnection
ECL	Electronic Communications Law
FTS	Fixed Telephone Service
GSM	Global System for Mobile Communications
IP	Internet Protocol
ISP	Internet service provider
LRIC	Long Run Incremental Costs
NGN	Next-Generation Networks
OSP	Other service providers
POP	Point of Presence
POI	Point of Interconnection
RIO	Reference Interconnection Offer
RO	Reference Offers
SMP	Significant Market Power
SIP	Session initiation protocol

SS7	Signalling System No. 7
TDM	Time Division Multiplexing
UMTS	Universal mobile telecommunications system
VOIP	Voice over Internet Protocol

Annex II

List of operators

MEO	MEO – Serviços de Comunicações e Multimédia, S.A.
ONITELECOM	OniTelecom – Infocomunicações, S. A.
OPTIMUS	Optimus – Telecomunicações, S. A.
PT Group	Portugal Telecom Group
PT PRIME	PT Prime - Soluções Empresariais de Telecomunicações e Sistemas, S. A.
PTC	PT Comunicações, S. A.
VODAFONE	Vodafone Portugal – Comunicações Pessoais, S.A.
ZON	ZON TV Cabo Portugal, S.A.
ZON Group	ZON TV Cabo Portugal, ZON TV Cabo Madeirense and ZON TV Cabo Açoreana
ZON Multimédia	ZON Multimédia – Serviços de Telecomunicações e Multimédia, SGPS, S. A.
ZON OPTIMUS	NOS – Comunicações, S.A., ZON TV Cabo Açoreana and ZON TV Cabo Madeirense

Annex III

List de other bodies/organizations

AdC	Autoridade da Concorrência (Competition Authority)
CMVM	Comissão do Mercado de Valores Imobiliários (Securities Market Commission)
BEREC	Body of European Regulators for Electronic Communications
EC	European Commission
ERG	European Regulators Group
EU	European Union
ICP-ANACOM	ICP - Autoridade Nacional de Comunicações
NRA	National Regulatory Authority