

**FINAL DECISION ON THE ANALYSIS OF**

**WHOLESALE LOCAL ACCESS MARKETS AT A FIXED  
LOCATION**

**AND OF**

**WHOLESALE CENTRAL ACCESS AT A FIXED LOCATION  
FOR MASS-MARKET PRODUCTS**

**Definition of product and geographic markets, assessments of SMP (significant market power) and imposition, maintenance, amendment or withdrawal of regulatory obligations.**

**ANACOM**

**2017**

**- PUBLIC VERSION -**

## Contents

<b>1. INTRODUCTION</b> .....	<b>1</b>
<b>The findings of the last market analysis</b> .....	<b>1</b>
<b>The developments occurred in the market and the need to review the analysis on the relevant markets</b> .....	<b>2</b>
<b>The market analysis</b> .....	<b>10</b>
<b>Market definition methodology</b> .....	<b>19</b>
<b>2. RETAIL BROADBAND ACCESS MARKET</b> .....	<b>21</b>
<b>Definition of the broadband access product market</b> .....	<b>24</b>
<i>The copper, cable and fibre-based broadband access service</i> .....	<i>25</i>
Demand-side substitutability .....	<i>25</i>
Supply-side substitutability .....	<i>28</i>
Conclusion on infrastructure substitutability .....	<i>32</i>
<i>The consumer broadband access service and the high-quality broadband service</i> .....	<i>33</i>
<i>Fixed broadband access service vs. mobile broadband access service</i> .....	<i>36</i>
Demand-side substitutability .....	<i>39</i>
Supply-side substitutability .....	<i>41</i>
Conclusion on substitutability between fixed broadband and mobile broadband.....	<i>42</i>
<i>The offer of individual and bundled broadband access</i> .....	<i>44</i>
<i>Definition of retail markets for broadband access products: conclusion</i> .....	<i>46</i>
<b>Definition of the retail geographic market for broadband access</b> .....	<b>47</b>
<i>Findings of the previous market analysis</i> .....	<i>48</i>
<i>The current and prospective competitive situation and the geographic unit</i> .....	<i>50</i>
The definition of the boundary/geographic unit .....	<i>51</i>

Current competitive situation .....	52
<i>Conclusion on the homogeneity of competitive conditions .....</i>	<i>64</i>
<b>Conclusion: retail broadband access market s.....</b>	<b>66</b>
<b>Competitive analysis of retail broadband access markets.....</b>	<b>66</b>
<i>Retail broadband access market in C Areas .....</i>	<i>67</i>
<i>Retail broadband access market for mass-market products in NC Areas.....</i>	<i>72</i>
<b>3. DEFINITION OF WHOLESALE LOCAL ACCESS MARKET AT A FIXED LOCATION (MARKET 3A) .....</b>	<b>76</b>
<b>Distinction between the Market 3a and Market 3b .....</b>	<b>76</b>
<b>Market 3a: Definition of product market .....</b>	<b>79</b>
<i>Technologically neutral approach .....</i>	<i>79</i>
<i>Direct and indirect constraints.....</i>	<i>84</i>
<i>The internal provision .....</i>	<i>90</i>
<i>Definition of the product market – conclusion .....</i>	<i>92</i>
Wholesale local access geographic market at a fixed location.....	93
Conclusion.....	101
<b>4. ASSESSMENT OF SMP ON THE WHOLESALE LOCAL ACCESS MARKET AT A FIXED LOCATION .....</b>	<b>102</b>
<b>SMP assessment criteria .....</b>	<b>102</b>
<b>Individual dominance.....</b>	<b>104</b>
<i>Market shares.....</i>	<i>105</i>
<i>Competition among established companies: barriers to entry and expansion and rivalry.....</i>	<i>106</i>
Control of infrastructure not easily duplicated .....	107
Vertical integration.....	108

Rivalry .....	109
<i>Potential competition</i> .....	109
<i>Countervailing power</i> .....	110
<i>Individual dominance: conclusion</i> .....	110
<b>Joint dominance</b> .....	<b>111</b>
<b>Prospective analysis</b> .....	<b>111</b>
<b>Assessment of SMP on the wholesale local access market at a fixed location:</b>	
<b>Conclusion</b> .....	<b>111</b>
<b>5. OBLIGATIONS IMPOSED ON THE MARKET OF WHOLESALE LOCAL ACCESS PROVIDED AT A FIXED LOCATION</b> .....	<b>112</b>
<b>Principles considered in the imposition, maintenance, amendment and withdrawal of obligations</b> .....	<b>112</b>
<b>Position of the Commission concerning the next generation networks</b> .....	<b>114</b>
<b>Obligations currently in force</b> .....	<b>118</b>
<b>Review of the specific obligations to be imposed, amended or withdrawn</b> .....	<b>118</b>
<i>Access and use of specific network resources</i> .....	118
To maintain the obligation of access to local cooper loop .....	119
Access to construction infrastructure (ducts, poles and associated infrastructure).....	123
The evolution towards NRAs and the access to fibre optic .....	127
Access to the terminating segment.....	140
Conclusion.....	141
<i>Non-discrimination</i> .....	142
Equivalence Standard to be adopted.....	145
Access to ducts .....	147
Access to poles .....	159
Copper loops unbundling.....	162

Access to dark fibre .....	163
Conclusions on the equivalence and implementation standard.....	164
Levels of service quality and compensation.....	167
<i>Transparency</i> .....	171
<i>Price control and cost accounting</i> .....	177
Costing method and respective implementation .....	180
<i>Accounting separation</i> .....	185
<i>Financial report</i> .....	186
<b>Conclusion</b> .....	<b>187</b>
<b>6. DEFINITION OF THE CENTRAL WHOLESALE ACCESS MARKET PROVIDED AT A FIXED LOCATION FOR MAJOR CONSUMER PRODUCTS (MARKET 3B).....</b>	<b>189</b>
<b>Market of wholesale central access product provided at a fixed location for major consumer products .....</b>	<b>189</b>
<b>Geographic market of wholesale central access provided at a fixed location for major consumer products .....</b>	<b>193</b>
<b>Wholesale markets that may have <i>ex ante</i> .....</b>	<b>195</b>
<i>Market of wholesale central access provided at a fixed location (for major consumer products) in Areas NC .....</i>	<i>195</i>
<i>Market of wholesale central access provided at a fixed location (for major consumer goods) in Areas C.....</i>	<i>196</i>
<b>Conclusion</b> .....	<b>200</b>
<b>7. ASSESSMENT OF SMP IN THE MARKET OF WHOLESALE CENTRAL ACCESS PROVIDED AT A FIXED LOCATION (FOR MAJOR CONSUMPTION PRODUCTS) IN AREAS NC .....</b>	<b>202</b>
<b>Individual dominance .....</b>	<b>203</b>
<i>Market shares</i> .....	<i>203</i>

<i>Barriers to entry and expansion</i> .....	204
<i>Price trends and behaviour</i> .....	205
<i>Countervailing power</i> .....	205
<i>Potential competition</i> .....	206
<i>Individual dominance: conclusion</i> .....	206
<b>Joint dominance</b> .....	<b>206</b>
<b>Prospective analysis</b> .....	<b>206</b>
<b>SMP Rating: Conclusion</b> .....	<b>207</b>
<b>8. IMPOSITION OF OBLIGATIONS ON MARKET OF WHOLESALE CENTRAL ACCESS PROVIDED AT A FIXED LOCATION (FOR MAJOR CONSUMPTION PRODUCTS)</b> .....	<b>208</b>
<b>Obligations currently in force</b> .....	<b>208</b>
<b>To impose obligations on the market of wholesale central access provided at a fixed location (for major consumer goods) in Areas NC</b> .....	<b>209</b>
<i>Access and use of specific network resources</i> .....	209
<i>Non-discrimination</i> .....	214
Equivalence standard to be adopted and technical replicability .....	215
<i>Transparency</i> .....	218
<i>Price control and cost accounting</i> .....	220
<i>Accounting separation</i> .....	225
<i>Financial report</i> .....	226
<b>Conclusion</b> .....	<b>226</b>
<b>9. CONCLUSION</b> .....	<b>229</b>

<b>Appendix I. Obligations imposed in the prior review .....</b>	<b>230</b>
<b>Appendix II. Description of the statistical elements used in the review.....</b>	<b>232</b>
<b>Appendix III. Parishes belonging to Areas C .....</b>	<b>235</b>

## Index of figures

Figure 1. Parishes where there is an operator with a market share of more than 50 percent in the retail broadband access market (pink) and parishes where there is no operator with a market share exceeding 50 percent in that market (green).....	53
Figure 2. NAN coverage (including identification - gray - of municipalities covered by high-speed networks in rural areas) in mainland Portugal.....	54
Figure 3. Distribution of parishes based on MEO's market share interval in the retail broadband access market in C Areas.....	60
Figure 4. Distribution of parishes based on MEO's market share interval in the retail broadband access market in NC Areas.....	60
Figure 5. Overlap between the parishes included in C Areas and the exchange areas included in C Areas in the previous broadband market analysis.....	65
Figure 6. (FTTH) Fibre network coverage of MEO, data from 2015.....	94
Figure 7. Cable network coverage (DOCSIS 3.0) of NOS (map on the left) and Apax (Cabovisão) (map on the right), in 2015.....	95
Figure 8. Fibre network coverage, data from 2015.....	96
Figure 9. Municipalities covered by rural fibre networks (from Fibroglobal and DSTelecom), data at the end of the 3rd quarter of 2014.....	97
Figure 10. Exchange areas with co-deployed operators (black outline) and parishes where there are at least two alternative operators to MEO with a coverage above 50 percent (coloured areas),	130
Figure 11. Exchange areas with co-deployed operators (black outline) and parishes where there is an alternative operator to MEO with a coverage above than 50 percent and where MEO market share in the broadband access retail market is under 50 percent (coloured areas)	132
Figure 12. Households cabled with MEO fibre located in parishes NC (light blue) and in parishes C (light coloured areas).....	135
Figure 13. NRA cabled households in various European countries in June 2015.....	136
Figure 14. FTTP (fibre to the premises) cabled households in various European countries in June 2015	137

Figure 15. Penetration of 2P and 3/4/5P packages in various European countries in July 2014 137

Figure 16. ORAC Interfaces..... 148

## **Index of tables**

Table 1. Examples of broadband access offer based on copper (ADSL), fibre and cable (DOCSIS 3.0) (February 2016).....	30
Table 2. MEO's market shares in the retail broadband access market according to the number and coverage of the operators with NAN (per parish).....	56
Table 3. MEO's market shares in the retail broadband access market depending on the number of operators with NAN and a covering rate of more than 50 percent (per parish).....	57
Table 4. Number of parishes where there are 0, 1, 2 or 3 operators (except for MEO) with NAN coverage in the parish over 50 percent per MEO's market share interval in the retail broadband access market.....	58
Table 5. Number of parishes per MEO's market share interval in the retail broadband access market , in C Areas and NC Areas .....	59
Table 6. Percentage of homes in C and NC areas in the 2009 analyses and in the present analysis	66
Table 7. Evolution of market shares in the retail broadband access market in C Areas with wholesale obligations (ORAC and ORAP, ORALL excluded) in force .....	68
Table 8. Number of parishes per MEO's market share interval in the retail broadband access market (maintaining all obligations currently in force), in C Areas.....	69
Table 9. Development of market shares in the retail broadband access market in the NC Areas with the wholesale obligations (ORAC and ORAP, but not the ORALL) in force.....	72
Table 10. Monthly charges of representative (copper, fibre and cable-based) retail offers	89
Table 11. Development of market shares in the wholesale local access market at a fixed location	105
Table 12. Average monthly invoice for fixed broadband services.....	138
Table 13. (Non- exhaustive) overview of the obligations to be imposed on MEO in Market 3a - Market of wholesale local access provided at a fixed location .....	187
Table 14. Evolution of market shares in the market of wholesale central access provided at a fixed location (for major consumer goods) in Areas C .....	197

Table 15.	Evolution of market shares in the market of wholesale central access provided at a fixed location (for major consumer products) in Areas NC.....	203
Table 16.	(Non-exhaustive) summary of the obligations to be imposed on MEO .....	227
Table 17.	Obligations imposed in the prior review on the companies identified with SMP in Market 4	230
Table 18.	Obligations imposed in the prior review of companies identified with SMP in Market 5NC	231

**Index of graphs**

Graph 1. Evolution of the number of broadband accesses at a fixed location in retail .....22

Graph 2. Evolution of the number of fixed and mobile broadband accesses..... 40

Graph 3. Development of MEO's ORAC occupation ..... 98

Graph 4. Development of fixings on MEO's ORAP masts ..... 99

## 1. INTRODUCTION

### The findings of the last market analysis

- 1.1. On January 14, 2009<sup>1</sup> a final decision was issued by the Board of Directors of ANACOM, who approved the decision on the definition of product markets and geographic markets, assessments of significant market power (SMP) and imposition, maintenance, amendment or withdrawal of regulatory obligations in the wholesale market for network infrastructure access at a fixed location – Market 4<sup>2</sup> – and in the wholesale broadband access market– Market 5<sup>3</sup>.
- 1.2. It was concluded under this decision that Market 4 was national in scope and in Market 5 different competitive conditions in different geographic areas occurred, with the latter market being therefore segmented into two different geographic markets:
  - Market 5C: which includes the area covered by the central areas, where at least one co-installed operator and at least one cable distribution system operator exist and the percentage of cabled households of the main operator in the central area is over 60 percent.
  - Market 5NC: this includes the area covered by the other central areas of the national territory.
- 1.3. Having the markets above been analysed and taking full account of the European Commission’s guidelines (Commission) for the analysis and assessment of SMP under the Community regulatory framework for the electronic communications services and networks (hereinafter referred to as “Guidelines”)<sup>4</sup>, ANACOM concluded that Grupo PT (now MEO)<sup>5</sup> held SMP in Market 4 and Market 5NC and, therefore, imposed on that entity access *ex ante* obligations – including, apart from local loop access, the access

---

<sup>1</sup> See <https://www.anacom.pt/render.jsp?contentId=814541>.

<sup>2</sup> Referred to as the wholesale supply market for network infrastructure (physical) access (including shared or fully unbundled access) at a fixed location, under Recommendation 2007/879/EC by the European Commission, of December 17, 2007, on relevant markets (meanwhile revised in 2014), available at <https://www.anacom.pt/render.jsp?contentId=984081>.

<sup>3</sup> Referred to as supply market for wholesale broadband access under the recommendation above.

<sup>4</sup> See <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2002:165:0006:0031:EN:PDF>.

<sup>5</sup> On December 29, 2014 PT Comunicações, S.A. (formerly referred to as PTC) merged, through a global transfer of assets, into MEO - Serviços de Comunicações e Multimédia, S.A., and assumed this business name.

to ducts and poles –, transparency, non-discrimination, separation of accounts, price control and financial control, as identified in **Appendix I**.

- 1.4. In the context of the same analysis, ANACOM concluded that Market 5C was competitive, non susceptible to *ex anteregulation* and therefore all obligations previously imposed on Grupo PT in this market should be eliminated. However, a transitional 12-month period during which obligation would remain in force shall be applied<sup>6</sup>.
- 1.5. ANACOM concluded that obligations imposed on at wholesale level in Market 4 and Market 5NC were required to promote competition in retail markets, in particular of broadband access. To ensure competition in the retail broadband access market in the C Areas, it was crucial to maintain all obligations (previously) imposed on Market 4.

### **The developments occurred in the market and the need to review the analysis on the relevant markets**

- 1.6. Since the beginning of 2009, following the publication of the previous market analysis, some changes with significant impact on retail and wholesale broadband access markets occurred.
- 1.7. Among changes occurring in the domestic market, the following are highlighted:
  - Introduction and rapid proliferation of bundled offers by leading operators and service providers in the market.
  - Increased speed of mobile broadband offers, in particular with the introduction of the LTE technology (known as 4G).
  - Reduction in the number of mobile broadband accesses based on data transmission cards that are connected to personal computers, in particular via USB-format cards (or other)<sup>7</sup>.

---

<sup>6</sup> Only the obligation to control prices (“retail-minus”) has been withdrawn immediately.

<sup>7</sup> Between the end of 2010 and the end of 2014 the number of mobile broadband accesses via cards /modem dropped from 1.3 million to 669 thousand.

- Increased speed of broadband offers, with the commercialization of fibre optic-based network services and coaxial cable distribution<sup>8</sup> (DOCSIS 3.0), with *download* speeds equal to or greater than 30 Mbps<sup>9</sup>.
- Decreased unbundled copper pairs accesses within the scope of the local loop (LLP) offer<sup>10</sup> and the exchanges where co-installed operators exist<sup>11</sup>, particularly significant in the first case representing a reduction of 69 percent since the maximum value in the 1st quarter of 2008 has been reached. The number of OLL-based accesses represents, at the end of 2015, 3.0 percent of the total broadband accesses.
- Decreased accesses based on the MEO's wholesale broadband access offer (ADSL PT Network)<sup>12</sup>. The number of broadband accesses for alternative providers based on the ADSL PT Network offer represents, at the end of 2015, only 0.5 percent of the total broadband accesses.
- At the end of 2010, the ORALL (Reference Offer for the Unbundled Local Loop)-based retail offer<sup>13</sup> was discontinued by one of the main operators benefiting from that offer for the mass-consumer market (at the time by Optimus Telecomunicações, S.A.<sup>14</sup> now NOS Comunicações, S.A.<sup>15</sup>). This operator will only be able to make offers to new customers based on its own network infrastructure, in particular fibre-optics (hereinafter referred to as 'fibre').

---

<sup>8</sup> Hereinafter referred to as "fibre networks (or operators)" and "cable networks (or operators)", respectively.

<sup>9</sup> In this analysis the term speed or throughput is used to indicate the bandwidth or capacity of a given (broadband) access, usually in "megabits per second" (Mbps).

<sup>10</sup> The number of unbundled loops reached a maximum value of 319,908 in the 1st quarter of 2008, maintaining a decreasing trend since then and at the end of 2015 it has decreased to 99,150 copper local loops.

<sup>11</sup> The number of Service Points (incumbent operator's local exchanges) where co-installed operators occur, i.e. they are present with a node of their network, decreased from 257 (1st quarter 2010) to 239 at the end of 2015.

<sup>12</sup> There has been a continuous decrease in these accesses and at the end of 2007 the total number of OPS accesses based on this wholesale offer were 59,947 and at the end 2015 it dropped to 15,159 accesses and these accesses are mainly provided to non-residential customers with facilities being dispersed throughout the country and in more remote areas.

<sup>13</sup> Reference Offer for Local Loop Access – offer for unbundled access to the copper network.

<sup>14</sup> Hereinafter referred to as Optimus.

<sup>15</sup> Hereinafter referred to as NOS. This merger occurred through two successive processes: Merger at SGPS level in 2013 which gave rise to ZON Optimus, SGPS, S.A. (now NOS SGPS, S.A.) and; Merger by incorporation of ZON TV Cabo Portugal, S.A. into Optimus Telecomunicações, S.A., in May 2014, with the company's business name being changed to NOS Comunicações, S.A..

- Strong investment in high-speed access networks (New Generation Networks– NGN– or New Access Networks, NAN<sup>16</sup>), both in cable networks and FTTH networks, as a result of the greater ease of access to infrastructures suitable for the accommodation of electronic communications networks, in particular within the scope of ORAC (reference offer of access to ducts)<sup>17</sup> and also of ORAP<sup>18</sup> – regulated offers under the access obligation imposed on the Market 4 – and, to a lesser extent, of infrastructures from other entities under the legal framework for the construction, access and installation of electronic communications networks and infrastructures<sup>19</sup>.

This investment in NAN shall continue in the short to medium term, and the following has already been announced:

- Additional investments by MEO, with the strategic objective of implementing fibre optic in another 3 million households and companies, through the construction of 30,000 km of fibre optic cable in 5 years, at a rate of 600 thousand homes per year<sup>20</sup>.
- Vodafone investments to extend its fibre network to 550 thousand households and companies by the end of 2016, increasing the reach of its network to more than 2.75 million, which is a coverage equivalent to more than 2/3 of households and companies with an investment of 125 million euros<sup>21</sup>.

---

<sup>16</sup> New Access Networks (referred to as NGA, *Next Generation Access*). In accordance with the Commission Recommendation on NAs, “*Next Generation Access Networks*” (NGA)[/NAN]: *cable access networks consisting wholly or partly in fibre-optic elements capable of providing broadband access services with more advanced characteristics (such as higher transmission capacity) than those provided by existing copper networks. In most cases, NGA networks are the result of improvements in an existing copper or coaxial access network*’.

<sup>17</sup> Reference Offer of Access to Ducts, which includes access to ducts, manholes and other civil engineering infrastructure.

<sup>18</sup> Reference offer for Access to Masts, with higher incidence on non-urban areas.

<sup>19</sup> According to Decree-Law no. 123/2009, of May 21 and taking also into account the simplification of the construction scheme, access and installation of electronic communications networks and infrastructures in buildings, allotments and urbanizations, including ITED / ITUR scheme, as provided for in this law.

<sup>20</sup> See MEO statement of November 5, 2015 at <http://blog.meo.pt/fibra-otica-da-pt-chega-a-mais-3-129656>.

<sup>21</sup> See Vodafone’s statement on November 25, 2015 at <http://press.vodafone.pt/2015/11/25/vodafone-anuncia-expansao-da-sua-rede-de-fibra-para-275-milhoes-de-casas-e-empresas/>.

- NOS continued its investment in RNG by requesting a EUR 100 million loan from BEI with the aim of extending its network to 574 thousand additional households. Such amount cannot exceed 50 percent of the total investment<sup>22</sup>.
  - Launching (and awarding) of tender procedures for the installation, management, operation and maintenance of high-speed electronic communications networks in rural areas (referred to as rural NGN), under public co-financing in 139 municipalities in (inland areas) of the national territory, where the lack of alternative infrastructure and potential provision of advanced services occurred<sup>23</sup>, with the network being already put in place and in operation, under the terms of the aforementioned competitions <sup>24</sup>.
  - Conclusion, by the end of 2010, of a NAN infrastructure sharing agreement between Optimus and Vodafone.
  - Conclusion, in July 2014, of a NAN infrastructure sharing agreement between MEO and Vodafone.
- 1.8. As a result of the developments described above, at the end of 2015, there were:
- about 4.2 million wired housing areas by cabled distribution networks with DOCSIS 3.0 technology and some housing areas are wired by different operators, being estimated a minimum of 3.6 million single households covered by at least a cable operator,<sup>25</sup> which corresponds to a minimum of 62 percent coverage;
  - about 4.2 million fibre cabled homes (FTTH), of which approximately 2.7 million corresponded to single homes <sup>26</sup>, corresponding to a minimum 47 percent coverage;
  - over 1.8 million customers using FTTH and DOCSIS 3.0-accesses supported services (with a tendency of high growth in the short term as most of fibre-optic

---

<sup>22</sup> See <http://www.eib.org/infocentre/register/all/61140750.pdf>.

<sup>23</sup> See <https://www.anacom.pt/render.jsp?categoryId=332482>.

<sup>24</sup> With the exception of the Island Region of Madeira, where network installation has not yet begun.

<sup>25</sup> Source: ANACOM based on data from cabled houses operators per municipality and the INE (statistics office) data from traditional private households per municipality. In order to eliminate the effect of multiple cabling households and to estimate a minority for the coverage of cable networks, the number of homes that are cabled, in each and every municipality, by the operator having the largest number of cabled homes in the municipality has been considered.

<sup>26</sup> Idem. Bearing in mind cable or fibre cabled homes, 4.0 million single homes use the same methodology, which means that in most areas where fibre exists, cable is also there.

accesses installed are not yet operational, so as to be effectively connected to customers), i.e., NAN-based, which already represents more than half of the broadband access customers;

- about 60 percent of broadband accesses at or above 30 Mbps (and 30 percent at 100 Mbps or higher), compared to just 9.3 percent at the end of 2010.

1.9. In addition to the developments identified above, a number of mergers have taken place since 2013 between undertakings operating in the markets under consideration:

- On August 26, 2013, the Competition Authority (CA) adopted<sup>27</sup> the decision not to oppose the Kento\*Unitel\*Sonaecom/ ZON\*Optimus<sup>28</sup> merger, apart from the imposition of conditions and obligations to ensure compliance with commitments made by the notifying parties, so as to ensure that effective competition in the various markets, where Optimus operated, is maintained, in particular where fibre accesses occur and where competition concerns have been identified<sup>29</sup>.

This operation resulted in the establishment of NOS Comunicações, S.A. (NOS)<sup>30</sup>.

- A decision on non-opposition to the merger was also adopted by the CA on August 2, 2013, which consisted in the acquisition by Altice Holdings S.à.r.l. (which controlled the company Cabovisão – Televisão por Cabo, S.A. (Cabovisão), through its subsidiary Altice Portugal, S. A.) of the exclusive control

---

<sup>27</sup> See

[http://www.concorrenca.pt/vPT/Controlo\\_de\\_concentracoes/Decisoes/Paginas/pesquisa.aspx?pNumb=5&yearNot=2013&pag=14&doc=True&est=2](http://www.concorrenca.pt/vPT/Controlo_de_concentracoes/Decisoes/Paginas/pesquisa.aspx?pNumb=5&yearNot=2013&pag=14&doc=True&est=2).

<sup>28</sup> Merger operation consisting in the acquisition by Mrs. Eng. Isabel dos Santos, indirectly, through the group of the undertakings Kento Holding Limited and Unitel International Holdings, BV, respectively, as well as by Sona SGPS, S.A., indirectly, through the undertaking Sonaecom, SGPS, S.A., of the joint control, through a joint venture company, over ZON, just as the latter resulted, upon incorporation by merger, in Optimus which, in turn, was also subject to such joint control.

<sup>29</sup> In general, the commitments made by the notifying parties were as follows:

- Extension of the term of the "Reciprocal Service Agreement", including all of its amendments, concluded between Optimus SA and Vodafone Portugal (Optimus SA / Vodafone Portugal Agreement).
- Liability regime through Optimus SA / Vodafone Portugal contract termination.
- Elimination of 3P customer loyalty from Optimus SA.
- Negotiation of wholesale access to the Optimus Shareable Network.
- Option to purchase on the Sellable Optimus Network.

<sup>30</sup> Through two successive processes: Merger at SGPS level in 2013 which gave rise to ZON Optimus, SGPS, S.A. (now NOS SGPS, S.A.) and; Merger by incorporation of ZON TV Cabo Portugal, S.A. into Optimus Telecomunicações, S.A., in May 2014, with the company's business name being changed to NOS Comunicações, S.A..

of Winreason, S.A.<sup>31</sup>, through the acquisition of all the shares representing the respective share capital and respective subsidiaries, as it was not liable to create significant barriers to effective competition in the relevant markets identified.

- Lastly, at the General Meeting of Shareholders of Portugal Telecom, SGPS SA, held on January 22, 2015, the approval of the sale of the entire share capital of PT PORTUGAL, SGPS, S.A., by Oi, S.A. to Altice, S.A. was decided. (Altice), under the terms as requested by Oi, S.A.<sup>32</sup>.

The merger project by which Altice acquired<sup>33</sup> the control of the Portuguese assets from PT Portugal, SGPS, S.A., through the acquisition of shares, has been notified to the Commission on February 25, 2015, pursuant to Article 4 of the Merger Regulation.

The Commission announced on April 20, 2015 that it has authorized<sup>34</sup>, under this Regulation, the proposal of the acquisition of PT Portugal by Altice, and it accepted Altice's divestiture commitment in its Portuguese subsidiaries, Oni and Cabovisão.

For the Commission, these structural commitments totally eliminate the overlapping of activities in Portugal from Altice and PT Portugal and therefore they adequately meet the initial competition concerns. The Commission has therefore concluded that the transaction, as amended by the commitments, does not give rise to competition concerns and it is therefore subject to full compliance with the commitments.

On September 15, 2015, Altice announced that it had entered into an agreement with Apax France for the sale of Cabovisão and Oni<sup>35</sup>, and it subsequently informed<sup>36</sup> the Competition Authority on the acquisition, by the company Cabolink S.à.r.L. (held by the APAX France investment fund), from Altice of the sole control of the companies Cabovisão, Winreason, S.A and Oni, and in November 2015 the Competition Authority decided not to oppose such merger.

---

<sup>31</sup> A Winreason, S.A. was a holding company that owns social participations in several companies, including Onitelecom – Infocomunicações, S.A. (Oni).

<sup>32</sup> See <http://web3.cmvm.pt/sdi2004/emitentes/docs/FR53656.pdf>.

<sup>33</sup> For the purposes of Article 3 (1) (b) of the Board of Directors Regulation (EC) No 139/2004 - OJ L 24, 29.1.2004, p. 1 ("the Merger Regulation").

<sup>34</sup> See [http://europa.eu/rapid/press-release\\_IP-15-4805\\_en.htm](http://europa.eu/rapid/press-release_IP-15-4805_en.htm).

<sup>35</sup> See <http://altice.net/wp-content/uploads/2015/09/20150915-ALT-sale-cabo-oni.pdf>.

<sup>36</sup> In October 2015.

- 1.10. The analysis developed in this document is thus based on the assumption that the commitments assumed and the sale of Cabovisão and Oni to Apax, in this analysis Cabovisão and Oni are, where relevant, referred to as Apax, shall be fulfilled effectively and completely.
- 1.11. In addition to the developments above, the publication of the Commission Recommendation on NANs, of September 20, 2010, under this analysis, is also relevant, which “*establishes a common approach to promoting a consistent implementation of remedies as to NGA networks, on the basis of a market analysis procedure, in accordance with Directives*”<sup>37</sup>.
- 1.12. After a lengthy discussion period, the Commission Recommendation on the consistency of non-discrimination obligations and costing methods to promote competition and to improve the context of broadband investment was also published in the Official Journal of the European Union on September 21, 2013.<sup>38</sup>
- 1.13. Finally, a new Commission Recommendation (Commission Recommendation 2014/710/UE of October 9, 2014) on the relevant markets of products and services in the electronic communications industry subject to *ex ante*<sup>39</sup> regulation was also published at the end of 2014.
- 1.14. In light of the previous Recommendation of 2007, Markets 4 and 5 have been redefined (and renumbered) as follows:
- Market 4, which was termed as wholesale (physical) network infrastructure access market at a fixed location, was renamed wholesale local access market at a fixed location (Market 3a).

---

<sup>37</sup> See <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32010H0572&from=EN> and hereinafter referred to as “Commission Recommendation on NANs”.

<sup>38</sup> See <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013H0466&from=EN> and hereinafter referred to as “Commission Recommendation on non-discrimination”.

<sup>39</sup> In accordance with Directive 2002/21 / EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services. Available at <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014H0710&from=PT> and hereinafter referred to as “Commission Recommendation on relevant markets”.

- Market 5, which was termed as wholesale broadband access supply market, was renamed wholesale central access market at a fixed location for mass-consumer products<sup>40</sup> (Market 3b).
- 1.15. The markets identified above are wholesale markets related to broadband retail markets.
- 1.16. The abovementioned Recommendation maintains the former Market 6, which was termed as the wholesale terminating segments of leased lines supply market, and renamed the high quality wholesale access market at a fixed location (Market 4), with its scope being broadened. There are thus typically asymmetric (“broadband”) access products (and possibly with restraint), targeted to large undertakings that may replace the supply of leased lines. These products were integrated into the analysis of that wholesale market (the new Market 4) and they are not analyzed under this decision.
- 1.17. Therefore and following the above developments, it is believed to be appropriate to review the analysis on broadband markets.
- 1.18. It is also pointed out that, by determination of February 6, 2012, ANACOM approved a draft decision on the definition of wholesale network infrastructure access markets at a fixed location and wholesale broadband access - former markets 4 and 5, respectively, from the previous Commission Recommendation on relevant markets (2007/879 /EC, of December 17) - the assessment of significant market power (SMP) and the imposition, maintenance, amendment or withdrawal of regulatory obligations.
- 1.19. In view of the market amendments identified above since then and amendments in the Commission Recommendation on relevant markets, as well as the publication of the Commission Recommendation on non-discrimination, a new draft decision has been made, which was adopted on February 11, 2016 and subject to prior hearing of stakeholders and public consultation.
- 1.20. The Draft Decision took also into account the contributions made in the general consultation procedure on the previous draft decision and the need for a finer and more appropriate analysis of NANS coverage is also there reflected, i.e. at parish level, for

---

<sup>40</sup> It should be noted that this Recommendation has subsequently been rectified, notably in the designation of markets, thus adopting the new designation (i.e. "mass-consumer products" rather than "wide-spread products").

which it was necessary to obtain the respective geo-referenced information from the operators.

## **The market analysis**

### *The Law on Electronic Communications, LEC*

1.21. In accordance with the Law on Electronic Communications (LEC)<sup>41</sup>, ANACOM (the National Regulatory Authority, NRA) is responsible for defining and analyzing relevant markets, declaring companies with SMP and determining the appropriate regulatory measures for the companies providing electronic communications networks and services<sup>42</sup>.

1.22. This process is carried out according to the following phases (Articles 55 to 61 of LEC):

- Definition of relevant markets

It is for the NRA to define relevant product and service markets in the electronic communications sector, including relevant geographic markets, in accordance with the principles of competition law.

In the definition of relevant markets, ARN shall, depending on the national circumstances, take into account the Commission Recommendation on relevant markets and Guidelines.

- Analysis of relevant markets

It is up to the ARN to analyse the relevant market as defined under the terms of previous paragraph, taking into account the Guidelines.

---

<sup>41</sup> Law No. 5/2004, of February 10, amended and republished by Law No. 51/2011, of September 13, and later amended by Law No. 10/2013, of January 28, by Law No. 42/2013, of July 3, by Decree-Law No. 35/2014, of March 7 and by Law No. 82-B/2014, of December 31 as amended by Law No. 51/2011, of September 13, by Law No. 10/2013, of January 28, by Law No. 42/2013, of July 3, by Decree-Law No. 35/2014, of March 7 and by Law No. 82-B/2014, of December 31. The legal regime applicable to electronic communications networks and services and associated resources and services has been approved, with the competencies of the National Regulatory Authority being defined in this area.

<sup>42</sup> See Article 18 of LEC.

The market analysis procedure aims at investigating the existence of effective competition. There is no effective competition if undertakings with SMP are identified<sup>43</sup>.

An undertaking shall be deemed to have SMP 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<sup>44</sup>.

- Imposition, maintenance, amendment or withdrawal of regulatory obligations

Should ANACOM conclude that a market is effectively competitive, it shall not impose any specific regulatory obligation and, if they already exist, it shall withdraw them<sup>45</sup>.

Should ANACOM determines that a relevant market is not effectively competitive, it shall on undertakings with SMP impose appropriate specific regulatory obligations, or maintain or amend such obligations, where they already exist<sup>46</sup>.

The obligations imposed:

- They shall be appropriate to the problem identified in the SMP assessment stage and proportionate and justified in the light of the regulatory objectives set out in Article 5 of LEC (Article 55 (3) (a)) and Article 66 (2).

---

<sup>43</sup> Also in line with the Guidelines (§24), “*under the regulatory framework, markets shall be defined and the SMP assessed with methods identical to those of competition law. (...) and the assessment of effective competition by the ARN shall be consistent with the case law and practice in matters of competition. In order to ensure such consistency, these guidelines are based on: 1. Case-law of the Court of First Instance and the Court of Justice of the European Communities with regard to the definition of market and the notion of dominance within the meaning of Article 82 of the EC Treaty and Article 2 of the Regulation on the control of mergers.*”.

<sup>44</sup> In accordance with Article 3,<sup>(1)</sup> and (2) of Law No. 19/2012, of May 8 (which approves the new competition legal regime):

“1 - For the purposes of this law, an undertaking shall be deemed to be any entity engaged in an economic activity consisting of the supply of goods or services in a given market, irrespective of its legal status and means of financing.

2 - It is deemed to be a single undertaking the group of undertakings which, although they are formally separate legal entities, constitute an economic unit or maintain interdependence links with each other(...)”.

It should be noted that, in accordance with ECJ judgment, of July 12, 1984, *Hydrotherm*, the notion of undertaking “is to be understood as referring to an economic unit from the point of view of the agreement object in question, even if, from a legal perspective, this economic unit is made up of several natural or legal persons”.

<sup>45</sup> See Article 5 (5) (f) and Article 59 (3), both of LEC.

<sup>46</sup> See Art. 59 (4) of LEC.

- They shall be objectively justifiable in relation to the networks, services or infrastructures which they refer to (Article 55 (3) (b) of LEC).
- They may not give rise to undue discrimination in relation to any entity (Article 55 (3) (c) of LEC).
- They shall be transparent as to their intended purpose (Article 55 (3) (d) of LEC).

1.23. Finally, in summary, it should be pointed out that, in order to meet the regulatory objectives to be pursued by ANACOM (Article 5 (1) of LEC), this Authority shall, in every decision and measure adopted, apply objective, transparent, non-discriminatory and proportionate regulatory criteria, in particular by<sup>47</sup>:

- Promoting the predictability of regulation, ensuring a consistent regulatory approach and appropriate review periods.
- Ensuring that, in similar circumstances, there is no discrimination in the treatment of undertakings providing electronic communications networks and services.
- Safeguarding competition for the benefit of consumers and promoting, where appropriate, competition based on infrastructures.
- Encouraging efficient investment and innovation in new and improved infrastructures, in particular by ensuring that every access obligation takes due account of the investment risk incurred by undertakings<sup>48</sup>.
- Taking due account of the variety of existing conditions both in competition and consumers, in the different national geographic areas.
- Imposing *ex ante* regulatory obligations only where there is no effective and sustainable competition and mitigating or withdrawing them as soon as this condition occurs.

1.24. At any stage of the market analysis, ANACOM shall “*take into account the recommendations of the European Commission on the harmonised implementation of the regulatory framework applicable to electronic communications, with a view to achieving the regulatory objectives as set out in Article 5, and it shall, in a reasoned*

---

<sup>47</sup> See Article 5 (5) of LEC.

<sup>48</sup> And allowing cooperation agreements between the latter and the applicants for access so as to diversify the investment risk, while ensuring that market competition and the principle of non-discrimination are safeguarded.

*manner, inform the European Commission if it decides not to follow any recommendation*<sup>49</sup>.

***Methodology adopted, according to the Commission Recommendation on relevant markets***

- 1.25. The Commission Recommendation on relevant markets provides that regulatory obligations shall only be imposed at the retail level in cases where NRAs consider that the measures applicable to the wholesale market do not allow effective competition and compliance with public interest objectives.
- 1.26. It should be noted that *ex ante* regulatory obligations may only be imposed on markets that comply with the “three-criteria test”<sup>50</sup>.
- 1.27. The main purpose of this analysis is to identify whether there is effective competition in the retail market(s) downstream into Market 3a and Market 3b and, if such does not exist, identify the measures required to impose at wholesale level so as to correct this failure.
- 1.28. In fact, the definition of markets is not an objective in itself, but rather a means to an end: the market definition is a necessary means to assess whether the end-users of a particular product or service are protected by an effective competition or if, on the contrary, *ex ante* regulation is required to ensure it.
- 1.29. According to the methodology adopted in the Commission Recommendation on relevant markets<sup>51</sup>, the starting point for the definition and identification of relevant wholesale markets is a description of the corresponding retail markets, their geographic size and the competitive, on the demand and supply-side, pressures, which they are subject to in a prospective way.

---

<sup>49</sup> igo

<sup>50</sup> The Commission considers that the markets identified for *ex ante* regulatory purposes shall meet three cumulative criteria:

- Presence of strong and non-transitory barriers to entering the market, whether structural, legal or regulatory nature.
- Market structure that does not tend to an effective competition over a relevant time horizon.
- Insufficiency of competition law to, alone, adequately address the market failure(s).

<sup>51</sup> Recital (7).

- 1.30. In a first step, the related broadband retail markets are analyzed in order to determine whether these retail markets are (prospectively) competitive in the absence of regulation, and the effects of other types of regulation applicable to relevant retail markets and associated wholesale markets throughout the relevant period shall also be taken into account<sup>52</sup>. If the relevant retail market is not effectively competitive, under a prospective approach and in the absence of *ex ante* regulation, then the related wholesale markets shall be analyzed.
- 1.31. When analysing borders and the market power in the relevant corresponding wholesale markets to determine whether they are effectively competitive, direct and indirect competitive pressures shall be taken into account irrespective of whether these pressures result from electronic communications networks or services or other equivalent services or applications from the end users perspective.<sup>53</sup>.
- 1.32. Thus, relevant wholesale markets are defined in the same dimensions - product market(s) and geographic market(s) - and the possible existence of SMP on these markets is assessed. Finally, the regulatory obligations to SMP undertakings in the same wholesale markets, or, in the absence of SMP, the way of withdrawing any obligations previously imposed, are analyzed.
- 1.33. In the Commission Recommendation on relevant markets it is argued that wholesale local access at a fixed location and wholesale central access at a fixed location for mass-market products are separate markets. High-quality wholesale access market is also defined as a relevant market at a fixed location. The Commission, in its Explanatory Statement<sup>54</sup>, begins with a retail market to define these wholesale markets: the retail broadband access market.

---

<sup>52</sup> Considerando (8).

<sup>53</sup> For example, OTT (*over-the-top*) supplementary services, although not currently considered as direct substitutes for services provided by providers of electronic communications services, may benefit from technological developments that may result in a continuous expansion in the coming years. However, these services do not have a significant impact on access markets under review.

<sup>54</sup> Document attached to the said Recommendation – see [http://ec.europa.eu/newsroom/dae/document.cfm?doc\\_id=7056](http://ec.europa.eu/newsroom/dae/document.cfm?doc_id=7056).

1.34. These markets are at different levels in the value chain, and it is important that they are analyzed together and sequentially.

1.35. In this context:

- The analysis of the wholesale markets shall be preceded by an assessment of the competition conditions in the related retail market(s), in the absence of regulation on their wholesale markets.

It should be noted in advance that, this assessment has to be carried out in the context of maintaining the wholesale access to MEO ducts and masts<sup>55</sup>, without which there would probably be no networks and/or alternative services (to the incumbent) in the electronic communications markets in Portugal.

- Subsequently, the further upstream wholesale market is analysed, in this case the wholesale local access market at a fixed location (Market 3a).
- If one or more operators have SMP in that wholesale market, *ex ante* regulation on such operator(s) shall be imposed.
- After imposing (further) upstream wholesale regulation measures, the retail market shall be reanalysed so as to determine whether *ex ante* further downstream regulation is also required, in this case in the wholesale central access market at a fixed location for mass-market products (Market 3b), to remedy any remaining retail competition issues.

1.36. This is followed by the methodology recommended by the Commission in the Recommendation on relevant markets, referred to as the “*modified greenfield approach*”<sup>56</sup>, which states that, in the context of wholesale markets, the markets situated at the top of the vertical value chain shall be first analysed and, after taking into account the regulation (if any) imposed on such markets, the markets at a lower level of the value chain shall be then analysed. That is, a downstream market shall only be subject to direct regulation if the competition situation on such market still

---

<sup>55</sup> And also to the local loop, since in strict terms, the access obligation imposed relates to LLP and the access obligation to ducts and masts was imposed on this context, even if, at the “investment ladder” is upstream into the LLP.

<sup>56</sup> See Recommendation – Explanatory Statement, sections 2.2 and 2.5.

shows the existence of SMP, even if wholesale regulation on the upstream market(s) exist <sup>57</sup>.

- 1.37. In this market analysis, the positions of BEREC are also taken into account <sup>58</sup>. More specifically, in the analysis and definition of obligations to be imposed (or withdrawn), the principles set out in the BEREC common positions on best practices in the imposition of obligations on wholesale markets (specifically in the former Markets 4 and 5 ) are also considered.

### *Consultation procedure*

- 1.38. This market analysis was subject to the general consultation procedure, pursuant to Article 8 (1) of LEC, and the prior hearing of stakeholders, in accordance with Articles 121 and 122 of the Administrative Procedure, in both cases for a period of 30 business days extended by 5 additional business days, and it was also subject to the opinion of the Competition Authority (CA) pursuant to Article 61 of LEC.
- 1.39. By communication received on 30.03.2016, the CA issued its opinion having generally referred to agree with ANACOM's Draft Decision. In particular, it does not oppose the definition of the relevant product and geographic markets, nor the SMP assessment, in Market 3a and Market 3b, as it considers that the methodology adopted by ANACOM is generally adequate to the ultimate goal that it pursues.
- 1.40. Having comments to the public consultation and prior hearing on the Draft Decision, a report was prepared, including a summary of the contributions received and the regulator's views thereon. The report is an integral part of this market analysis<sup>59</sup>.

---

<sup>57</sup> In this regard, in the previous analysis, ANACOM concluded that the imposition of obligations on Market 4 was sufficient to make the retail market competitive in certain geographic areas (called as C Areas), thus justifying, in those areas, the withdrawal of obligations imposed on Market 5. The same situation has not already occurred in the so-called NC Areas (Non-Competitive Areas).

<sup>58</sup> BEREC – “*Body of European Regulators for Electronic Communications*” (the acronym is used in English, as it is widely used).

<sup>59</sup> By decision of June 30, 2016, ANACOM approved the draft final decision to notify the European Commission, BEREC and the NRAs of the other Member States of the European Union on the analysis on the wholesale local access markets at a fixed location and wholesale central access at a fixed location for mass-market products (market 3a and market 3b of Recommendation 2014/710 / EU), as well as the report of the prior hearing and the consultation which its SPD was subject to.

See notification at <https://www.anacom.pt/render.jsp?contentId=1389850> and report at:

[https://www.anacom.pt/streaming/relamerc3a\\_3b.pdf?contentId=1389743&field=ATTACHED\\_FILE](https://www.anacom.pt/streaming/relamerc3a_3b.pdf?contentId=1389743&field=ATTACHED_FILE).

- 1.41. After receiving the answers to the consultation on the SPD, by communication of April 19, 2016, ANACOM, in compliance with the provisions of article 125 of the previous Code of Administrative Procedure, a specific request for information to operators in order to collect updated information, per parish and related to the end of 2015, on the number of retail accesses of the broadband Internet access service and NAN coverage (the latter also in GIS format) was made. This information is included in this document.
- 1.42. The draft final decision was notified on July 1, 2016 to the Commission, BEREC and the NRAs of the other Member States, pursuant to Article 57 (1) and under the terms of Article 7 of the Framework Directive.
- 1.43. On July 12, 2016 and July 14, 2016, the Commission sent ANACOM two requests for information, and this Authority responded on July 15, 2016.
- 1.44. The ANACOM draft decision not to regulate access to the MEO's fibre-optic network in the non-competitive areas provoked some reservations within the Commission. On 29 July 2016, the Commission, pursuant to Article 7(a) (1) of the Framework Directive, initiated phase II of the investigation and subsequently notified ANACOM and BEREC on the reasons for which it had serious doubts as to the compatibility of the draft measure with EU law.
- 1.45. BEREC published its opinion on September 15, 2016 on the serious doubts raised by the Commission pursuant to Article 7(a) of the Framework Directive. ANACOM expressed reservations to the BEREC opinion, which was approved by a majority, and it voted against it, in particular because several aspects have not been adequately addressed.
- 1.46. On November 29, 2016, the Commission adopted a Recommendation in accordance with Article 7a of the Framework Directive, according to which:
  - ANACOM shall amend or withdraw corrective measures regarding access obligations imposed on MEO in the areas of wholesale local and central access markets corresponding to the CN areas identified at the retail level when, on a prospective basis, there are limits to the economic viability and to the possibility of NGN competitive deployment and in cases where there is no alternative

wholesale access to these networks, enabling a sustainable competition, in order to meet the Commission's concerns.

In particular, in these areas, ANACOM shall impose on MEO an obligation to provide wholesale access to the unbundled fibre line service, as well as to the continuous flow of fibre data. In doing so, ANACOM shall consider granting MEO some flexibility in the pricing of fibre access products, in line with the Commission Recommendation on Non-Discrimination Obligations and Methods of Calculation of Costs. ANACOM shall also consider using the MEO commercial offer as the basis for regulated access products.

- In accordance with Article 7 (7) (a) of the Framework Directive, ANACOM shall, if it decides not to amend or withdraw the draft measure on the basis of the Recommendation, present to the Commission a reasoned justification.
- In accordance with Article 7 (6) (a) of the Framework Directive, ANACOM shall notify by December 29, 2016 the draft measure adopted to the Commission. This period may be extended, at the ANACOM request, in order to enable it to conduct a public consultation, in accordance with Article 6 of the Framework Directive.

1.47. By decision of December 22, 2016, ANACOM approved the SPD on the weighting of the European Commission Recommendation of November 29, 2016 for cases PT/2016/1888 and PT/2016/1889<sup>60</sup>. In this SPD, ANACOM presents the reasoned justification for not altering and not withdrawing the draft final decision approved on June 30, 2016 and notified to the EC on July 1, 2016 and consequently not accepting the EC Recommendation.

1.48. It was agreed to submit this draft decision to a prior hearing of stakeholders, under articles 121 and 122 of the Code of Administrative Procedure, as well as the general consultation procedure provided for in Article 8 of LEC, with the period of 20 business days being fixed, in both cases, for the stakeholders to voice their opinion.

---

<sup>60</sup> With respect to the analysis of the wholesale local access markets at a fixed location (market 3a) and of wholesale central access at a fixed location for wide-spread products (market 3b).

- 1.49. Subsequently, by ANACOM decision, dated January 19, 2017, and at the stakeholders' request, the term of pronouncement in the context of the prior hearing and the consultation which the draft decision was subjected to was extended for 5 working days.
- 1.50. Having comments to the public consultation and prior hearing on the Draft Decision of 12.21.2016 been analysed, a report was prepared, including a summary of contributions received and ANACOM's views thereon. The report is an integral part of this market analysis.

### **Market definition methodology**

- 1.51. According to the current regulatory framework, which follows EU competition law, the relevant markets are defined through the intersection of two different dimensions: the product market and the geographic market.
- 1.52. The purpose of the product market definition process is to identify all products and / or services which are sufficiently interchangeable or replaceable, not only in terms of their objective characteristics, by which they are particularly suited to meeting the needs of consumers, but also in terms of their prices and intended use<sup>61</sup>.
- 1.53. The definition of this market thus begins with the grouping of the goods or services used by consumers for the same purposes / end use<sup>62</sup>, i.e., according to demand. These products and services will be part of the same relevant market if the behaviour of the producers or service providers concerned is subject to the same type of competitive pressure on the supply side, in particular in terms of price fixing.
- 1.54. In this context, two main types of competitive pressures in the definition of the product market are identified:
- the demand-side substitutability, and
  - the supply-side substitutability<sup>63</sup>.

---

<sup>61</sup> See Guidelines §44.

<sup>62</sup> Idem.

<sup>63</sup> See Guidelines §38. There is also a third source of competitive pressure on the behaviour of the operator which is the potential competition - whenever relevant, this possibility will be considered.

- 1.55. As the theoretical analysis of the degree of substitution or complementarity between two products through the cross-elasticity of demand is complex, and the data available for this purpose are usually scarce, one of the most widely used methods for assessing the existence of demand and supply-side substitutability consists of applying the so-called “hypothetical monopolist test” (SSNIP test – *small but significant non-transitory increase in price*), enabling both demand-side substitutability and supply-side substitutability to be identified<sup>64</sup>.
- 1.56. In addition, the relevant geographic market includes each of the areas in which the competition conditions are similar or sufficiently homogeneous with respect to the neighbouring areas<sup>65</sup>.
- 1.57. In the definition of the geographic market, the same methodology for defining the product market, in particular the SSNIP test, where practicable, may also be applied<sup>66</sup>.
- 1.58. According to the Commission Recommendation on relevant markets, particular consideration should be given to whether the potential operator with SMP operates uniformly across the whole network area or there are considerably different competition conditions to such an extent that activities are restricted in some areas, but not in other areas.<sup>67</sup>.

---

<sup>64</sup> See Guidelines §40-43.

<sup>65</sup> See Guidelines §56.

<sup>66</sup> See Guidelines: “43. If a NRA decides to resort to the hypothetical monopolist test, it should then be applied until it can be established that a relative increase in prices in the defined geographic markets and product will not lead consumers to quickly opt for available substitutes or to be supplied by providers located in other areas”.

<sup>67</sup> See Commission Recommendation on relevant markets – Recital 7.

## **2. RETAIL BROADBAND ACCESS MARKET**

- 2.1. As referred to in Article 8 (1) of the Framework Directive, the definition of markets shall be neutral in relation to the network / technology used in the provision of services.
- 2.2. According to the Explanatory Statement, markets shall be analysed independently of the network or infrastructure used to provide the services as well as in compliance with the requirements of the competition law.
- 2.3. The Commission Recommendation on relevant markets defines the following wholesale markets:
  - Wholesale local access at a fixed location (Market 3a).
  - Wholesale central access at a fixed location for mass-market products (Market 3b).
- 2.4. For the definition of these wholesale markets, the Commission begun with retail broadband access products and these retail products could be provided through the following technologies or infrastructures:
  - Copper (xDSL).
  - Coaxial cable.
  - Optic-fibre.
  - Wireless and mobile networks<sup>68</sup>.
- 2.5. By the end of 2015 there were around three dozen active operators in Portugal providing retail broadband access services at a fixed location that had about 3.1 million accesses. However, most are providers with a very small volume of accesses and only four entities account for more than 99.7 percent of these accesses<sup>69</sup>.
- 2.6. In addition, the three mobile operators also made available by the end of 2015 the mobile broadband access service (including at a “fixed location”) to about 572 thousand end-users<sup>70</sup>.

---

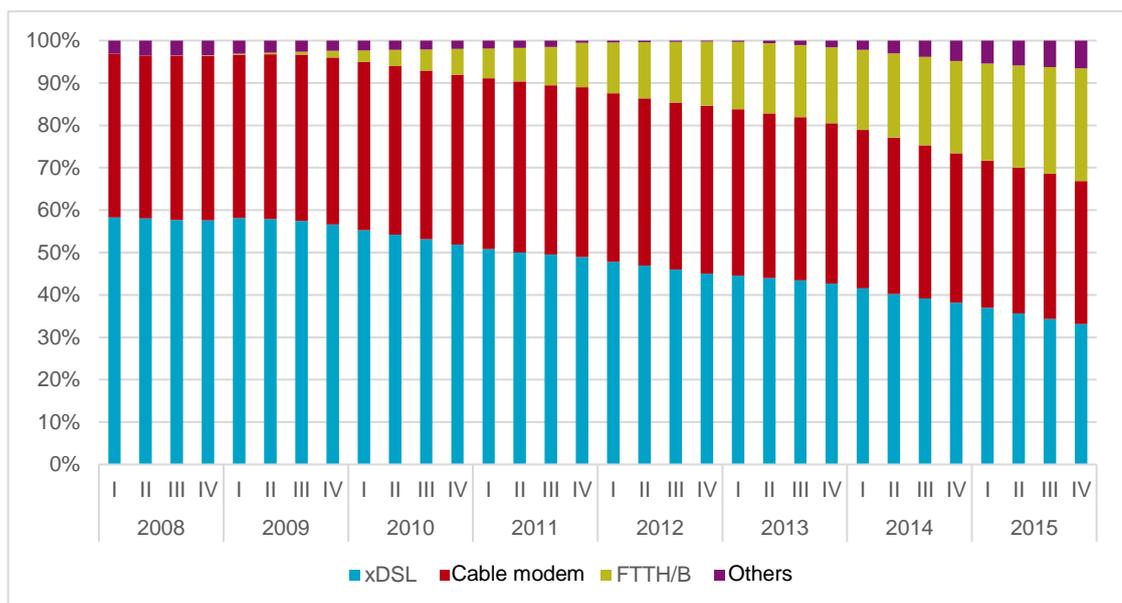
<sup>68</sup> Rendering services at a fixed location.

<sup>69</sup> MEO, NOS, Vodafone and Apax.

<sup>70</sup> These are broadband (Internet) accesses attached via (USB/*modem*) card and computer. MEO, Vodafone and NOS are the concerned providers.

- 2.7. Although the definition of the product market should be based on the type and characteristics of the product provided, and not on the technological means of support, the characteristics and the current state of implementation of the different technologies and infrastructures to support broadband access services in Portugal, with a view to assisting the analysis of the retail market, are as a previous point analysed.
- 2.8. Thus, in terms of network infrastructures that allow broadband access at a fixed location in Portugal, the most relevant are still the copper network (using *ADSL* modems), cable networks (using *cable* modems) and fibre networks (using *optical* modems), which have gradually conquered the market, as you can see in the following graph (this graph is only for illustrative effects, since the technologies that form part of the relevant market have not yet been defined at this stage of the analysis).

**Graph 1. Evolution of the number of broadband accesses at a fixed location in retail**



Source: ANACOM based on the operators' data

- 2.9. The main fixed broadband access technologies remain the (ADSL over) copper and cable, each representing, at the end of 2015, about 33 percent of the total. However, these technologies have been losing their importance in favour of fibre-based accesses (FTTH) which represent, at the end of 2015, around 27 percent of total retail accesses. It is noted that in 2015 the number of fibre-based accesses grew, on average, about 8 percent per quarter. More significantly, fibre-based broadband

access also attracted more than 85 percent of net retail members in the fourth quarter of 2015.

- 2.10. Also noteworthy is the growth in the number of LTE-based broadband accesses at a fixed location, reaching by the end of 2015 approximately 203 thousand accesses and representing the larger proportion of “other” broadband accesses at fixed location, as shown in the previous graph. However, these accesses still represent less than 10 percent of all broadband accesses at a fixed location.
- 2.11. Apart from the growing relevance of the fibre-based service, the mobile networks-based broadband access (especially in recent years with LTE and the use of “advanced” smartphones or tablets) has gained some importance in recent years - though the number of mobile broadband accesses based on data transmission cards connected to personal computers, in particular via USB (or other) is decreasing –, implying that the reanalysis whether or not mobile broadband accesses, either on a mobile phone, tablet or PC, are part of the same product market than that of fixed broadband access.
- 2.12. There has also been a generalization of the provision of retail services based on broadband accesses included in bundled services – *dual-play*, *triple-play*, *quadruple-play* and *quintuple-play*<sup>71</sup> – and currently the retail service separated from the (consumer) broadband access service does not exist.
- 2.13. In fact, the (consumer) retail broadband market is characterized by the increasing (and exclusive) jointly supply and demand for electronic communications services, usually constituting bundled services - FTS, broadband access and pay TV (and, more recently, also STM).
- 2.14. By the end of 2015, more than 88 percent of the broadband access fleet had associated pay-TV service, which shows the importance of this service to end-users. In this way,

---

<sup>71</sup> Services such as fixed broadband, STF – Fixed Telephone, Pay TV, STM – Mobile Telephone and mobile broadband are included.

infrastructures not supporting the pay-TV service or having restrictions on their offer and use (such as mobile networks <sup>72</sup>) may be limited in terms of substitutability.

2.15. In this context, the following questions related to substitutability are important to be answered, which is done in the following section:

- Will the copper, coaxial cable and fibre optic-based services be part of the same product market?<sup>73</sup>
- Will consumer and high-quality broadband access services be part of the same product market?
- Will fixed and mobile-based services be part of the same product market?
- Will broadband services provided in individual and bundled offers services be part of the same product market?

### **Definition of the broadband access product market**

2.16. According to the Guidelines, as explained in the introduction, the product market definition process aims at identifying all products and / or services that are sufficiently interchangeable or substitutable, not only in terms of their objective characteristics, through which they are particularly capable of satisfying the needs of consumers, but also in terms of their prices and intended use.

2.17. The various possibilities of substitutability referred to above are discussed below<sup>74</sup>.

---

<sup>72</sup> Although television distribution services based on 3G and 4G mobile services are available, this service is provided in *unicast* mode and has limitations. In any case, the substitutability between both fixed and mobile broadband is analysed in a specific section of this document.

<sup>73</sup> And, associated question: will the traditional (i.e., broadband speeds below 30 Mbps) and high-speed broadband (i.e., 30 Mbps or greater) broadband services be part of the same product market?

<sup>74</sup> It could also be assessed whether the broadband access service satellite-based or BWA systems is also part of the market under analysis. In this respect, it is noted that satellite communications systems still have very limited use, only in very specific situations and at the undertaking level, occurring a significant reduction in the number of accesses (as the main user of that technology - AR Telecom – no longer provides services to residential users) and there is no recent progress at coverage level.

On the other hand, it is not expected that, in the period up to the next analysis of this market, BWA networks will have significant coverage or expression.

Thus, ANACOM considers that, given the low availability, coverage and penetration in the market, these broadband access services are still not relevant for the purposes of market definition and they will not be analysed in the light of broadband markets.

### *The copper, cable and fibre-based broadband access service*

#### **Demand-side substitutability**

- 2.18. In general terms, end users are looking for broadband access services with permanent access, high speed and quality, with cable, with fibre and copper accesses presenting very similar functionalities from this point of view<sup>75</sup>. It can then be concluded that they are capable of meeting similar needs<sup>76</sup>.
- 2.19. From the point of view of the average end user, the type of access (i.e., the "wire" that gets home) is generally not relevant. This user intends to obtain, without restrictions, an Internet access service or, more recently, a range of quality electronic communications services, delivery of which is indifferently carried out through copper, cable, fibre or other technology.
- 2.20. Historically, demand has focused for many years on copper pair accesses, the only existing infrastructure that has subsequently extended to cable accesses (with the growth of cable network coverage at national level) and, more recently, fibre accesses.
- 2.21. There is currently increased demand for these last two types of access (or, in areas where fibre coverage exist, a stronger supply of fibre accesses compared to the supply of copper accesses<sup>77</sup>) compared to the copper-based accesses.
- 2.22. Thus, in areas where these three types of access exist, at similar prices, the end user generally opts for cable or fibre access. Only when these are unavailable, or when you only need a minimum price offer, does the user opt for the copper-based services.

---

<sup>75</sup> Although the maximum delivery from the copper network is of 24 Mbps, due to ADSL2+ technology limitations. In Portugal, operators, in particular MEO, have chosen not to install advanced copper technologies, in particular VDSL (and *Vectoring*).

<sup>76</sup> See in this respect the studies carried out by ANACOM concerning the "Quality of the broadband Internet access service" (a study of 2010, which in particular " *compared the services of fixed accesses (cable and ADSL), where the representativeness at mainland Portugal has been sought to ensure the level* "). Available at <https://www.anacom.pt/render.jsp?contentId=1056930>.

<sup>77</sup> An example is the Internet operators' page, where the fibre optics-based services are presented first (these links contain links to the copper-based services).

- 2.23. This could, at first sight, indicate the existence of an asymmetric substitutability of copper accesses for (cable and) fibre accesses<sup>78</sup>. However, despite the significant growth in the number of fibre-based broadband accesses, there still are a very significant number of copper-based broadband accesses, even in areas with fibre coverage.
- 2.24. Moreover, in some of (these) areas, a reduction in the number of cable-based broadband accesses has been identified, as a result of the number of customers switching from cable-based offers to fibre-based offers, although this does not mean that these are not substitutes for fibre-based accesses.
- 2.25. That is to say, it is not possible to draw definitive findings on the existence or not of substitutability between the products in question (supported over the various access infrastructures) only by demand developments, although it is true that indications go in the direction of such existence.
- 2.26. One of the main aspects that can differentiate (or approximate) the various offers, for a given bundle type, is the speed of the broadband access service, and the number of channels associated with the television service or certain specific contents may also justify the option for a particular product.
- 2.27. However, according to data from the Telecommunications Barometer - Marktest, in May 2016, 27.1 percent of users in households with bundled services, including the fixed broadband access service, reported that their operator's choice was based on the price, with only 7.1 percent having said that this choice was based on quality (possibly including the speed of Internet access in such quality).
- 2.28. According to the same source, households with fixed broadband access that do not have the bundled service<sup>79</sup>, only 4.2 percent reported that the choice of operator was based on the best quality.

---

<sup>78</sup> Although there are indications of this asymmetric substitutability, given the results of the available surveys which indicate that price, rather than speed or technology, is the main reason for joining a particular operator, it is likely that, vis-à-vis a SSNIP in the price of fibre-based broadband services, a significant number of customers of such services switch to copper-based broadband services (making such price increase unprofitable), since, as it will be seen, a significant number of fibre-based broadband service networks have speeds of 30 Mbps and the prices of fibre and copper-based broadband services are identical.

<sup>79</sup> Previously contracted services and relatively low number services.

- 2.29. Thus, the data presented above show that, currently, the access speed is not a critical factor in the choice of the operator.
- 2.30. In the case of new customers, with no switching costs<sup>80</sup>, joining fibre and cable-based services is a more rational option compared to joining copper-based services, as, for instance, there are fibre and copper-based services with broadly equivalent speed rates (24 Mbps at copper level and 30 Mbps at fibre level), sold at the same price. The latter is a technologically advanced infrastructure.
- 2.31. In this respect, and in addition to the data already presented by Marktest, it has been found that, according to the Commission's Eurobarometer data <sup>81</sup> for January 2014, price is the most valued factor when deciding on subscribing a broadband access service, as reported by 80 percent of respondents, with the access' highest speed being reported by 41 percent of respondents (about half of those who indicated the price).
- 2.32. Also relevant is the fact that 60 percent of respondents did not know which speed rate they had hired.
- 2.33. From the Commission's Eurobarometer data for January 2014, 94 percent of respondents were not willing to pay more for broadband access with increased speed or with more traffic included, even without switching from provider.
- 2.34. Thus, there is no evidence that the products concerned should be on separate markets, because, for example, for users of lower-speed offers, copper-based offers (ADSL) sold at the same price as fibre-based (and cable) offers can also be good substitutes in view of an increased price in fibre and cable-based offers.
- 2.35. Thus, on the demand side, there are no significant breaks in the substitutability chain when comparing current copper-based broadband services with those provided over cable and fibre.

---

<sup>80</sup> Even occurring possible switching costs (notably the modification of the of the data *modem*), this does not present itself as a preventative factor of the substitutability, as such switching costs are estimated to be reduced. In fact, in the context of actions to promote services, the majority of undertakings offering access (and electronic communications) services, regardless of the supporting technology, has been provided both the "installation *kits*" and the access/service activation.

<sup>81</sup> See [http://ec.europa.eu/public\\_opinion/archives/ebs/ebs\\_414\\_sum\\_en.pdf](http://ec.europa.eu/public_opinion/archives/ebs/ebs_414_sum_en.pdf).

- 2.36. In this respect, since 2010, the total volume of copper accesses remains fairly stable, in the order of 1.1 million, with only 72,000 being the difference between the maximum value and the minimum value in this period (up to the end of 2015), although part of these accesses may be marketed in areas where there is no cable or fibre coverage, as the copper network covers practically all households in Portugal.
- 2.37. It is also concluded that in parishes where the cable network has practically total coverage (above 95%) and where MEO has practically no fibre coverage (less than 5%), which amount to 81, the percentage of MEO's broadband accesses (mostly copper-based, by definition) is still relevant (more precisely, 39%) when comparing the percentage of cable operator accesses with the highest number of accesses in each of these parishes (and that covers practically the entire parish). This means that even in the presence of a network that allows higher-speed accesses - the cable network - a high percentage of users who maintain their ADSL-based connection occur.
- 2.38. The significant growth in the number of fibre-based broadband accesses has had some impact, in particular on the evolution of the number of copper-based accesses for two reasons: the availability of a fibre-based offer with significantly lower prices (and with clearly higher access speeds) by Vodafone - which has significantly increased the number of customers - and the fact that MEO itself exerts some pressure to migrate customers from the copper network to the fibre network, possibly maintaining the price and / or improving the characteristics of the network offer.

#### **Supply-side substitutability**

- 2.39. The choice of end users for a given access supported on a particular infrastructure / technology is mainly conditioned by the coverage of the network and by any technological limitations that may condition any service offer supported on such access, for example in terms of Internet access speed.
- 2.40. It is necessary to see whether the characteristics and the coverage of the access offer provided over (a) copper, (b) cable and (c) fibre are sufficiently homogeneous and whether these accesses are used (indifferently) by the users for the same purposes.

- 2.41. Copper, cable and fibre access services generally cover (in the context of bundle offers) largely common geographic areas, with the area covered by copper being higher than that covered by fibre or cable, although in the case of copper, there are limitations to the provision of broadband services, especially in (more) rural / remote areas where the length of the loops is higher.
- 2.42. Since 2009, several operators in the Portuguese market have significantly been investing in fibre access networks, with an emphasis on MEO, Vodafone and even cable operators, such as NOS. In fact, in the previous analysis of broadband markets, ANACOM had anticipated the development in this area as several investments had already been announced by then<sup>82</sup>.
- 2.43. Specifically in the case of fully fibre access to the home (FTTH), approximately 835 thousand active broadband customers were registered at the end of 2015 in the retail segment, about 34 percent higher than that registered at the end of 2014 , having attracted more than 75 percent of new net accessions to broadband access services in this period<sup>83</sup>. At the end of 2015, the number of cabled homes with fixed fibre networks totalled 4.2 million<sup>84</sup>. After the initial period of development of the fibre network infrastructure, the commercialization of fibre-based broadband access services began more generally throughout 2009.
- 2.44. It now appears that the various fibre-based broadband access retail offers are very similar to cable and even copper offers (in this case, for lower-speed offers), and are usually included in (*multiple-play*) bundles, with very similar associated monthly charges as to accesses with comparable maximum *download* speeds, as at **Table 1** (prices include VAT and exclude promotions)<sup>85</sup>:

---

<sup>82</sup> For example, Optimus announced in 2008 a € 240 million 3-year investment plan in next-generation networks covering one million homes (an objective that has since been abandoned, if only due to the merger with ZON).

<sup>83</sup> Between the end of 2014 and the end of 2015.

<sup>84</sup> It includes “double” counting, i.e., homes with more than one fibre network.

<sup>85</sup> Information collected on the Internet operators’ website in February 2016. The promotional price is taken into account when it applies for an extended period (e.g., 24 months or more).

**Table 1. Examples of broadband access offer based on copper (ADSL), fibre and cable (DOCSIS 3.0) (February 2016)**

Offer	Technology	Max. download speed (Mbps)	Monthly fee (Euros)
<b>BL+TV+STF+STM</b>			
Card M4O Light 1	Copper	24	53.99
Card M4O Light 1	Fibre	30	53.99
Card NOS Quatro Light 1	Cable	30	53.80
Tv Net Voice number 1 RED	Fibre	100	53.80
<b>BL+TV+STF</b>			
Total 24 Special	Copper	24	42.99
Total 30 Special	Fibre	30	42.99
Iris 30 Mega	Cable	30	42.99
Total 24 Cine Plus	Copper	24	57.99
Total 100 Cine Plus	Fibre	100	57.99
Tv Net Voice	Fibre	100	26.90
<b>BL+STF</b>			
ADSL 24 MB	Copper	24	28.99
30 MB Fibre	Fibre	30	28.99

2.45. Prices are very similar over copper, cable and fibre-based services for similar bundles. The perceived differences are related to the fibre guaranteed speed (which is not guaranteed on copper<sup>86</sup> and cable system<sup>87</sup>), with the fibre and cable offer speed being 30 Mbps while on copper is of 24 Mbps (maximum). The number of channels both on copper and fibre offer is identical<sup>88</sup>. Even in a given infrastructure, several offers with virtually the same price and with significantly different speeds take place, which does not mean that they are not in the same product market (e.g. card M4O Light 1 and TV Net Voice number 1 RED shown in the previous table and having speeds of 30 and 100 Mbps, respectively).

2.46. By the end of 2015, more than 84 percent of broadband accesses based on copper cables had speeds of 24 Mbps - with 34 percent of cable and fibre-based broadband accesses having a speed equal to 30 Mbps or less - , thus concluding that a significant

<sup>86</sup> The total bandwidth is shared between the broadband access service and IPTV.

<sup>87</sup> As it is a shared environment (the same coaxial cable can be shared by several downstream customers).

<sup>88</sup> At least in the MEO case.

proportion of broadband accesses is still marketed at similar speeds [between 24 and 30 Mbps], regardless of the (copper, cable or fibre) supporting infrastructure.

- 2.47. In this context, and even if a fall in substitutability at 24/30 Mbps can be pondered, considering that 24 Mbps corresponds to the maximum limit of the (copper) ADSL speed, it is believed that there is still no clear boundary between the access (demand and the) supply supporting lower speeds and others supporting higher speeds. As such, there is a continuous chain of maximum speeds (in broadband access) in the range of offers made available by the operators in the retail market.
- 2.48. In addition, there is no clear distinction between different types of supply as to other product characteristics, including:
- the volume of monthly traffic included, with most fixed broadband offers presenting no limitations (unlimited traffic included)
  - the equipment included, such as *modems* and *routers wireless*; or even
  - other services/applications included in the bundles where broadband access is also included (e.g., *multiple-play* with limited volume mobile broadband offer, “video club”, TV recorder, inter alia).
- 2.49. Although the copper network has physical limitations that prevent, in the case of ADSL2+, the provision of broadband access service at speeds in excess of 24 Mbps, with the effective speed being supported by each loop as a function of its length and other characteristics that may also prevent the availability of the Pay-TV service itself. In practice, it is noted that these limitations from the copper cables did not prevent, by the end of 2015, the existence of around 750 thousand copper-based TV accesses<sup>89</sup>. Since the end of 2010, there was an increase by about 225 thousand in such accesses, compared to a reduction by 81 thousand cable networks-supported TV accesses, during the same period<sup>90</sup>. It should be noted once again that these are generic market data at national level illustrating the ability of copper networks to support pay-TV services, rather than a detailed analysis of the areas in which they are located - although the more remote the areas, the longer is the loop length, and thus the lower

---

<sup>89</sup> That is, 21 percent of total pay-TV accesses.

<sup>90</sup> Between the end of 2010 and the end of 2015.

the capacity to support pay-TV services - and whether alternative networks (in particular, cable and/or fibre-optic) in these areas exist.

**Conclusion on infrastructure substitutability**

- 2.50. As mentioned above, there is a chain substitutability across the various broadband offers available (cable, copper or fibre), on the understanding that, for a given broadband access offer (of any speed), there are greater or lesser speed offers (which are the connection of the chain) that are close substitutes for this offer. Thus, all offers are subject to a common price restriction; in fact, equal (speed/channels) bundles have equal prices.
- 2.51. Demand-side chain substitutability thus suggests that a hypothetical monopolist offering lower-speed broadband access services - in areas where other fibre or cable-based broadband access products exist - does not find it profitable to maintain prices above the competitive price, following a small but significant and non-transitory price increase because there will be a sufficient number of customers capable of switching to products with higher speeds.
- 2.52. Over the next few years, demand for higher bandwidth is expected to rise in order to meet the new services that have been added to broadband Internet access, in particular the high definition TV service with increasingly demanding content and applications (for example, 3D), which may in the future lead to a break in the chain of substitutability between different access speeds, namely between the copper-based offers (limited to 24 Mbps) and those provided over fibre and cable. However, it is considered that there is no evidence to suggest that such developments will occur in the short term and within the time period covered by this market analysis.
- 2.53. In conclusion, given the similarity between the characteristics and functionalities and (relative) price levels of broadband access offers for copper, cable and fibre to end users and the commercial actions carried out on them, it is reasonable to assume that a small but significant and non-transitory increase in the price of the copper access service leads to the substitution by the user for a cable or fibre access service in a sufficient volume to make the price increase unprofitable, with the contrary being also true. Even if any switching costs occur (in particular, in the case of the *modemswitching*), it is not a factor preventing substitutability, as such switching costs

are expected to be reduced<sup>91</sup>, at least in the case where a loyalty program does not apply.

- 2.54. Thus, it is concluded that broadband access offers in any infrastructure / technology shall be included in the same retail market, regardless of the maximum available speed. The answer to the first question under paragraph 2.15<sup>92</sup> is, therefore, affirmative: copper, cable and fibre-based services are part of the same product market.
- 2.55. This has, moreover, been the general conclusion reached by other European regulators in the analyses they carried out on this market, with the Explanatory Statement position being also stressed out in the sense that “NANs' analyses so far have not shown significant breaks in the chain of substitution when comparing current copper-based broadband services with those provided over fibre optic”.

*The consumer broadband access service and the high-quality broadband service*

- 2.56. In addition to the standardized broadband access services available in the mass consumer market, both residential customers and SMEs, there are other high-quality broadband access services normally available to large companies (and some medium and even small enterprises) and the State.
- 2.57. In the latter case, typically asymmetric (and possibly with limited restraint) access products meeting certain quality characteristics are included, as follows:

---

<sup>91</sup> Indeed, in the context of actions to promote broadband access services through different technologies, most companies have been offering either “installation kits” or the service activation.

<sup>92</sup> Will copper, coaxial cable and fibre optic-based services be part of the same product market?

- availability and quality of service, including service level agreements (SLAs), ongoing customer support, redundancy and reduced repair times, typically targeted to the needs of business customers;
- high-quality network management, including the transport component, with reduced restraint;
- possibility of access to the network at defined points according to the geographic population density and distribution of undertakings (instead of residential users);
- the possibility of providing Ethernet continuity.

2.58. In fact, although many non-residential customers can look for standardized services, larger business customers typically require more advanced and reliable services to connect their business units and (multiple) locations and allow internal communication between them, so that a standardized mass-consumer broadband retail product normally does not meet these requirements<sup>93</sup>. In addition, typical customers who require high quality products, such as large multi-site undertakings, prefer to purchase the different services from a single provider.

2.59. The typical services that (large) companies are looking for are high quality broadband Internet connections with limited containment, IP telephony, data centres and backup, additional support, high availability and reduced repair times and, in the case of multi-site undertakings, "dedicated" data links and with reduced (or even unconstrained) cross-national connectivity. Many business customers also require a value added service, for instance, from virtual private networks.

2.60. Usually, the form of contracting services by large undertakings and the State differs from the way of contracting services in the mass consumer market. As such, in the first case the subject to negotiation or specification of technical conditions is by the customer rather than the provider (e.g. public tenders). Also after-sales service is different, with specific managers being usually assigned. And even the technical

---

<sup>93</sup> Although some companies may see their needs met with such product or occasionally supplement a high quality product with mass consumer market offers.

options may be different, depending on the type of service intended by the end user, in the case of specific business customers.

- 2.61. High-quality retail services were usually (historically) provided through leased lines, which ensured dedicated and symmetric capacity. However, more recently, the broadband connections with guaranteed QoS (particularly those fibre-based, such as Ethernet connections on GPON - point-to-multipoint fibre network) will be considered "equivalent" to certain undertakings and solutions<sup>94</sup>.
- 2.62. It should also be noted that several undertakings have locations connecting in national territory areas, where there is no transmission or alternative access to the MEO network (that has fibre access in all of the national territory municipalities, although in some municipalities the number of fibre accesses is only a few units, which indicates that it is mainly access for business customers), so only this operator may provide services to those undertakings using its own infrastructure, even in areas where other operators have coverage (as these customers usually wish for services from a single operator).
- 2.63. Thus, the demand and supply conditions in the mass consumer market and by large undertakings are distinct. As such, it is understood, in line with the provisions of the Explanatory Statement, that there are significant differences in the demand for access services by different end users, with a clear distinction between the demand for mass consumer services and the demand for specialized and high-quality services, with emphasis put on lower containment rate -, regardless of the fixed supporting technology, with two different broadband access markets:
- Mass consumer retail broadband access market, regardless of the supporting (copper, cable or fibre) technology;

---

<sup>94</sup> For high capacity and high quality (low containment) connections, copper and cable networks present some technical limitations as to: (I) the maximum upstream speed rate (in both cases); (II) maximum downstream speed rate (in the case of the copper network, maximum 24 Mbps and only for loops with limited length); and (III) capacity sharing at the level of the coaxial (cable) network itself, with an impact on the (non) guarantee of low contention.

- High-quality retail broadband access market – Market to be analysed in the light of Market 4 of the Commission’s Recommendation on relevant markets .

2.64. The answer to the second question under 2.15 is thus negative: mass consumer and high-quality broadband access services are not part of the same product market.

*Fixed broadband access service vs. mobile broadband access service*

2.65. An end user can access the Internet by using a fixed broadband access or a mobile broadband access, as discussed in previous sections. In the latter case, and for today’s most representative technologies – 3G/4G<sup>95</sup> –, the end-user can use mobile phones /*smartphones* or tablets provided with that technology or personal computers (usually portables) connected to data transmission cards/*modems* (USB, PCMCIA or equivalent), with the latter being an experience that could be close to the fixed network broadband access.

2.66. The analysis of this question is detailed under “Study on the substitutability between fixed broadband and mobile broadband”, of October 2015, carried out by the IMR - Marketing Research Institute, at the request of ANACOM<sup>96</sup>.

2.67. The main findings of the study are as follows:

- The access service providers tend to consider as complementary the forms of fixed and mobile access <sup>97</sup>.
- The pay-TV plays a key role in the Internet use behaviour and its forms of access.

---

<sup>95</sup> BWA technologies (e.g., mobile WiMAX) are not available on a large scale and Wi-Fi is not a mobile access technology. In addition, GPRS/2.5G technologies cannot be considered as broadband technologies, given their limited access speeds (in both directions).

<sup>96</sup> Vide <https://www.anacom.pt/render.jsp?contentId=1378890>.

<sup>97</sup> Network operators believe that the relationship between both fixed and mobile broadband is distinct and complementary from the technical and use perspectives, as there are differentiation axes associated with the preferred location of use and the recipients. Thus, they consider the fixed access as a home-targeted product and for shared use by the family, as opposed to mobile access, preferably targeted as an out-of-home product and for individual use. As a corollary, they infer that these are distinct relationships because the two forms of access serve different needs and realities: the mobile Internet is based on the mobility needs and the fixed Internet is structured according to the technological advantages, in particular, latency and speed.

- 44.5 percent of households with Internet have fixed and mobile access service; 26.2 percent only have fixed access service; 17.5 percent have already mobile access service and 11.8 percent access only through free solutions, overwhelmingly away from home.
- 67.8 percent of Internet users have Internet access services integrated into bundled tariffs, with a predominance for solution with fixed and mobile access forms included<sup>98</sup>.
- In Internet access from home, the use of fixed solutions predominates, but the mobile solutions are gaining support.
- The use of forms of broadband Internet access in a complementarity manner predominates in Portuguese households <sup>99</sup>.
- Activities with specific requirements tend to be performed mostly at home, such as those requiring higher speed (e.g. live television), lower latency (e.g., real-time multiplayer games), and more security (e.g. banking transactions)<sup>100</sup>.
- Users of fixed and mobile access forms do not intend to replace fixed Internet with mobile Internet<sup>101</sup>.
- Exclusive users of fixed Internet access can join mobile access forms<sup>102</sup>.

---

<sup>98</sup> And 82.2 percent have a service integrated into a bundled tariff. The reasons for use are associated with mobility in an integrated bundle of services (47.5 percent) and convenience.

<sup>99</sup> 69 percent of households use fixed and mobile Internet access services in a complementarity manner, 26.2 percent of households consider fixed and mobile access forms as substitutes tending to favour the latter. 4.8 percent also consider substitute forms of access, but mainly using fixed solutions.

<sup>100</sup> However, most of the activities are carried out both at home and outside, confirming the need to have forms of fixed and mobile access.

<sup>101</sup> 67.1 percent of the holders of both forms of access intend to maintain the current situation recognizing the complementarity effect. This is due to application in different situations (29.9 percent), lack of fixed Internet traffic (21.7 percent), fixed Internet sharing by family members (17.4 percent) and greater reliability of fixed solutions (14.4 percent). The effect of non-substitution is more incisive in customers aged 25-34. 13 percent admit the possibility of replacing the fixed Internet with the mobile, mainly due to mobility (27.8 percent), the need to reduce costs (27 percent) and the perception of greater convenience (16 percent).

<sup>102</sup> 33.9 percent of respondents who only have fixed access can join the mobile Internet through mobile phones, showing receptivity and complementarity between the forms of access.

- 2.68. The study concludes that the characteristics of the current demand in Portugal continue to show a slight trend towards a predominance of complementarity versus the substitution of the forms of access, since:
- About 30 percent of the respondents reveal some difficulty in differentiating the concepts of fixed Internet and mobile Internet.
  - There is a high propensity for forms of fixed and mobile access to the Internet to be considered as complementary.
  - There is a propensity to consider mobile forms of access as being substitute with each other.
  - Respondents with fixed and mobile Internet services are interested in maintaining complementarity.
  - Respondents with exclusive use of fixed Internet access services are mostly interested in not complementing mobile solutions.
  - Nevertheless, 33.9 percent admit to joining the mobile solution in mobile phones, 17.3 percent of which show strong conviction.
- 2.69. In the previous market analysis, ANACOM concluded that the “*lack of demand-side substitutability (for the majority of users)<sup>103</sup> and the understanding that supply-side substitutability is not relevant<sup>104</sup> (...) suggests that the existence of mobile Internet access offers does not lead to a constraint on the hypothetical monopolist’s definition of a price above the level of competition in the provision of fixed broadband access service. Thus, for the relevant time period in this market analysis, it is understood that fixed broadband accesses and mobile broadband accesses are not included in the same relevant market*”.

---

<sup>103</sup> “The degree of substitutability between the fixed broadband access service and the mobile broadband access service is limited, with the mobile broadband access service essentially targeting a specific segment (in addition to users eligible for the “e-teacher”, “e-professor” and “e-opportunities”) programs”.

<sup>104</sup> “To enter the broadband access market in the fixed network, mobile broadband access providers would either have to acquire the relevant wholesale inputs or build their own network (...) quickly and inexpensively. For this reason, these providers cannot impose a constraint on fixed broadband providers. On the other hand, all operators of the land mobile service are included in economic groups that are also providing broadband access services in the fixed network. The opposite situation (broadband access service providers in the fixed network to enter into the provision of mobile broadband services) is still more difficult to occur, given the needs of spectrum and because this is a scarce resource”.

- 2.70. Despite the initial growth in the number of mobile retail broadband accesses through cards/modems<sup>105</sup>, in recent quarters the number of such accesses has been decreasing, although the number of *smartphones* users has been growing. It should be noted, however, that although the number of smartphones is much higher than the number of mobile broadband accesses via cards / modems, traffic generated by smartphones is significantly lower (about half) to traffic generated by mobile accesses with connection via cards / modem.
- 2.71. For the reasons described above, the same understanding as in the previous analysis that the mobile broadband service cannot be deemed as a substitute for the fixed broadband service is maintained.
- 2.72. In addition to the arguments presented in the study carried out by the IMR for ANACOM - and which are duly substantiated and detailed in the study - the main differences (and similarities) of the characteristics and functionalities of the fixed broadband access service and mobile broadband access service, demonstrating that they are not able to meet the same needs on the part of end-users who want a broadband access are summarized below.

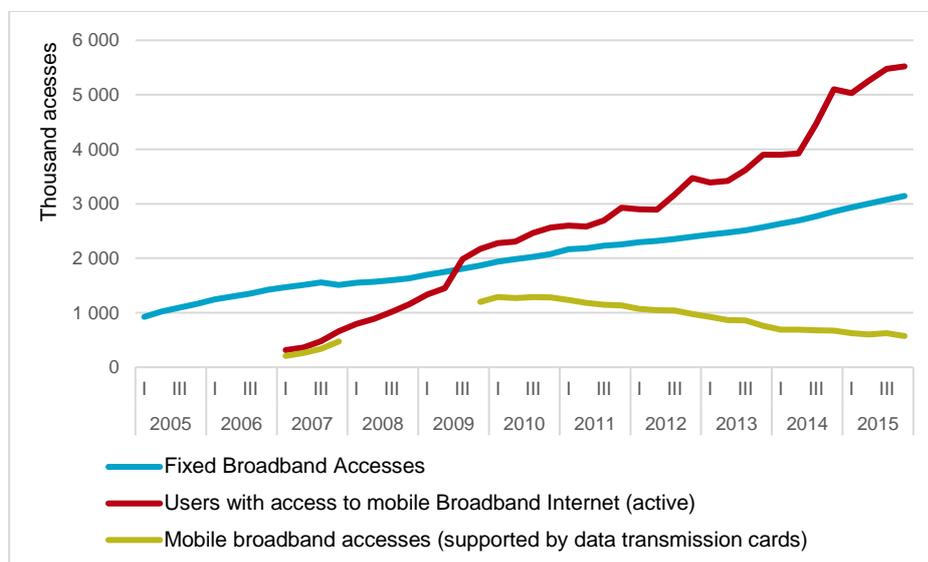
#### **Demand-side substitutability**

- 2.73. Currently broadband Internet access can be made through mobile networks, using a (smartphone) mobile phone, a tablet or a PC, presenting itself under **Graph 2** the development of the number of fixed and mobile broadband accesses (excepting those supported on data transmission boards).

---

<sup>105</sup> At the end of 2007, the number of mobile broadband accesses via cards / *modems* was 660 thousand, achieving at the end of 2015, 572 thousand, after reaching more than 1.3 million. In the case of fixed broadband access, the evolution was from 1.5 million at the end of 2007 to around 3.1 million at the end of 2015.

Graph 2. Evolution of the number of fixed and mobile broadband accesses



Source: ANACOM based on the operators' data

- 2.74. Although a “regular” user<sup>106</sup> can access the Internet through mobile cards/*modems* with experience of use that may get close to fixed broadband access, the demand-side substitutability is deemed to be limited, given the differences that exist in these two types of accesses, both directly and fundamentally in the fixed/mobile (inflexibility vs. mobility) dichotomy, and in terms of costs or even in terms of access speeds (compared to the fibre and cable offers, in particular with speeds equal to or greater than 100 Mbps per access).
- 2.75. Indeed, in the relationship between prices and access speeds made available, mobile offers continue to compare unfavourably with fixed broadband offers mainly for the higher-speed offers, although this difference has been attenuated over time, which is further aggravated by the monthly traffic volume limitations associated with mobile broadband access offers (which do not exist in fixed broadband offers) and the fact that speed is not guaranteed (even in the access) in mobile broadband offers.
- 2.76. It is also noted that, despite the significant growth in the number of mobile broadband accesses in 2008 and 2009 (although this trend has not been observed since 2010, on the contrary), this does not appear to have affected the development of demand for

<sup>106</sup> A user not requiring intensive *downloads* nor, for instance, high-definition viewing/switching videos. That is, the regular Internet user, who uses email and instant messaging / chat”, searches and / or accesses certain websites (e.g., shopping, banking transactions).

fixed broadband accesses (see **Graph 2**)<sup>107</sup>. In other words, there does not seem to be a substitution of fixed broadband accesses for mobile broadband accesses, and there is also a sustained increase of the first ones and a decrease of the latter.

- 2.77. Reinforcing the conclusions of the IMR study, it appears that about 90 percent of users with fixed Internet access have purchased the service as bundled services. As mentioned above, one of the main *drivers* in the adoption of broadband and bundle offers is the pay-TV, a service that is not available in the case of mobile broadband access.
- 2.78. Finally, the cumulative volume of traffic generated by active mobile broadband access customers via *cards/modem* is, on average (7.0 GB per customer and per month), significantly lower than the average fixed broadband traffic (54 GB per customer and per month)<sup>108</sup>. This difference (of about eight times) can be explained by the traffic limits that exist in several mobile broadband offers (at least those of lowest speed and price), and in most fixed broadband offers no longer exist limits, and by the different user profiles and usage patterns of these two types of broadband access.

#### **Supply-side substitutability**

- 2.79. For the purposes of the analysis of supply-side substitutability, mobile operators are included in economic groups that are also providing fixed broadband access services and are also those with the highest share.
- 2.80. In the past, the operators themselves have recognized the complementary nature of mobile broadband versus fixed broadband. For instance, in the Report and Consolidated Accounts for the First Nine Months of 2010, NOS (ZON at the time) stated that “*Our mobile service calls on consumers because of its very attractive offer in the case of a Triple Play customer of ZON. However, these offers are seen as a mobility complement*”<sup>109</sup>.

---

<sup>107</sup> The number of mobile broadband accesses remained virtually unchanged throughout 2010, with a sharp decrease of 55 percent between the end of 2010 and the end of 2015.

<sup>108</sup> Data from the end of 2015.

<sup>109</sup> See <http://www.zon.pt/microsites/investidores/DocRender.aspx?FileId=980>.

2.81. On the other hand, it is unlikely that in the short term, developments in mobile networks will allow replicating the characteristics of fixed broadband access services, namely at the level of continuous access to multiple IPTV channels (in particular, HD channels and, in the near future, 4K). And fixed networks also continue to be developed, so in the face of consumer expectations and the bandwidth needs that will increase with the development of certain applications, it is likely that the degree of substitutability between the mobile broadband access service and fixed broadband access service remains very limited, especially in the time period until the next market analysis.

**Conclusion on substitutability between fixed broadband and mobile broadband**

2.82. In conclusion, there is a maintenance (since the previous market analysis) of the available supply and demand characteristics, namely:

- The fundamental difference between accesses at the mobility level (intrinsic to the mobile broadband access service and valued by the respective subscribers), and the consideration of this isolated fact would lead to the conclusion that fixed broadband access services and mobile broadband services would not serve as substitutes.
- The lower price differences for an equivalent charge in the fixed broadband access service (particularly in areas where networks and competitive offers exist).
- The maximum speed is much higher in the fixed broadband access service (several hundred Mbps in the fixed service compared to 150 Mbps, currently in the mobile, with values nearly reaching their maximum level very different in one and in other cases).
- The widespread existence of limits on the traffic monthly volume in the mobile broadband access service.
- The differences in the volume of traffic generated by fixed broadband and mobile broadband customers, in a factor of eight.

2.83. In addition, current demand for fixed broadband focuses, almost exclusively, on bundled services that include fixed broadband access and only in complementarity manner the mobile broadband access.

- 2.84. In view of the above, it is considered that the degree of substitutability between the fixed broadband access service and the mobile broadband access service remains limited.
- 2.85. Indeed, the continuing lack of evidence leading to the conclusion that there is a sufficiently strong level of substitutability on the demand-side and the understanding that supply-side substitutability is not so relevant suggests that the existence of mobile broadband access offers does not lead to a constraint, on the hypothetical monopolist's part, to definition of a price above the competitive level in the provision of the fixed broadband access service.
- 2.86. In addition, in other Member States, only the Austrian regulator considered these two services as substitutes, taking into account certain specific features of their markets, in particular the fact that most Austrian users use mobile broadband access as an isolated product, rather than bundled with other services, which does not entirely correspond to the existing situation in Portugal<sup>110</sup>.
- 2.87. Given the recent (mid-2013) introduction of LTE offers at a fixed location, ANACOM believes that it is not possible to carry out a rigorous substitutability analysis currently, in particular taking into account consumer preferences and possible limitations of this type of offer, especially with regard to the pay-TV service support.
- 2.88. However, recognizing the significant growth in this type of offer (representing around 6.5% of total retail accesses to the [fixed] broadband Internet), ANACOM will monitor the evolution of demand and supply of this type of product and in the next market analysis it will develop a substitutability analysis between these offers and the broadband offers based on other technologies (namely ADSL), with their characteristics and prices taken into account.

---

<sup>110</sup> In its market analysis “based on the customers” survey, RTR stresses that residential mobile broadband customers use their connection mainly on a stand-alone basis (76%), rather than coupled with a fixed connection (24%). RTR also notes that most mobile broadband connections are used at a fixed location e.g. at the customer's home. Residential customers see therefore mobile broadband as a substitute rather than a complement to fixed broadband. RTR [also] concludes that bundled offers will not prevent a sufficiently large number of customers from switching from fixed to mobile broadband access in order to argue against the substitutability of the two products”.

2.89. For the relevant period of time in this market analysis, it is understood that fixed broadband accesses and mobile broadband accesses do not belong to the same product market, and the answer to the third question is negative, as for 2.15.

*The offer of individual and bundled broadband access*

2.90. In the Explanatory Statement, the Commission does not propose to define a separate market for bundles, although at the retail level there has been an increase in the demand for bundled services provided for by the same operator.

2.91. BEREC, for its part, argues that under the Competition Law the process of defining a product market including a bundle should not be substantially different from that followed in the definition of the market for an autonomous service<sup>111</sup>. However, for this entity, the application of the current regulatory framework for bundled services is not simple and straightforward.

2.92. According to BEREC, the Community Competition Jurisprudence states that the existence of alternative operators with autonomous access offers can be seen as an important indicator of individual demand (of that product), while economic theory suggests that it may be appropriate to define a separate market for bundled services if the substitutability between autonomously and bundled services is limited. Specifically for BEREC, the presence of economies of scale and economies at transaction costs level, inter alia, could justify the definition of distinct markets for bundled services and for individual services.

2.93. On the other hand, according to the SSNIP test, the result of a market definition exercise involving bundles depends on the degree of substitutability between bundles and individual products, as well as the focal product<sup>112</sup>. BEREC notes that there may be asymmetric substitutability between individual bundles and products. For instance, end-users may consider STF bundles and broadband substitutes for stand-alone STF, but probably not the other way round (i.e., the substitute STF for STF bundles and broadband). This could mean that the availability of bundles limits the ability of an

---

<sup>111</sup> “BEREC report on impact of bundled offers in retail and wholesale market definition”, available at: [http://berec.europa.eu/eng/document\\_register/subject\\_matter/berec/reports/209-berec-report-on-impact-of-bundled-offers-in-retail-and-wholesale-market-definition](http://berec.europa.eu/eng/document_register/subject_matter/berec/reports/209-berec-report-on-impact-of-bundled-offers-in-retail-and-wholesale-market-definition).

<sup>112</sup> The main product provided individually or bundled. In this case, it will be the broadband access.

individual service hypothetical monopolist to maintain, with profitability, prices above the competitive level.

- 2.94. It is possible, however, that the opposite may not occur: that individual products do not restrict the ability of a hypothetical monopolist to offer bundled services to profitably keep prices above the competitive level. In this scenario, the bundle may be defined from the individual service (as the focal product) in the same market, however the service offered autonomously would not be part of the market that was defined with the bundle as the focal product.
- 2.95. In Portugal, available data show a very significant commitment to bundled services (including broadband access service), replacing isolated broadband services, which, however, still exist for historical reasons and currently only as maintenance of previous offers.
- 2.96. At the moment, the growth driver in the retail (broadband) market is, essentially, the demand for and supply of bundled services, essentially those that include, in addition to broadband access, the pay-TV service. End users have shown a clear preference for bundled services (from a single provider<sup>113</sup>, even when there are no significant switching costs for the individual products that make up the bundle.
- 2.97. In fact, as already mentioned, at the end of 2015, more than 88 percent of broadband accesses had associated pay-TV service, so the number of broadband accesses (individualised, with or without FTS ) is small (only around 12 percent) and refers to "old" offers that remain, in most cases, unchanged for years. In view of recent developments, this means that the most recent accessions to broadband services have mostly been in broadband bundles with the television service.
- 2.98. Under this circumstance where there is no (meaningful) demand independent of individual components of the bundle, i.e. broadband, individual and bundled services can be considered to be part of the same retail market. It can thus be considered that there is (asymmetric<sup>114</sup>) substitutability between bundles (notably broadband and television) and individual broadband access: end users consider broadband (and television) bundles as substitutes for individual broadband services (with or without

---

<sup>113</sup> This allows for potential gains for the final customer, not only at no duplication of installation costs level, but also the single invoice and contact with a single entity in case of any problems.

<sup>114</sup> An eventual offer of individual broadband access does not restrict the ability of a bundle hypothetical monopolist (including broadband services) to profitably maintain prices above the competitive level.

FTS). In fact, the substitution has already occurred, with the lack of individual broadband demand (with or without FTS)<sup>115</sup> and the migration of most of the autonomous services to bundled services.

- 2.99. In this context, ANACOM concludes that the broadband access is the retail product market to be considered in this context, whether provided individually or in a bundle (along with other services such as the FTS or television). The answer to the fourth question, formulated under 2.15 is, therefore, affirmative: autonomous and bundled broadband access services are part of the same product market.

*Definition of retail markets for broadband access products: conclusion*

- 2.100. As in the previous analysis, a range of technological alternatives to support broadband access services is still identified, with emphasis on access via copper, cable and fibre.

- 2.101. In general terms, and as also concluded in the previous market analysis, broadband access services over copper, cable and fibre have very similar functionalities from the point of view of end-user demand: permanent access (*always on*) multiple offers with equivalent prices and speeds (up to 24 Mbps in the case of ADSL), inclusion in (similar) bundles and equivalent perceivable quality, so that it can be concluded that they are able to meet similar needs. On the supply side there is no evidence of a non-substitutability (and chain) between the different offers, supported on those different networks and technologies.

- 2.102. Thus, ANACOM understands that, from the point of view of user demand and supply, broadband access services over copper, fibre and cable are in the same retail market.

---

<sup>115</sup> Although there are offers available – see Table 1.

2.103. Taking into account the different supply and demand conditions of broadband access services in the mass consumer market, which are distinct from high quality broadband access services, ANACOM intends to define the following retail broadband access market:

- Retail broadband access market, regardless of fixed support technology, in the mass consumer segment - Retail broadband access market.

### **Definition of the retail geographic market for broadband access**

2.104. After identifying the relevant product market, it is necessary to define the respective geographic dimension. To this end, a study on the existence of geographic areas with similar or sufficiently homogeneous competitive conditions, but different from those of other areas, is required.

2.105. According to the Guidelines, *“the relevant geographic market includes an area in which the undertakings concerned participate in the supply and demand of the relevant products or services, where the conditions of competition are similar or sufficiently homogeneous and that they can be distinguished from areas where the prevailing competition conditions are”*<sup>116</sup> considerably different.

2.106. On the other hand, according to the Explanatory Statement<sup>117</sup>, investment in alternative infrastructures is generally not homogeneous throughout the territory of a Member State and in many countries there are several competing infrastructures in certain areas of the territory, usually in urban areas, while in other areas there is only one network. In these cases, according to the Commission, the NRA may, in principle, define sub-national geographic markets.

2.107. Finally, it should be noted that the LEC already foresees that ANACOM considers the *“variety of existing conditions, with regard to competition and consumers, in different geographic areas”*<sup>118</sup>.

---

<sup>116</sup> See Guidelines §56.

<sup>117</sup> See section 2.5.

<sup>118</sup> See Article 5 (5) (e) of LEC.

- 2.108. It is therefore necessary to ascertain whether there are geographic areas with similar or sufficiently homogeneous competitive conditions but rather different from the conditions of competition in other geographic areas.
- 2.109. According to the Commission, the existence of several operators in a given area is not in itself a sufficiently robust criterion to identify real differences in competitive conditions with the aim at defining the geographic market<sup>119</sup>. The Commission argues that, when examining whether the conditions of competition in a particular area are similar or sufficiently homogeneous, additional structural and behavioural evidence, for instance, is required to be identified, by means of:
- Information on the distribution of market shares and their evolution over time.
  - Evidence of different retail or wholesale prices in different areas (which may indicate different competitive pressures).
  - Prices practiced by the various operators and development in the relevant areas.
- 2.110. The existence, in certain specific areas, of entry barriers, *marketing* and selling strategies or characteristics in the services other than those in other areas.

*Findings of the previous market analysis*

- 2.111. In the previous market analysis it was concluded that the definition of the relevant retail geographic market no longer corresponded to the national territory.
- 2.112. At that time, there were developments in the broadband market, notably by the LLP expansion<sup>120</sup> and *spin-off* of PT Multimédia (now NOS), which suggested the existence of different competitive conditions at geographic level; which justified the market segmentation.

---

<sup>119</sup> Comments on notifications from several NRAs (see, for instance, Commission comments on cases UK / 2007/0733 and UK / 2010/1065).

<sup>120</sup> In terms of new exchanges with co-installed operators, from the increasing number of unbundled local accesses and the entry of new operators.

- 2.113. It was thus found that the areas covered by the cable networks and / or the exchange areas, where co-installed operators operated, were those where the retail division of former Grupo PT (now MEO) experienced a greater competitive pressure<sup>121</sup>.
- 2.114. More specifically, it was found that in the MEO exchange areas with at least one co-installed operator, belonging to municipalities where there was at least one cable operator with significant exchange area coverage, there was a strong (negative) correlation between MEO's market share and the percentage of households lined up by alternative operators, meaning that the greater the coverage of the exchange area by the operators, the greater the competitive pressure exerted on MEO.
- 2.115. On the other hand, in the other areas, the competition experienced by MEO was by no means as strong as that felt in those areas.
- 2.116. Thus, the exchange areas were grouped into groups, with the competitive conditions being similar or sufficiently homogeneous. This option is an adequate commitment between the levels of granularity and feasibility, still ensuring a compliance with the obligations existing at the time, being relatively simple to distinguish obligations depending on the exchange areas<sup>122</sup>.
- 2.117. It was thus concluded that there were two relevant geographic markets<sup>123</sup>, defined by:
- Areas covered by exchange areas where there is at least one co-installed operator and at least one cable operator and where the percentage of cabled households of the main operator in the exchange area is over 60 percent<sup>124</sup> – referred to as C Areas.
  - Other areas, referred to as NC Areas.

---

<sup>121</sup> In addition to the presence of co-installed operators within LLP and / or cable operators, additional indicators substantiated more or less competitive pressure: the number of operators concerned and the percentage of cabled households in the exchange areas.

<sup>122</sup> When assessing the geographic scope of electronic communications markets, it was considered that the application of substitutability tests could ultimately lead to the definition of very thin geographic markets due to limited capacity of such substitution to occur. This is because end-users are unlikely to switch to lower-broadband prices and because supply-side substitution entails significant sunk costs.

<sup>123</sup> Particularly for the purposes of Market 5 of the Recommendation of the European Commission on relevant markets for 2007.

<sup>124</sup> Identified in Annex 3 of the previous market analysis.

- 2.118. C areas consisted of the coverage area of 184 MEO exchange areas <sup>125</sup>, and in only 26 areas the MEO's market share was over 40 percent (and in only 12 of these 26 areas, the MEO's market share was greater than 50 percent). In all of these 184 exchange areas, i.e., in C Areas, the MEO's average market share was 26 percent.
- 2.119. To briefly summarise, in the previous market analysis, it was found that developments that have occurred in the broadband access market have suggested the existence of different competitive conditions in different areas, and ANACOM concluded that there were different geographic areas that justified the definition of distinct geographic markets with repercussions on the obligations imposed at the wholesale level.

*The current and prospective competitive situation and the geographic unit*

- 2.120. As mentioned above, ANACOM analysed in detail the competitive situation at the retail level, in 2009, in the various areas of the national territory. In view of the developments on the market after that date, in particular after partial deregulation of former Market 5<sup>126</sup>, it is important to check whether there have been changes in the competitive conditions in the different geographic areas <sup>127</sup>.
- 2.121. As such, in the previous market analysis, it was noted that *“relevant developments could be achieved by[amending] the competitive conditions(...), particularly in relation to the introduction of fibre into access network and with the possible creation of new service points, with the respective transfer of loops among service points”*.
- 2.122. Therefore, it is now important to analyse the developments that have taken place in the market, in particular at NAN, fibre and cable-based offers (DOCSIS 3.0), and check whether there has been an impact on the geographic differentiation of competitive conditions in the retail broadband access markets in Portugal.
- 2.123. It should be noted in this respect that the Commission Recommendation on NAN argues that *“NRAs should assess the differences in competition conditions in different geographic areas to determine whether the definition of sub-national geographic markets or the imposition of differentiated remedies is justified. Should divergences between the competition conditions be stable and substantial, NRAs shall define sub-*

---

<sup>125</sup> These were responsible for 61 percent of broadband accesses and for 47 percent of STF accesses.

<sup>126</sup> As a result of said geographic differentiation, and only in C Areas.

<sup>127</sup> That is, whether the competition in C Areas is maintained and whether NC Areas remain uncompetitive or whether there are areas that were C and move to NC and vice versa.

*national geographic markets in accordance with the Commission Recommendation 2007/879 / Commission*<sup>128</sup>.

2.124. And although “[s]and in the past, remedies or sub-national geographic markets that depend on access products in Market 4, that may become superfluous because of the NGA network installation, had been defined in Market 5, such segmentations or remedies shall be reviewed.”<sup>129</sup>.

2.125. In other words, according to the Commission, the development and migration to the NAN can change the competitive conditions in the different geographic areas and lead to the review of the geographic segmentation in the relevant markets in cases where those markets have been segmented based on the resulting competition of LLP.

#### **The definition of the boundary/geographic unit**

2.126. ANACOM notes that since the end of 2009, broadband offers over copper, namely those based on ORALL<sup>130</sup> have become less relevant. The total number of unbundled accesses has been decreasing over time and one of the main beneficiaries of LLP, which had more than 200 thousand accesses based on that offer, no longer makes available (to new customers in the mass-consumer segment). Retail products based on this offer, having at the end of 2015 only about 10 thousand LLP-based broadband accesses.

2.127. On the other hand, the offers and the number of fibre accesses (and even over cable, although more slowly) are growing rapidly. These new networks (FTTH), such as cable networks, do not have the same structure as the traditional copper network, that is, they do not necessarily focus on the main distributors (MDF) located in the approximately 1,850 MEO exchange areas, even because they do not have the same limitations in terms of local loop length.

2.128. With the market development towards the investment by operators in fibre optic and cable networks, a significant investment since the previous market analysis, and with less importance of using LLP, it is believed that the criterion should be redefined to

---

<sup>128</sup> See (9)

<sup>129</sup> See (10)

<sup>130</sup> That is, supported on equipment co-installed by the alternative operators in certain exchange areas, fundamentally in C Areas.

consider or not a particular competitive area, making it independent of the supporting infrastructure.

2.129. Thus, in view of these developments and from a prospective point of view, it will not be reasonable for MEO's exchange area/ MDF to remain the most appropriate geographic unit for the definition of geographic markets, particularly at the retail level.

2.130. An alternative, which allows even a finer analysis, is the parish, since, on average, the area covered by a parish is less than the area covered by a exchange area (there are 3,092 parishes<sup>131</sup> and 1,852 exchange areas).

2.131. Moreover, in terms of the (retail) market, a border associated with an administrative and agnostic area towards the network structure (of an operator) will be better suited to the present geographic market definition and analysis.

2.132. In this way, the parish is adopted as the relevant geographic unit for the purposes of this analysis.

#### **Current competitive situation**

2.133. According to the Explanatory Statement, once the product market has been delimited and an initial assessment of the competitive situation in the units selected, the NRA shall aggregate the areas that have homogeneous competitive conditions. This is followed by an assessment of the conditions of competition in each sub-national market to determine whether the imposition of *ex anteregulation* is still justified.

2.134. In the Explanatory Statement it is stated that if a NRA concludes (following a "modified *greenfield* approach") that, in the absence of regulation in the related wholesale markets, the retail market (s) has (have) sustainable competition in a given geographic area, then the NRA shall conclude that regulation is no longer required at the wholesale level. As a result, the NRA shall deregulate the wholesale market (s) in that geographic area.

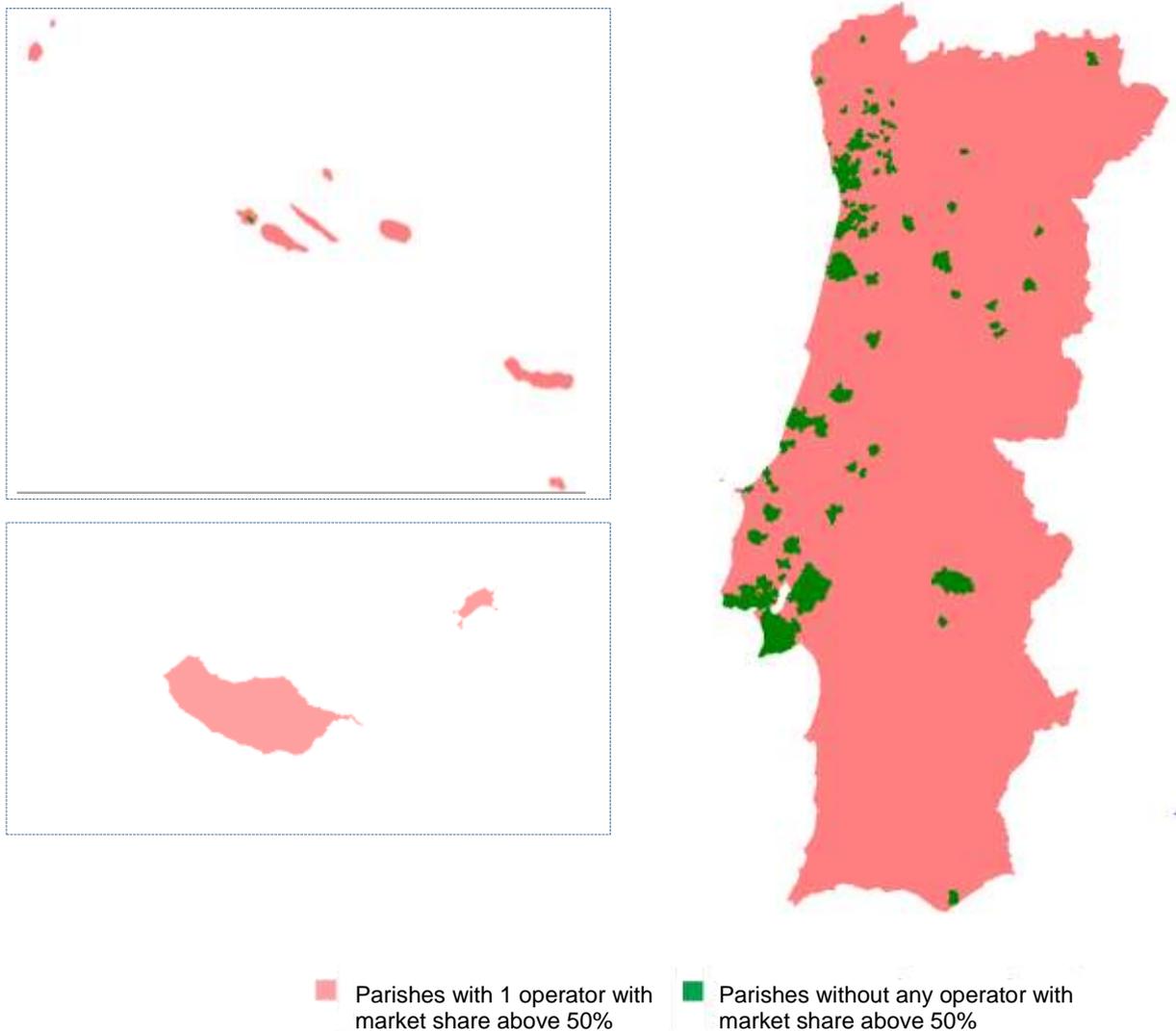
2.135. In Portugal, currently, in areas where there is a greater population density and greater economic activity, greater competition has been developing through the installation of (a greater number of) alternative networks, supported to a large extent (in certain areas, exclusively) on wholesale regulated access to MEO ducts and masts.

---

<sup>131</sup> The analysis is carried out based on the data from CAOP 2014.

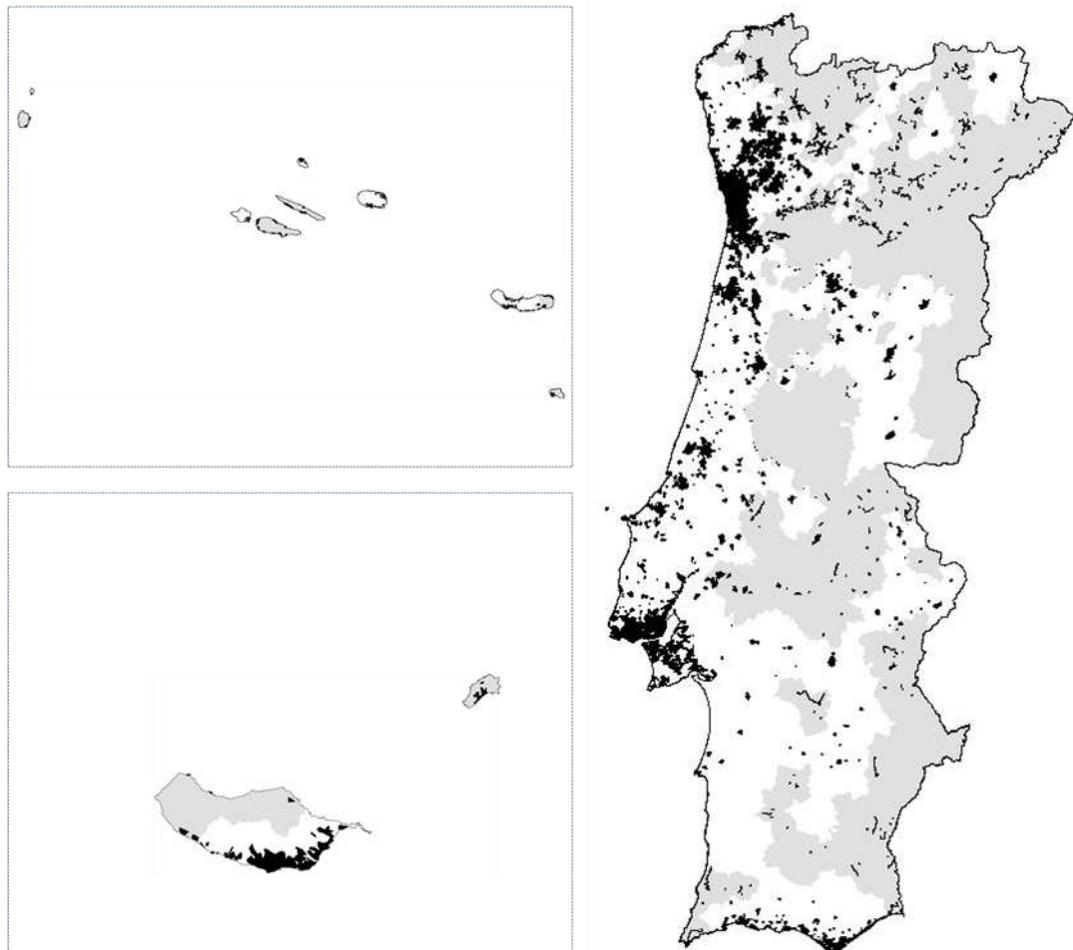
2.136. The following figure identifies the parishes where there is no operator with a market share over 50 percent in the retail broadband access market and parishes where there is an operator with a market share exceeding 50 percent in such market.

**Figure 1. Parishes where there is an operator with a market share of more than 50 percent in the retail broadband access market (pink) and parishes where there is no operator with a market share exceeding 50 percent in that market (green)**



- 2.137. It is also confirmed that there is a NAN coverage in areas of greater population density, and in areas where *roughly* the NAN coverage does not occur, there are operators, in particular MEO having a market share exceeding 50 percent in the retail broadband access market. In these areas, the share market is the result of ADSL accesses over copper (or, even with reduced expression, in municipalities covered by rural NANs).
- 2.138. The following figure shows the areas covered by MEO's NAN, NOS, Vodafone and Apax (Cabovisão), including the high-speed networks in rural areas managed by DStelecom and Fibroglobal, which have associated the principle of open network.

**Figure 2. NAN coverage (including identification - gray - of municipalities covered by high-speed networks in rural areas) in mainland Portugal**



- 2.139. In practice, by simply observing the above figures, both market shares and NAN's own coverage, it can be concluded that there are differences between the competition conditions in different geographic areas which may justify the definition of sub-national geographic markets or the imposition of differentiated remedies.
- 2.140. Starting from a domestic retail broadband access market <sup>132</sup>, one may conclude that at the end of 2015 MEO has 48.7 percent market share, followed by NOS with 34.4 percent, Vodafone with 12.1 percent and Apax with 4.7 percent<sup>133</sup>.
- 2.141. It should be noted that the market shares estimated in the previous paragraph in the retail broadband access market include the retail accesses based on own network (regardless of the technology), but also on the MEO's wholesale offers, since, as mentioned, the ORAC and the ORAP are essential for the alternative operators. It is certain that the incumbent's market share would reach values close to 100 percent if the accesses supported on these offers were not accounted for. The volume of retail accesses supported on the remaining wholesale offers (ORALL and ADSL PT network) is, as already mentioned above, declining, and their inclusion does not significantly affect the findings.
- 2.142. So as to estimate the market shares in line with a modified *greenfield* approach – i.e., in the case of absence of regulation in the related wholesale markets (i.e., in Market 3a and Market 3b) –the regulated LLP and ADSL PT network accesses are withdrawn.
- 2.143. The greater the coverage of alternative operators in a given area (i.e., in a given parish) and the more operators are in competition, the greater the competitive pressure exerted on MEO. This is confirmed by the figures given in Table 2. In this table, and for the purpose of the criterion used for the geographic segmentation of the market, the networks of DStelecom and Fibroglobal are also included<sup>134</sup>.

---

<sup>132</sup> Including the mainland Portugal and the Islands Regions of the Azores and Madeira.

<sup>133</sup> These market shares were calculated considering the most representative operators in the market (MEO, NOS, Vodafone and Apax), whose total number of fixed broadband accesses accounted for 99.7% of the market and LTE accesses were cleared.

<sup>134</sup> As best developed in the prior hearing report.

**Table 2. MEO's market shares in the retail broadband access market according to the number and coverage of the operators with NAN (per parish)**

# of operators (except for MEO) with NAN coverage exceeding <u>15</u> percent in the parish	MEO's market share (any technology)	No. of parishes	Houses in the parish
0	98%	1,731	1,294,399
1	62%	995	1,518,977
<u>2</u>	<u>38%</u>	<u>323</u>	2,628,377
3	33%	43	417,908
<b>TOTAL</b>	<b>49%</b>	<b>3,092</b>	<b>5,859,661</b>

# of operators (except for MEO) with NAN coverage exceeding <u>50</u> percent in the parish	MEO's market share (any technology)	No. of parishes	Houses in the parish
0	91%	2,038	1,759,522
1	54%	768	1,404,332
<u>2</u>	<u>36%</u>	<u>260</u>	2,378,131
3	34%	26	317,676
<b>TOTAL</b>	<b>49%</b>	<b>3,092</b>	<b>5,859,661</b>

2.144. In fact, in parishes where there are (at least) two alternative operators with significant coverage competing with MEO, its (average<sup>135</sup>) market share does not exceed 40 percent, which is clearly below the domestic market share and far below the market share in the areas where an alternative network offer does not exist.

2.145. Given that, in its decision-making practice, the Commission normally raises concerns as to situations of individual dominance in the case of undertakings with a market share exceeding 40 percent<sup>136</sup>, in the first analysis and on the basis of information from **Table 2** it has been found that the 286 parishes, where, apart from MEO, at least two alternative operators operate, each with a NAN coverage exceeding 50 percent, show on average significantly different competitive conditions from those in other parishes. As such, in the first case, the MEO's average market share is 36 percent (less than 40

<sup>135</sup> This is the sum of the MEO's broadband accesses in the parishes in question to be divided by the total number of accesses in such parishes.

<sup>136</sup> Even though, however, there may be cases with dominant positions even with lower market shares– See Guidelines §75.

percent) and in the second one the average market share is 70 percent (over 50 percent) – see table below:

**Table 3. MEO's market shares in the retail broadband access market depending on the number of operators with NAN and a covering rate of more than 50 percent (per parish)**

# of operators (except for MEO) with NAN coverage exceeding <u>50</u> percent in the parish	MEO's market share (any technology)
0 and 1	70%
2 and 3	36%
<b>TOTAL</b>	<b>49%</b>

2.146. However, the homogeneity of the competitive conditions in each of the geographic areas shall be further analysed.

2.147. From the data presented in the Table 4<sup>137</sup> one can see that there are 46 parishes out of 284 in which the MEO's market share exceeds 50 percent and where there are, as an alternative to MEO, two or more operators operating with a NAN coverage in the parish exceeding 50 percent.

2.148. It can also be seen that there are 178 parishes where MEO's market share is less than 50 percent and where there is an alternative operator to MEO with parish coverage of more than 50 percent, meaning that in 30 percent of parishes where there is only one alternative operator to MEO with relevant coverage, MEO's market share is below 50 percent.

---

<sup>137</sup> There are three parishes where no broadband access has been reported.

**Table 4. Number of parishes where there are 0, 1, 2 or 3 operators (except for MEO) with NAN coverage in the parish over 50 percent per MEO's market share interval in the retail broadband access market**

MEO's market share interval (any technology)	# of parishes with $n$ ( $n = 0, 1, 2$ and $3$ ) operators (except for MEO) having NAN coverage in the parish over <u>50</u> percent			
	0 operators <sup>138</sup>	1 operator	2 operators	3 operators
[0, 10%[	5	4	1	0
[10, 20%[	1	5	11	2
[20, 30%[	3	33	67	8
[30, 40%[	4	64	86	6
[40, 50%[	13	74	50	7
[50, 60%[	14	68	27	3
[60, 70%[	21	72	8	0
[70, 80%[	58	47	7	0
[80, 90%[	69	93	3	0
[90, 100%]	1,850	308	0	0
<b>TOTAL</b>	<b>2,038</b>	<b>768</b>	<b>260</b>	<b>26</b>
	1% <sup>139</sup>	14% <sup>139</sup>	17% <sup>140</sup>	12% <sup>140</sup>

2.149. Thus, in parishes where there is only one operator (alternative to MEO) with coverage greater than 50 percent, another criterion that results in a higher level of homogeneity of the competitive conditions is required to be identified, with the most appropriate criterion being that based on the market shares (i.e. parishes with only one alternative operator to MEO with a coverage rate greater than 50 per cent and locations where MEO's market share is below 50 percent belong to C areas and the rest to NC areas).

2.150. Bearing in mind these two criteria - parishes with at least two alternative operators to MEO with a coverage rate greater than 50 percent or those with an alternative operator to MEO with a coverage rate greater than 50 percent and where MEO's market share is below 50 percent - we then have the following relatively homogeneous areas from the point of view of market shares (and presence of operators):

<sup>138</sup> The MEO's market share in this case (0 alternative operators) is not always equal to 100 percent because there may be alternative operators with NAN-supported accesses covering less than 50 percent

<sup>139</sup> Percentage of parishes where MEO's market share is below 50 percent and where there is 1 or no operator with NAN coverage greater than 50 percent.

<sup>140</sup> Percentage of parishes where MEO's market share is over 50 percent and where there is more than 1 operator with NAN coverage greater than 50 percent.

- **C Areas** : Parishes with (i) at least two alternative operators to MEO with a NAN coverage rate greater than 50 percent or (ii) an alternative operator to MEO with a NAN coverage rate greater than 50 percent and where MEO's market share in the retail broadband access market is below 50 percent (this criterion is fulfilled by 466 parishes).
- **NC Areas** : Remaining parishes (2.626 parishes).

**Table 5. Number of parishes per MEO's market share interval in the retail broadband access market , in C Areas and NC Areas**

MEO's market share interval	NC Areas <sup>141</sup>	C Areas <sup>142</sup>
[0, 10%[	5	5
[10, 20%[	1	18
[20, 30%[	3	108
[30, 40%[	4	156
[40, 50%[	13	131
[50, 60%[	82	30
[60, 70%[	93	8
[70, 80%[	105	7
[80, 90%[	162	3
[90, 100%]	2,158	0
<b>TOTAL</b>	<b>2,626</b>	<b>466</b>

2.151. The results from **Table 5** are graphically shown below.

<sup>141</sup> NC Areas– non-competitive areas.

<sup>142</sup> C Areas – competitive areas

Figure 3. Distribution of parishes based on MEO's market share interval in the retail broadband access market in C Areas

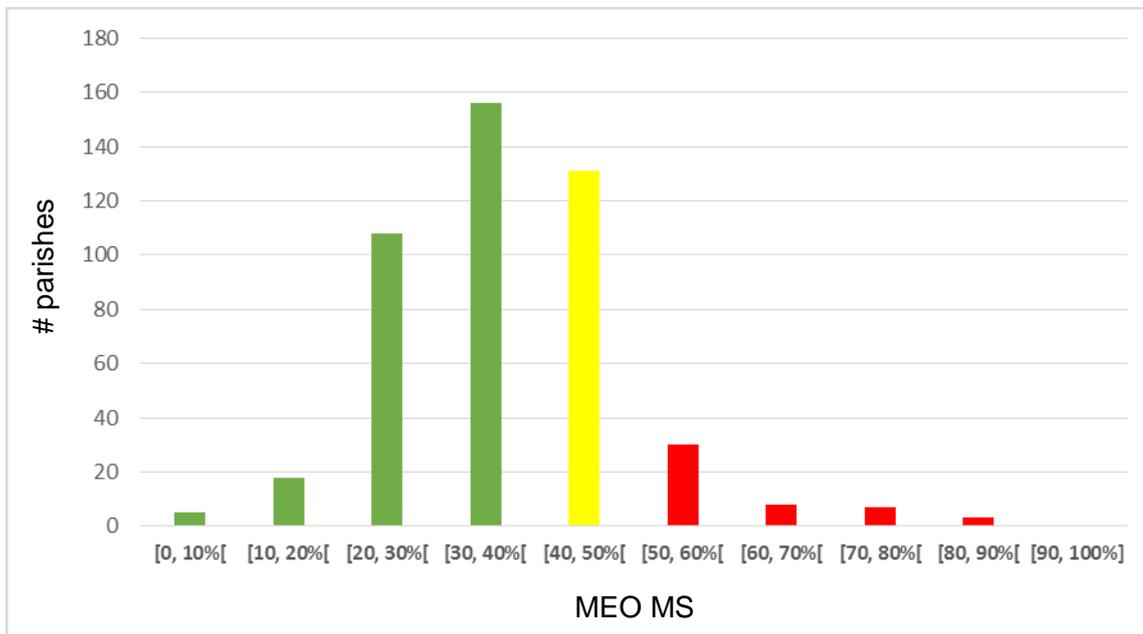
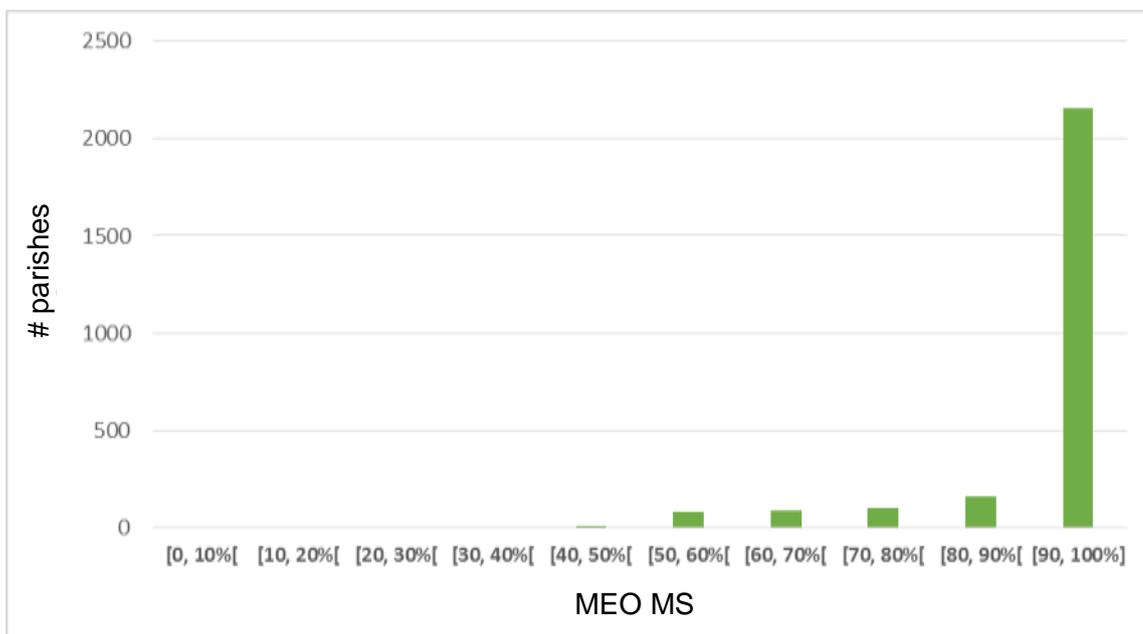


Figure 4. Distribution of parishes based on MEO's market share interval in the retail broadband access market in NC Areas



2.152. Under **Table 5** (and figures above), the values in red in the C Areas column correspond to 48 parishes which are considered to be competitive, but where MEO's market share

exceeds 50 percent<sup>143</sup>. Among these, 28 correspond to parishes where Vodafone has fibre optic infrastructure (covering more than 50 percent of the homes), either on its own or within the scope of the fibre optic network sharing agreement with MEO, results of which, in terms of Vodafone's broadband customer base are not yet fully visible, but in prospective terms they will be expected to be competitive, if only because Vodafone was one of the operators in 2015 that acquired a larger number of broadband customers (with a contribution margin close to 50 percent). In the remaining 20 parishes, there is another operator - other than MEO - with NAN coverage in practically the entire parish (on average, the NAN network of each of the alternative operators to MEO covers 75 percent of housing).

- 2.153. The figures in yellow under C Areas column of **Table 5** also correspond to 131 parishes which are considered to be competitive and in which MEO's market share ranges from 40 to 50 percent. Of these 131 parishes, MEO is not the operator with the largest market share in 81, and of the remaining (50), 32 correspond to parishes where Vodafone provides fibre optic infrastructure covering more than 50 percent of the parish's homes, either of its own or within the scope of a fibre optic network sharing agreement concluded with MEO. In the remaining 18 parishes there is always another operator with NAN coverage higher than MEO's NAN coverage (and always over 63 percent).
- 2.154. In other words, from a prospective point of view - and from potential competition in the short to medium term perspective - it is very likely that in these parishes (yellow and red) the competitive dynamics will develop and therefore should not be deemed as NC Areas. However, statistically and from the point of view of market shares, these could be considered as such, taking into account MEO's current market shares.
- 2.155. There are, on the other hand, 13 parishes – corresponding to 2 percent of homes in the country – NC Areas column of **Table 5** where MEO's market share is below 40 percent. In these parishes there is only NAN coverage from a single operator, and it is below 50 percent.

---

<sup>143</sup> In these parishes there are 6 percent of total retail broadband accesses and 5 percent of total homes.

- 2.156. Thus, it is understood that parishes where there are (i) at least two operators (excluding MEO) with NAN coverage greater than 50 percent or (ii) one operator (alternative to MEO) with NAN coverage greater than 50 percent and where MEO's market share in the retail broadband access market is below 50 percent, present sufficiently homogeneous conditions, both in current and prospective terms, which are different from those presented by the other parishes.
- 2.157. In terms of market shares, in:
- **C Areas** MEO's market share is **36 percent** ; and in
  - **NC Areas** is **84 percent**.
- 2.158. In C Areas, there are 73 percent of total broadband accesses (customers) and 97 percent of homes covered by MEO' fibre and 88 percent of the total homes covered by NAN from the remaining operators.
- 2.159. These market shares were estimated on the assumption of maintaining the regulation of access to masts and ducts currently in force in former Markets 4 and 5, with the obligations to access the local loop and broadband access being excluded.
- 2.160. If the obligations to access ducts and masts did not exist or were withdrawn, competitive conditions would be very different in prospective terms, although access to ducts and masts would generally be regulated for all entities that provide such infrastructures, and even if the symmetrical access to infrastructure applies to MEO as provided for in Decree-Law 123/2009, under conditions of equality, transparency and non-discrimination and under cost-oriented remuneration conditions.
- 2.161. In fact, the universe and the characteristics of the various entities covered by the access obligations as set out in Chapter III of Decree-Law No 123/2009 have determined that, within this context, the legislator has opted for a more hands-off approach than that provided for in the LEC for electronic communications companies. The powers expressly conferred by Articles 67, 68 and 69 of LEC upon ANACOM to regulate the wholesale offers in every aspect are not directly related in the regime as provided for in Decree-Law No 123/2009. This different approach highlights the intention of the legislator to confer upon ANACOM competences with different scope.

- 2.162. In fact, the regulation imposed under the market analyses, in terms of access to ducts and masts, is more demanding than the symmetrical regulation imposed pursuant to Decree-Law No. 123/2009. (i) specifically the change in the offers from operators providing infrastructures by ANACOM, contrary to the SMP regime, or (ii) the concrete definition of prices by ANACOM, even though the access prices to infrastructure should be cost-oriented. It should also be noted that this lower requirement of Decree-Law no. 123/2009 vis-à-vis the LEC is expected to continue with the transposition of Directive 2014/61 / EC of May 15, 2014 on measures to reduce the cost of deploying high-speed electronic communications networks.
- 2.163. Considering these aspects, Decree-Law no. 123/2009 sought to leave the infrastructure holder some freedom to establish the conditions of access and use of such infrastructures, even though it has established a minimum number of requirements that it considered to be fundamental and adequate within the context of the symmetrical regulation which is endorsed by this decree - equality, transparency, non-discrimination and cost-oriented prices<sup>144</sup>.
- 2.164. The analysis developed here is related only to the identification of relatively homogeneous areas from the competitive conditions for market definition and SMP assessment point of view, within the context of individual dominance, without prejudice to the existence of various situations (i.e. parishes) of high concentration - evaluated through the index of *Herfindahl-Hirschman* HHI – in the order of 4,000-5,000 points.
- 2.165. It shall also be made a reference to the wholesale broadband access offers resulting from public tenders for the installation, management, operation and maintenance of NANs in rural areas that are already in operation, involving about 400,000 homes passed (covering about 50 percent of the population in each of the municipalities involved).
- 2.166. These networks are already in operation in the North, Centre Region, Alentejo and Algarve and in the Island Region of the Azores. These are open networks, which provide non-discriminatory wholesale access to any operator wishing to provide retail services based on those networks.

---

<sup>144</sup> See Article 13 (2).

2.167. These networks will be analysed in the context of the eventual imposition of fibre optic access obligations.

*Conclusion on the homogeneity of competitive conditions*

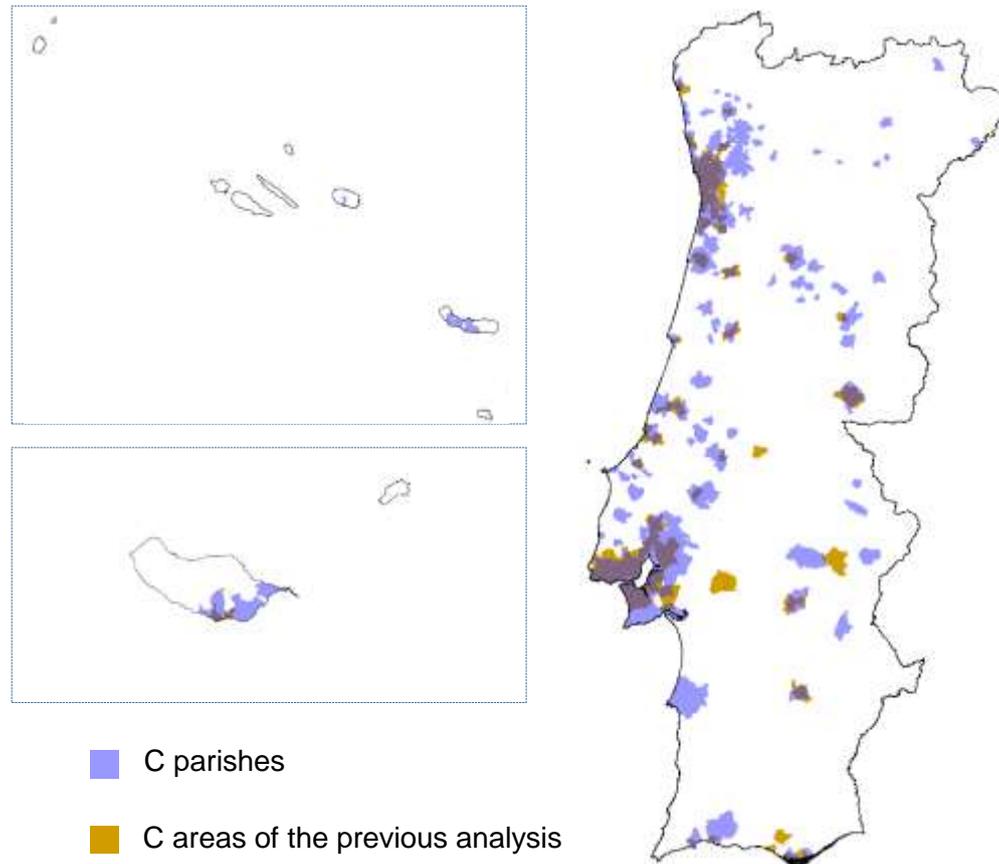
2.168. Taking into account the developments in the market and the analysis carried out, ANACOM concludes that in retail sector there are two retail geographic markets:

- C Areas: Parishes with (i) at least two alternative operators to MEO with NAN coverage greater than 50 percent or (ii) an alternative operator to MEO with NAN coverage greater than 50 percent and where MEO's market share in the retail broadband access market is below 50 percent; and
- NC Areas: Other parishes.

2.169. The parishes included in C Areas are identified in the **Appendix III** and remain up to the next market review.

2.170. The situation will not be very different from that observed in the previous market analysis of 2009, in which the MEO's exchange area was used as a relevant geographic unit - in **Figure 5** the overlap between the parishes included in C Areas and the exchange areas of the previous market analysis included in C Areas is shown.

**Figure 5. Overlap between the parishes included in C Areas and the exchange areas included in C Areas in the previous broadband market analysis**



2.171. As a result of the change in geographic unit and the criterion for the identification of C Areas, it is estimated that about 7 percent of the homes that were in C Areas of the 2009 analysis will be in the NC Areas of this analysis and that about 28 percent of the homes that were in the NC Areas of the 2009 analysis will be in C Areas of the present analysis. That is, in 2009, the C Areas covered 42 percent of the traditional family homes in the national territory, which in the present analysis covers 56 percent of these homes.

**Table 6. Percentage of homes in C and NC areas in the 2009 analyses and in the present analysis**

Analysis	2015		
	C Areas	NC Areas	TOTAL
2009			
C Areas	38.9%	2.8%	<b>41.6%</b>
NC Areas	16.6%	41.8%	<b>58.4%</b>
TOTAL	<b>55.5%</b>	<b>44.5%</b>	100%

## Conclusion: retail broadband access market s

2.172. Upon the analysis carried out, the following retail broadband access markets are considered to occur in Portugal:

- The broadband access retail mass-consumer market, regardless of fixed supporting technology, in C Areas - hereinafter referred to as retail broadband access market in C Areas;
- The broadband access retail mass-consumer market, regardless of fixed supporting technology, in NC Areas - hereinafter referred to as retail broadband access market in NC Areas;

2.173. ANACOM is of the opinion that the factors considered in this analysis are not expected to change in the short / medium term until the next market definition and SMP analysis<sup>145</sup> is carried out.

## Competitive analysis of retail broadband access markets

2.174. Given that the retail broadband access markets are defined, these shall now be characterized in terms of the prevailing competitive dynamics, as market failures are primarily to be avoided at the retail level and an effective competition is to be encouraged in order to provide end customers with the maximum benefit in terms of choice, price and quality of electronic communications services. If there is no competition in the retail market and direct regulatory intervention at this level is not desirable, proportional *ex ante* obligations on the wholesale markets, particularly on the wholesale central access market at a fixed location, for mass-consumer products that, if SMP applies, shall be primarily imposed.

<sup>145</sup> In line with Article 59 (A) of the LEC, the next definition of the market will be triggered as soon as: (1) there is an event which significantly changes the conditions of competition on the market or (2) as soon as the Recommendation is reviewed in respect of these markets or (3) within 36 months.

- 2.175. Under this context, ANACOM is of the opinion that this competitive nature of the retail, although it shall be rigorous, it does not need to follow the same steps of a thorough SMP analysis, fundamentally because it will be carried out in a detailed way in terms of the related wholesale markets.
- 2.176. Given the correspondence between the broadband access (retail and wholesale) markets, the SMP assessment in both cases would always be very similar (also because most of the wholesale accesses are the result of internal supply). Thus, ANACOM once again has chosen to carry out a summary analysis on the competitive conditions of the relevant retail markets.
- 2.177. In any event, it should be noted that the very different competitive dynamics between the two markets under consideration in the definition of geographic markets in the previous section have already been characterised in great detail.

#### *Retail broadband access market in C Areas*

- 2.178. In the previous market analysis, the analysis of effective competition began with the calculation of market shares, after which an exhaustive and comprehensive analysis of the economic characteristics of the relevant market was carried out before concluding as to the existence of competition.
- 2.179. It was concluded that, in the absence of regulation, the market share of the then Grupo PT in C Areas, at the end of 2007, would be between 43 percent and 53 percent - higher, therefore, than 40 percent - and there were strong indications that wholesale regulation in the former Market 4<sup>146</sup> would be key to ensuring competition in the retail market. In the presence of such regulation, Grupo PT's share decreased in 2007 to 25 percent, still below the market share of then Optimus, with 26 percent and then ZON, with 37 percent. That is, in the presence of this wholesale regulation in the former Market 4, the retail market was considered (also prospectively) competitive, as well as the former wholesale Market 5C.

---

<sup>146</sup> With the weight of the ADSL PT network-based accesses being much lower than the weight of the ORALL-based accesses.

2.180. In this circumstance, since the regulation in the former Market 5 in C Areas in 2009 has been withdrawn, and in view of the developments that have occurred in the market, the evolution of market shares (in terms of customers) in the presence of the regulation of access to MEO's ducts and masts (ORAC and ORAP) in Market 3a (but not considering LLP) is as follows:

**Table 7. Evolution of market shares in the retail broadband access market in C Areas with wholesale obligations (ORAC and ORAP, ORALL excluded) in force**

Operator	2007	2010	2013	2015
MEO	25%	34%	39%	36%
NOS <sup>147</sup>	63%	52%	44%	43%
Apax	10%	8%	6%	5%
Vodafone	1%	6%	10%	16%

**Note:** In 2007, 2010 and 2013, the market shares were calculated for the exchange areas that are included in C Areas of the previous market analysis, while for 2015 they were calculated for the parishes that are included in C Areas of the current analysis.

2.181. As already pointed out, these market shares are the result of the investment in own infrastructure, made possible to a large extent by access to MEO's ducts and masts, which resulted in the high coverage of cable and fibre networks (with the LLP-based accesses not having been included in a modified *greenfield* approach).

2.182. In the case of LLP-based accesses (i.e. maintenance of the obligation to access the local loop), MEO's market share would be reduced to 35 percent, that of NOS would drop to 42 percent and that of Vodafone would reach 18 percent.

2.183. It is also verified that the maintenance of the local loop obligation reduces the number of parishes included in C Areas, where MEO's market share is over 40 percent – see **Table 5** – making C Areas more homogeneous.

<sup>147</sup> The joint market shares of Optimus and ZON / TV Cabo are considered as if these undertakings were integrated into NOS since 2007.

**Table 8. Number of parishes per MEO's market share interval in the retail broadband access market (maintaining all obligations currently in force), in C Areas**

MEO's market share interval	C Areas <sup>148</sup>
[0, 10%[	3
[10, 20%[	21
[20, 30%[	116
[30, 40%[	164
[40, 50%[	116
[50, 60%[	26
[60, 70%[	8
[70, 80%[	7
[80, 90%[	3
[90, 100%]	0
<b>TOTAL</b>	466

2.184. In addition, LLP is important, especially for Vodafone, as a means for this operator to ensure a broader retail offer, allowing it to complement its retail fibre optic-based offer in areas where coverage does not yet exist. It should be noted in this respect that the geographic unit adopted for the purposes of the analysis - the parish - may have some heterogeneous conditions, namely in relation to the NAN coverage. The copper-based network broadband offer has practically universal coverage, ensuring MEO a ubiquitous broadband offer in the national territory.

2.185. The elimination of the obligation of local loop access would undoubtedly prejudice Vodafone's broadband offer, having a dynamic impact on competition. It should also be pointed out that this obligation may also be relevant in other markets (in particular in the case of market 4, as MEO has already argued) and its proportionality can be ensured by the fact that operators - in particular Vodafone - use LLP only in geographic areas where they do not have their own infrastructure.

<sup>148</sup> C Areas – competitive areas

- 2.186. An even more negative scenario that could arise from the elimination of the obligation of local loop access would be that in which the LLP-based customers would pass to MEO, thus increasing MEO's market share in C Areas to 38 percent, and making C Areas more heterogeneous. Indeed, in this scenario of eliminating the obligation to local loop access, the number of parishes in C Areas where MEO's market share exceeds 40 percent in the retail broadband market is higher than the number of parishes in C Areas where MEO's market share is below 40 percent. Under these conditions it would be difficult to consider C Areas as being competitive.
- 2.187. In the absence of the above wholesale regulation, retail customers have a limited countervailing buying power, as in practice there would be no alternative operators with any appreciable extent to provide broadband access services, even in these C Areas or in areas with relevant coverage<sup>149</sup>. Indeed, in addition to unbundled accesses, the network of alternative operators (including cable operators) has been built on the basis of access to MEO ducts and masts – a heavily regulated access - , so that if any kind of wholesale regulation occurs, there would be a setback in the conditions for accessing this type of infrastructure, even though MEO is currently subject to the regime of symmetrical access to ducts as provided for in Decree-Law no. 123/2009, of 21 (under conditions of equality, transparency and non-discrimination, and cost-oriented remuneration). In fact, since it is no longer a public telecommunications service concessionaire, MEO is now covered by the obligations set out in Chapter III of Decree-Law no. 123/2009, of 21 May, on access to infrastructure suitable for housing electronic communications networks. Thus, as the regime of this Decree-Law is less demanding than the MP regulation<sup>150</sup>, such setback would be detrimental to the market.
- 2.188. Thus, in the absence of wholesale obligations, in particular in Market 3a (particularly access to ducts and masts, but also access to the local loop), the retail broadband access market in C Areas is not, even from a prospective point of view, competitive.

---

<sup>149</sup> Where there is a wholesale regulation and in particular retail offers based on regulated wholesale offers, the countervailing buying power of retail customers is significantly increased as there is a greater diversity of choice.

<sup>150</sup> For instance, within the scope of Decree-Law no. 123/2009, the amendment in the offers of operators holding infrastructures by ANACOM is not specifically foreseen, unlike the SMP regime, and even though the prices of access to infrastructures should be cost-oriented, ANACOM's concrete definition of prices is also not provided for in Decree-Law no. 123/2009.

- 2.189. It should be remembered that the applicable regulatory framework favours the imposition of obligations at the wholesale market level and, as a last resort only, regulatory measures may be imposed on retail markets. That is, wholesale regulation, where appropriate, should be sufficient to encourage a competitive supply at the retail level.
- 2.190. Indeed, if the obligations in Market 3a, but not in Market 3b, are maintained, the retail broadband access market in C Areas will be competitive (the shares shown at **Table 7** are a reflection of this situation, as the number of accesses regulated in Market 3b is residual, representing, at the end of 2015, only about 15 thousand retail broadband accesses throughout the national territory, including NC Areas <sup>151</sup>), and thus the imposition of obligations in Market 3b, which will be further developed in this analysis, will not in principle be justified.
- 2.191. Indeed, the continued competition of cable operators and the maintenance of LLP-covered areas by operators who have invested in this wholesale offer (which in the past has allowed them to gain in importance and scale by developing more competitive retail offers), and they already invest in their own fibre network, allows the competitive dynamics in this market to remain high, and there is no evidence of MEO's dominance or another operator, if the wholesale obligations in Market 3a which resulted from this competition in the (geographic) retail market.
- 2.192. It should be noted that given the MEO ducts and masts distribution network and the fact that access to MEO ducts and masts is regulated, it is reasonable to assume that operators who invest in their own network rely, first and foremost, on MEO ducts and masts and only if there is a lack of (space in) ducts or masts in a particular section or alternative route, they resort to the ducts of other entities (or, ultimately, they choose to build their own civil infrastructure).

---

<sup>151</sup> These accesses include both accesses to offer mass-market products and accesses to high quality offers with reduced containment.

- 2.193. Any criterion other than market shares does not allow contradicting that, in the absence of regulation in Market 3a, the retail broadband access market for mass-market products in C Areas is not competitive.
- 2.194. ANACOM therefore concludes, both in the light of the current situation and in a prospective analysis, the absence of evidence of a dominant position in the retail broadband access market in C Areas. This conclusion is valid in the presence of wholesale regulation in Market 3a and in the absence of regulation in both the retail market and the Market 3b.

***Retail broadband access market for mass-market products in NC Areas***

- 2.195. As in the case of C Areas and also of the previous market analysis<sup>152</sup>, the competitive analysis in the retail broadband access market in NC Areas begins with the calculation of market shares and the analysis of their evolution.

**Table 9. Development of market shares in the retail broadband access market in the NC Areas with the wholesale obligations (ORAC and ORAP, but not the ORALL) in force**

Operator	2007	2010	2013	2015
MEO	66%	70%	70%	84%
NOS	23%	20%	21%	10%
Apax	10%	8%	6%	4%
Vodafone	1%	2%	2%	2%
<b>Note:</b> In 2007, 2010 and 2013 the market shares were calculated for the exchange areas included in the NC Areas of the previous market analysis, while for 2015 they were calculated for the parishes included in the NC Areas of the current analysis.				

- 2.196. MEO has a global market share well above 50 percent, which is an evidence of its dominance in this retail market, even taking into account the fact that wholesale regulation (in particular through ORAC, ORAP, ORALL and the PT ADSL network offer) applies, with its share and dominance being also increased over time since the previous market analysis (although in 2007, 2010 and 2013 the areas are not identical, on the one hand, and in 2015, on the other).

<sup>152</sup> The analysis of effective competition began with the calculation of market shares (identifying the candidates with SMP). Then, an exhaustive and comprehensive analysis of the economic characteristics on the relevant market is carried out before concluding as to the existence of SMP (e.g. the degree of potential competition and between installed companies).

- 2.197. Given the high market share, ANACOM maintains the understanding that the maintenance of regulation in Market 3a and Market 3b is required to promote competition in the retail market in these areas, and that LLP is not sufficient given the scale necessary for co-installation in a high number of exchange areas and the small number of accesses per exchange area in these areas.
- 2.198. In the context of entry and expansion, MEO continues to benefit from significant economies of scale due to the high fixed costs of building local network infrastructure in less densely populated areas, as it already has an extensive number of infrastructures (such as buildings, ducts and masts) and a copper network with universal coverage (and with significant fibre coverage in some areas), which was built over years of monopoly, which would now require high investments by alternative operators. In this way, it is not feasible to fully duplicate MEO's (copper) access network. In particular, the scale and configuration of the MEO's fixed network allow it to provide broadband access services for mass-market products in all their extension with relatively moderate additional investments.
- 2.199. Thus, MEO continues to benefit from unit costs lower than those of its competitors<sup>153</sup>. This is despite the fact that the average costs of housing cabling increase with the extension of the network in less densely populated areas.
- 2.200. If an alternative operator wishes to provide broadband access services in retail, it has to develop its own access network (as cable operators have been doing, but not yet covering the entire national territory) or use regulated wholesale offers, in particular the PT ADSL network offer, as LLP is not, in practice, an effective option in most of this geographic market<sup>154</sup>. On the other hand, the main alternative operators to MEO providing broadband access services for mass-market products in retail (in particular into *multiple-play* bundles) have been investing in infrastructures and fibre

---

<sup>153</sup> In addition, because it is a vertically integrated operator, it has a large, planned internal demand that allows it to benefit from large economies of scale and to invest in the development of its networks with a degree of risk lower than that of its competitors.

<sup>154</sup> Much of the national territory has a low population density, which makes it difficult to obtain a scale. As such, it is covered by power plants with a low number of accesses and therefore co-installation entails a significant initial cost, with expected reduced revenues, especially because the speed access is limited and it will not be able to compete with the copper, and particularly, fibre high-speed offers.

technologies to provide these services, but only in certain geographic areas<sup>155</sup>. To a large extent, such areas do not belong to NC Areas.

- 2.201. The maintenance in the CN Areas of the regulation in the Market 3b - of the PT ADSL network wholesale offer, possibly improved in order to provoke a greater demand by the operators - continues therefore to be important for the promotion of the entry and expansion of the OSPs in this market without incurring significant unrecoverable costs associated to the construction of own access network, while also reducing incentives for MEO to fully exploit its market power. This aims at ensuring that users in these areas benefit in some way from alternative offers and greater choice.
- 2.202. Although investments have been made in some of these areas, in particular through public tenders for new generation networks in rural areas, a significant part of the demand in these rural areas is still likely to be directed at copper-supported offers, mainly because rural NAN cover (only) about 50 percent of the municipality.
- 2.203. Comparing the various offers that are available in the market under analysis and their prices, there is still, on the one hand, a varied range of offers (included in a bundle) depending on the *download* speed and, on the other, a great similarity between the offers from alternative operators and MEO offers.
- 2.204. It should be noted, however, that the typical configuration of the PT ADSL Network offer (at IP level, which is the type of bundling that is being preferentially used by the OSP), has not allowed to differentiate services, making alternative providers, in practice, simple "resellers" of MEO broadband access service and therefore they do not add significant value to these offers, both in terms of quality and innovation, and retail prices.
- 2.205. In view of these and previous conclusions, ANACOM does not foresee that there will be a significant change in the competitive conditions in this retail market in the short and medium term, considering the circumstances described above, in particular the developments of the access network (OSP) in these markets. Areas that are generally less commercially attractive and require large investments only possible over decades of monopoly.

---

<sup>155</sup> In high population density urban areas, particularly in the metropolitan areas of Lisbon and Oporto.

- 2.206. It can thus be concluded that the retail broadband access market for mass-market products in NC Areas remains uncompetitive, with MEO maintaining a very high market share (which has even increased since the previous market analysis), exceeding 80 percent at the end of 2015, much higher than 40 percent<sup>156</sup>.
- 2.207. By focusing on the imposition of obligations at the wholesale market level to promote a competitive offer at the retail level (regulatory measures on retail markets may only be imposed as a last resort), the wholesale markets related to the retail broadband access market are analysed in chapters below.

---

<sup>156</sup> The limit that has been used in the Commission's decision-making practice as the amount above which it may be deemed to occur concerns about situations of dominant position.

### **3. DEFINITION OF WHOLESALE LOCAL ACCESS MARKET AT A FIXED LOCATION (MARKET 3A)**

- 3.1. Once the retail broadband access market has been characterized and defined and the competitive pressures to which it is subject (both demand-side and supply-side) identified, and after concluding that there is no effective competition in that market, the associated upstream wholesale market will be defined and identified as follows:
- Market 3a: wholesale local access market at fixed location.
- 3.2. This chapter starts with the distinction between Market 3a and Market 3b, followed by the definition of product market and geographic scope of Market 3a.

#### **Distinction between the Market 3a and Market 3b**

- 3.3. Operators have, in a simplified way, six options to provide potential customers with access in accordance with the so-called “investment ladder” (beginning with the step with the smallest investment, and excluding pure resale or access to commercial offers):
- They make use of regulated (active) wholesale offers which enable them to, in a timely manner and without significant initial investment costs, provide any user covered by the operator’s network at a wholesale level – the so-called *bitstream* offers (such as the ADSL PT Network offer) with retail services, which allow reduced differentiation of services in view of the service offer of the (vertically integrated) wholesale provider.
  - They use regulated (passive, such as LLP) wholesale offers which allow them, with a higher level of investment, especially more equipment and own network to connect their network to access points (particularly where local loops end), to make available offers with a greater level of differentiation and autonomy in view of those of the operator that provides them with the access.
  - They make use of the wholesale (passive or active) offers provided by rural network operators, who are obliged to provide this type of non-discriminatory access following public tenders launched in 2009.

- They establish network-sharing agreements, as in the case of fibre-optic network sharing between Vodafone and then Optimus and, more recently, in the case of fibre-optic network sharing between MEO and Vodafone, in particular to complement the network investment they have already made.
  - They invest in their own network infrastructure up to the end-customer (in particular, in fibre – or coaxial cable – mainly installed in the MEO ducts and masts<sup>157</sup>), being (totally) independent as to the implementation and definition of their retail offers.
  - They also construct their own duct network, autonomously or jointly, but it is an option that results in costs significantly higher than the costs associated with the previous options.
- 3.4. The choice of one of the alternatives identified above depends on a number of factors, including, for example, the existence of supporting infrastructure and / or competing networks / operators, population density in a certain area (including housing typology), experience gained from the market, the financial resources available, and also the greater or lesser flexibility (which operators want) in defining the services they provide in retail. Operators can also use, as they expand their own network coverage, complementary alternatives in different geographic areas.
- 3.5. In any case, the (access and transport) network of alternative operators has essentially been built with basis on the (regulated) access to ducts (and masts), so this wholesale offer is fundamental for this and other markets - access to ducts (and masts) is analyzed in detail throughout this document.
- 3.6. In this sense, according to the so-called “*modified greenfield approach*”, it could not be concluded that, in the absence of obligation in Market 3a, particularly the access to ducts and masts, but also access to local loop, this market would be competitive, as these obligations, as well as their regulation through the corresponding reference offers (ORAC, ORAP and ORALL), are essential for alternative operators to MEO to install and expand their networks.

---

<sup>157</sup> Or from others owning this type of infrastructures.

- 3.7. In this regard, on the one hand, the MEO duct network has a much higher network than that from other operators (who built them in a residual way and merely complement the MEO duct network) and it is more apt to install electronic communications networks than that from other entities outside the electronic communications sector and, on the other hand, the regulation on MEO in these offers, resulting from the dominant position it holds in the market, is more intense than the regulation resulting from Decree-Law No 123/2009 of May 21.
- 3.8. In the previous market analysis it was concluded that the then Market 4 and Market 5 constituted distinct product markets, corresponding unequivocally (the associated regulated wholesale products) to an option of the aforementioned investment ladder.
- 3.9. Given the changes that have occurred in the access network, namely with the fibre installation with no longer fully passive solutions (GPON, point-multipoint) and, also in the cable networks, closer to the end consumer, the purely passive (point-to-point) or active (point-multipoint) nature that characterized the former Market 4 and Market 5, respectively, is deemed to be outdated. This means that "non-physical" / virtual or "active" access products may be part of Market 3a provided they have the following characteristics<sup>158</sup>:
- These shall be made available close to the end-user, i.e., at local (exchange) level, maximizing the operators' own transport network usage.
  - These shall allow beneficiaries of the access to, to a greater degree, change and control the functions, characteristics and quality of service of the access offer.
  - These shall not be restricted to a particular and limited range of speeds.
  - These shall not have restraint (the sharing of capacity/traffic, i.e. a "dedicated access" shall not occur)
- 3.10. Indeed, in its Explanatory Statement, the Commission argues that, in view of the emergence of virtual (or non-physical) access products, it is no longer appropriate to consider the distinction between physical and non-physical access in the definition of market borders between the different types of wholesale access products available, and the following essential characteristics shall be assessed in order to distinguish these wholesale products:

---

<sup>158</sup> These characteristics were also specified, for example, by Ofcom in its analysis on the former Market 4.

- Location of the point of delivery (of bundled access) – the wholesale access provided locally<sup>159</sup> may be different from the access provided at a higher (more central) level of the network, for example, at regional and/or national level.
- Characteristics of network topology and transmission, in particular as regards containment in the network - some products have by nature (relatively high) containment and allow access seekers to provide standardized retail services with limited (shared) resources, while others provide access seekers with an agnostic service with unconstrained transmission capacity, that is, providing guaranteed bandwidth.
- Degree of flexibility of network control (for access seekers to differentiate their retail offers) – it is important to assess, for each wholesale access, which network elements and auxiliary *inputs* (for example, customer premises equipment – the CPE<sup>160</sup>) remain under full control of the SMP operator and which are under control of access seekers.

3.11. ANACOM therefore considers that, in line with the Commission Recommendation on relevant markets, Market 3a and Market 3b are complementary rather than substitute markets and therefore these are analyzed separately.

### **Market 3a: Definition of product market**

#### *Technologically neutral approach*

3.12. It should be pointed out, however, that as referred to in Article 5 (8) of LEC<sup>161</sup>, the market definition shall be neutral in relation to the network or technology used within the provision of services.

---

<sup>159</sup> That is, when traffic is delivered to a level closer to the end-customer premises.

<sup>160</sup> *Customer Premises Equipment*.

<sup>161</sup> And in Article 8 (1) of Framework-Directive.

- 3.13. ANACOM pursues an approach in line with this principle of technological neutrality, and similarly to what was carried out for the related retail broadband access market, it is believed that the wholesale local access market to a fixed location should in principle contain all access products irrespective of the supporting technology or infrastructure and that by presenting a range of homogenous characteristics these are deemed to be equivalent and therefore substitutable wholesale products. Indeed, the exercise to define the relevant product or service market begins by grouping the products or services used by the operators for the same (end-use) purposes.
- 3.14. Bearing in mind that the definition of market is a means to an end – which is aimed at assessing whether consumers are sufficiently protected by an effective competition or whether the *ex ante* regulation is required – it is essential to identify all products that may represent a relevant constraint.
- 3.15. In addition, the Guidelines (§ 67) state that the “*Commission has established that the “access” market includes all types of infrastructures which may be used to provide a given service<sup>162</sup>. The question of whether the network infrastructure market is to be divided into the number of separate sub-markets corresponding to the number of existing network infrastructure categories clearly depends on the degree of substitutability between these (alternative) networks<sup>163</sup>. This exercise must be performed according to the category of users to whom access to the network is provided. However, a distinction should be drawn between the supply of infrastructure to other operators (wholesale level) and end-users (retail level)*”.

---

<sup>162</sup> “For instance, in *British Interactive Broadcasting / Open*, the Commission noted that for the provision of basic voice services to consumers, the relevant infrastructure market included not only the traditional copper network of BT, but also the cable networks of the cable operators, which were capable of providing basic telephony services, and possibly wireless fixed networks, see case IV / 36.359 (OJ L 312 of 6.12.1999, paragraphs 33-38). In case IV/M.1113 - *Nortel/Norweb*, the Commission recognised that electricity networks using digital “power lines” technology could provide an alternative to the traditional local telecommunications access loop, paragraphs 28-29”.

<sup>163</sup> “In assessing the conditions of network competitive in the Irish market that would ensue following full liberalisation of the sector, the Commission also relied on the existence of what, at that period of time, were perceived as potential alternative infrastructures providers, namely, cable TV and electricity networks, *Telecom Eireann*, cit. paragraph 30. The Commission left open the question whether the provision of transmission capacity by an undersea network infrastructure constitutes a distinct market from terrestrial or satellite transmissions networks, case COMP/M.1926 — *Telefonica/Tyco/JV*, at paragraph 8”.

- 3.16. With the investment in NAN, the beneficiary operators of LLP have seen their unbundled copper accesses decrease over time, although there is still a park of about 100 thousand of these accesses located in the main metropolitan areas and urban areas of the territory. In other words, in the future it is expected that in the areas where alternative operators to MEO install fibre optics networks, the migration of the (current) LLP-supported customers to fibre optics accesses will continue and that the relevance and necessity of the LLP will decline over time.
- 3.17. It can therefore be concluded that, in areas where NOS and Vodafone (or any other operator) have already installed fibre (and / or cable), the internal fibre supply by these operators is a substitute for unbundled copper access within the LLP.
- 3.18. This also means that, faced with a SSNIP in the price of LLP by a hypothetical monopolist, operators - who already have fibre equipment - would replace, in areas where they did not install their own fibre, unbundled copper access with unbundled access to fibre (provided, for instance, by MEO).
- 3.19. In this context, the Commission clarifies, in its Recommendation on NANs (recital 3) *“that NRAs, pursuant to Article 16 (4) of Directive 2002/21 /Commission, are preparing regulatory responses to the challenges arising from the transition from copper to fibre networks. Relevant markets in this area are the markets for wholesale network infrastructure access (market 4) and wholesale broadband access (market 5)”*.
- 3.20. Therefore, the existing evidence and the Commission's view on the subject set out in the various letters of comments on the notifications made by the various European regulators clearly point to the inclusion of fibre accesses in Market 3a.
- 3.21. In the Explanatory Statement, it is mentioned in this regard that the experience does not show significant breaks in the substitution chain between broadband accesses of the current generation and those that are based on fibre optic, i.e. access to fibre optics should be considered functionally equivalent to the traditional copper LLP, and the NRAs shall include in Market 3a all these access products in the physical layer.

- 3.22. With regard to cable accesses, according to the Explanatory Statement, NRAs shall, in line with the principles of competition law and in order to identify precisely the delimitation of Market 3a, assess the indirect constraints arising from cable operators providing services in the retail broadband market, even in the absence of wholesale access to these (alternative) platforms<sup>164</sup>.
- 3.23. The Commission therefore recommends that, from a prospective scenario and relying on the different stages of implementation, coverage and upgrading of cable networks (eg for DOCSIS 3.1) in the EU, NRAs shall continue to assess their substitutability for a possible inclusion in Market 3a.
- 3.24. In this regard, ANACOM considers the following:
- Portugal remains one of the Member States where cable network coverage reaches a more significant extent, as evidenced by the available data, as well as those presented in the previous market analysis, namely data on cabled households' coverage – that at the end of 2015 ranged between 62 percent and 71 percent of traditional private households nationwide<sup>165</sup> with DOCSIS 3.0, which is a coverage higher than that of fibre networks.
  - A wholesale product is possible to be defined in cable networks that:
    - is made available near the end user, i.e., at “local” level, maximizing the operators' own network use (at CMTS level<sup>166</sup>);

---

<sup>164</sup> However, according to the same Explanatory Statement, the experience resulting from the procedures pursuant to Article 7 shows that, given the current technical constraints of cable operators in respect of wholesale access at the local level, and on a scale comparable to that of copper or fibre optic network operators, such constraints are unlikely to be strong enough to restrict the price of products in Market 3a at national or even sub-national level.

<sup>165</sup> Source: ANACOM based on data from cabled houses operators per municipality and the INE (statistics office) data from traditional private households per municipality. In order to eliminate the effect of multiple cabling households and to estimate a minority for the coverage of cable networks, the number of homes that are cabled, in each and every municipality, by the operator having the largest number of cabled homes in the municipality has been considered.

<sup>166</sup> It is about cable hybrid network equipment (HFC) that centralizes all communication between cable *modems* (at end customer) and the operator's network/services. The CMTS has a similar function to that of the DSLAM over copper networks.

- allows access beneficiaries to change and control minimally the functions, characteristics and quality of access offer service (namely at Ethernet level in the “Bundled Access”);
  - is not restricted to a particular and limited range of speeds (apart from the technical limitations of the coaxial cable itself); and
  - has no containment (discounting the implicit containment by sharing the capacity of the coaxial cable itself).
- Looking ahead, the cable network will also evolve, at least in certain geographic areas, to a fully fibre access network (FTTH-GPON), with the substitution of the cable terminating segment with fibre (incidentally, according to the statistical information on high-speed networks relative to the end of 2015. NOS already had, along with the DOCSIS 3.0 accesses, a few hundred thousand FTTH / B accesses and it would not be only the accesses of the former TVTel acquired by NOS). In fact, cable operators continue to exploit their networks using coaxial cable terminating segments (customers’ access) by means of the latest technologies (DOCSIS 3.0). However, they have already announced that evolving into fibre technologies (to home) will be required, especially in *greenfield* projects, given the limitations of current HFC networks in the face of the growing demand for high-speed retail services.

3.25. In this way, a wholesale fibre local access offer (GPON) or a wholesale cable local access offer would, in technical terms and from the point of view of supply, have similar characteristics, although from the point of view of demand it can be acknowledge that operators who already have fibre installed accesses would prefer fibre access offer, because they could use - optical - equipment identical to those they already have, reducing thus the need to learn and manage two different networks. It should be noted that this possible operational complexity did not prevent mergers operations between operators holding fibre and cable networks (or their "convergence"): (i) Optimus and ZON (integrated into NOS group)<sup>167</sup> and (ii) Cabovisão and Oni (integrated into Apax group). Also for the same reasons it would be expected that possible "alternative" operators would opt, if there was one, for a wholesale cable access offer in order to be

---

<sup>167</sup> Although there is a commitment to sell the fibre optic network that belonged to Optimus before this merger (although the new housing coverage by NOS is based on fibre optic rather than cable).

able to provide services in areas where they did not have coverage through their own network.

- 3.26. In addition, with regard to possible obligations to be imposed, the Commission itself acknowledges in its Recommendation on NANs (recital 5) that “ *upon the installation of NGA networks, the conditions of demand and supply are expected to change significantly both at wholesale and retail level. It may therefore be necessary to impose new remedies as well as a new combination of remedies on markets 4 and 5 in terms of active and passive access*”, i.e., there will no longer be an unequivocal connection between Market 3a and passive “remedies” and between Market 3b and active “remedies”, as existed in the previous recommendation on relevant markets.
- 3.27. If ever there was any doubt about the possibility of direct substitutability between cable and fibre networks, the analysis of indirect constraints eliminates these possible doubts.

#### *Direct and indirect constraints*

- 3.28. In the definition of the wholesale market there may arise situations where the degree of substitutability between two products at the retail level may be in such a way that it may lead to indirect constraints<sup>168</sup>, i.e., despite the lack of direct substitutability between wholesale products (there are no wholesale access offers to alternative networks) there may be a high cross-price elasticity of demand between related retail products <sup>169</sup> which limits the ability of a hypothetical monopolist to increase its wholesale price.
- 3.29. In its comments on NRA decisions (both in relation to former Market 4 and in relation to former Market 5), the Commission argued that the inclusion of coaxial cable accesses in these wholesale markets shall be supported by concrete evidence, in

---

<sup>168</sup> Generally speaking, an indirect price constraint translates into the existence of a situation in which, despite the low ratio of direct substitutability between wholesale products, the increase in the price of the wholesale *input* with a consequent increase in the price of the related retail service, leads to a high rate of substitution of the retail product, making this wholesale price increase unprofitable. This substitution results, therefore, in an indirect way, from factors verified in the associated retail market.

<sup>169</sup> In this context, it may be necessary to ascertain the price elasticity of demand for the retail product whose *input* wholesale price increases. That is, how the retail consumption of the product decreases if its price increases.

particular based on the direct or indirect constraints<sup>170</sup>. This argument is also made in the Explanatory Statement.

- 3.30. Since wholesale regulation is not an end, but rather a means of ensuring competition in the retail market, in cases where, in the absence of such wholesale regulation, the retail market is not competitive, it does not appear to be permissible to include, in Market 3a, only the accesses copper cable and fibre optic supported, when in fact the coaxial cable accesses are those currently exerting effective competitive pressure on MEO at the retail level, in many areas of the national territory. In fact, the main operator and alternative service provider (broadband included) is NOS, a cable operator (with only a residual number of fibre and LTE supported broadband services).
- 3.31. In this regard, it should be noted that the characteristics of cable-supported retail offers are identical to the characteristics of fibre-supported retail offers and, for similar speeds, to the characteristics of copper-supported retail offers. This similarity between retail products is a strong indication that cable networks access (internal supply) does indeed exert a constraint on the provision of wholesale local access at a fixed by an operator using copper and fibre loops.

---

<sup>170</sup> Specifically, in the comments to the Ofcom (UK NRA) notification, which chose to include coaxial cable accesses in the definition of former Market 4 on the basis of indirect constraints, the Commission stated as follows:

*“Firstly, the Commission would stress that — to its knowledge — the unbundling of cable networks does not at this stage appear technologically possible or economically viable, thus ruling out the possibility of direct wholesale substitution between cable lines and copper loops. Despite this fact, unlike other NANs, Ofcom nonetheless intends to include cable in the WLA market on the basis of indirect constraints.*

*According to Ofcom, the hypothetical monopolist test (HMT) analysis of indirect constraints involves assessing the extent of demand-side and supply-side substitution between loop-based and cable-based services, where cable services are available. Under the assumptions of the HMT framework, an increase in the price of the (notional) WLA would be passed on to the corresponding retail access prices paid by customers. The extent to which retail prices would increase would depend on the proportion of the retail price made up by the price of the wholesale input. Ofcom estimated this to be between 65% and 75%.*

*The Commission is concerned that Ofcom has not provided sufficient justification as to why any price increase would be entirely passed on to the end-users of retail broadband access products or that sufficient demand substitution would take place at retail level to render that price increase unprofitable, in particular because an LLU price increase could also affect other retail products, such as voice telephony and IPTV. Moreover, it is doubtful that competitors would not be able at least partly to absorb a 10 % price increase in their margins. Incomplete pass-through of this price increase would further weaken the substitution effect at the retail level.*

*For these reasons, the Commission takes the view that cable should not be included in the market definition, as its inclusion would lead to overstatement of the competitive constraints on LLU. As previously stated by the Commission, where pricing constraints from the retail market are found to exist, they should be taken into account at the stage of the SMP assessment. However, as Ofcom admits itself, inclusion of cable could affect the SMP conclusions only if an operator were found not to hold SMP on the broader market. As BT was found to hold SMP, even assuming a broader market definition, inclusion of cable hence makes no difference to the outcome of this market review. For this reason the Commission does not challenge Ofcom’s finding, but urges the British regulator not to include cable in the WLA market in its final measure”.*

- 3.32. Thus, although there could be doubts as to the possibility of direct substitutability between copper accesses and accesses, both in fibre and cable, there are evident indirect constraints, again, from both fibre and cable supported services, in LLP. Therefore, even if there is no price increase for LLP, operators are, for instance, already replacing unbundled accesses over copper with fibre access internal supply.
- 3.33. The questions of indirect constraints are thus placed, with the same intensity, in the wholesale local access market at a fixed location of the fibre optic and coaxial cable-supported accesses. If these constraints were ignored, erroneous conclusions could be drawn up, with an overestimation of market power.
- 3.34. Failure to include the accesses on the cable networks in this market - in which they introduce indirect constraints - would result in a market definition that would be too narrow in the light of the reality of the market and, in turn, could result in a relatively different SMP analysis, as such hypothesis would increase MEO's market share, with an obvious distortion in view of the reality of the retail market (as discussed in the previous chapter).
- 3.35. In other words, if that was the case, MEO's market share would be overestimated, because the scope of the market definition would be (artificially) restricted, and in the wholesale market – which only exists because regulation was imposed (on LLP) – it would have a much higher market share, given that it is the only operator subject to access obligations in this area. Moreover, in reality, and in an extreme scenario, the retail market could even be competitive even if there were no obligation to access the local loop, as long as several operators with their own competing infrastructure exist.

- 3.36. In this context, a scenario that included only copper and fibre accesses in Market 3a - where MEO's market share was 78% in terms of customers by the end of 2015 - would not be representative of the competitive situation at the retail level, where nationwide, despite the fact that MEO has a market share of just under 50 percent, there are alternative options, such as cable networks, available to end-users, and operators of these networks have slightly increased their market share in the retail broadband access market . In fact, the networks and offers from alternative cable operators have also led to an increased competitive pressure in retail markets, in particular in the broadband access market. It is again pointed out that these market shares entail the maintenance of the obligations of access to ducts and masts in this market, which, in case they do not exist, would increase MEO's market shares (since the installation of cables by alternative operators would be hampered, thus reducing the investment by these operators), to values close to 100 percent.
- 3.37. However, as already pointed out, MEO's market share of 78 percent<sup>171</sup> is not, in any way, representative of the competitive environment in the retail market, the promotion of which is the ultimate purpose of the regulation.
- 3.38. In fact, the number of retail broadband accesses for mass-consumer products supported by (over copper) regulated wholesale offer in Market 3a was, by the end of 2015, very low, about 3% of total traded retail broadband accesses, which confirms that retail competition is mainly based on vertically integrated operators with their own network, who use the other offers that are regulated within this market (ORAC and ORAP).
- 3.39. In the past, the Commission has argued that competitive constraints should be taken into account in the assessment phase of SMP (which may have the effect of underestimating the weight of these constraints) rather than at the market definition stage.
- 3.40. And the Commission is of the opinion that, in order to include coaxial cable accesses in Market 3a, with basis on indirect constraints, the following would have to be proved:

---

<sup>171</sup> That is, the MEO's market share that would result from a scenario that included only copper and fibre accesses in Market 3a (cable accesses excluded).

- Alternative operators are required to pass a hypothetical increase in the wholesale price to their retail customers in the same proportion (of the wholesale price on the retail price).
  - There is a sufficient degree of substitutability on the retail demand-side that, based on the indirect constraints, makes the increase in the wholesale price unprofitable.
  - Customers of alternative operators will not significantly change to the integrated hypothetical monopolist retail operator, in particular if the latter does not increase their own retail prices.
- 3.41. More recently, however, the Commission has raised serious doubts as to the notification by the Dutch regulator on the analysis of Market 3a, and its doubts were based on the fact that the regulator did not take due account of cable accesses in the wholesale market concerned, irrespective of these accesses may or may not be technically and economically comparable to other network virtual access products.
- 3.42. The Commission argued that cable and fibre networks could be sufficiently substitutes as they could be used in any area of the Dutch territory as a wholesale input to meet the needs of end users (in particular to provide retail broadband services at comparable prices, either individually or as part of bundled services). The Commission also pointed out that, in light of the existence of a cable network providing a substitute service from that offered by KPN, the regulator should have considered the internal provision of the cable operator while delineating Market 3a.
- 3.43. ANACOM considers that the application of the test proposed by the Commission is not in practice immediate or even feasible because the marketing of retail offers to LLP-based residential customers is already residual and it is not the main choice of users. Thus, one cannot even estimate with a reasonable degree of certainty the future impact of variations in LLP price in current retail offers.
- 3.44. Nevertheless, but taking the MEO's (over copper) retail offer as reference, it is found that the prices of this offer are similar to the prices of the cable-based broadband offers as well as those of the fibre-based offers:

**Table 10. Monthly charges of representative (copper, fibre and cable-based) retail offers<sup>172</sup>**

Offer	Infrastructure	TV channels	Max. download speed (Mbps)	Calls	Monthly fee (Euros)
MEO – TOTAL 24	Copper	200	24	Unlimited	49.99
MEO – TOTAL 30	Fibre	200	30	Unlimited	49.99
NOS – Iris 30 Mega	Cable	128	30	Unlimited	42.99

- 3.45. In other words, for near characteristics in terms of TV channels and Internet access speed, the price of cable retail broadband offers is in line with (or is even lower than) the price of copper retail broadband offers.
- 3.46. As there is some competition in the retail market, at least in certain geographic areas where several operators (where prices are in theory in line with costs) operate, any wholesale price increase (LLP) would have to be immediately and totally passed to the retail.
- 3.47. Vodafone, in practice currently the only active customer operator of the ORALL (for its offer in the downstream mass-consumer market), presents exactly the same price for its retail offers (of *multiple-play*) based on LLP and its own fibre network (disregarding copper limits as to maximum speed). If the price of copper local loop accesses would increase, it would probably lead to increased prices on its LLP-based retail offer, and it would also bring a greater incentive for Vodafone to migrate those customers to its network.
- 3.48. Moreover, the fact that LLP's accesses are being reduced, while cable and fibre accesses are increasing is an illustration of what is intended to be demonstrated: even without any LLP price increase there is already a substitution, in retail, for cable and fibre-based offers.
- 3.49. At the very least, the wholesale price (considering only the monthly charge of the unbundled loop) corresponds to about 25 percent of the retail price - excluding VAT, so a 10 percent increase in the wholesale price could hypothetically result in an increase of 2.5 percent in the retail price (which, for the €49.99 offer, results in a price of €51.24, becoming 19 percent higher than the equivalent cable offer price, which has a higher speed than that of the copper-based offer).

<sup>172</sup> Offers published on the operators' website in February 2016 (prices with no promotions and VAT included).

- 3.50. Thus, and with substitutability between copper and cable-based offers at the retail level and with cable networks having a relevant coverage in the national territory, any increase in the price of copper-based retail broadband access offers would result in an increase in the price differential between these offers and cable-based offers, and thus there would be a significant number of customers replacing the copper offers with the cable offers.
- 3.51. In conclusion, even if one does not agree with the need, or rather with the actual capacity, to carry out the test proposed by the Commission in Portugal, a theoretical application of the test results in a positive response to the three questions posed in the test, “proving” that there are, in fact, constraints associated with cable accesses, and that these should be included in the same market, Market 3a.
- 3.52. Finally, regardless of the inclusion or not of cable access in the definition of the wholesale local access market at a fixed location, the findings as to the existence of SMPs do not change as, in any case, it is concluded that MEO is dominant.

#### *The internal provision*

- 3.53. Finally, it should be again stressed out that, in accordance with the so-called “*modified greenfield approach*”, the *ex ante* analysis on market and its definition shall start from a scenario of lack of regulatory obligations at the market level under analysis, so as to avoid any circularity in the obligations already determined.
- 3.54. In this scenario, it is not plausible to assume that wholesale services (in this case, LLP, access to ducts and access to masts) would effectively be provided, at least under the conditions that would be practiced if the market was competitive, either by the dominant operator, or the cable operators.
- 3.55. The implementation of this methodology may imply that only vertically integrated operators are present in the wholesale market. Under these circumstances, NRA has to consider a conceptual wholesale market formed by the internal supply of each operator.

- 3.56. In the Explanatory Statement<sup>173</sup> the Commission acknowledges that, in many cases, the incumbent operator is the only undertaking that is in a position to provide a potential wholesale service. However, the Commission also recognizes that it is likely that there is no genuine (competitive) wholesale market, since it is not in the interest of that incumbent / dominant operator, so that in this situation and in cases where there is both consumer harm and a potential demand for this wholesale access, the construction of a conceptual market is so justifiable.
- 3.57. In this case, the Commission believes that the implicit internal supply of this *input* by the incumbent operator shall be taken into account. Where demand-side substitution is likely, i.e. where wholesale customers are interested in acquiring products from alternative operators, the Commission acknowledges that taking into account the internal supply of such third parties for market delimitation purposes may also be justified.
- 3.58. In addition, the Commission believes that the own supply of alternative operators should be assessed, in particular when their networks are included in the relevant market due to the strong direct restrictions they place on incumbent's prices. However, for the Commission, this is not a reasoned justification if alternative operators face capacity constraints or their networks do not offer ubiquity in the relevant geographic market and / or if alternative providers have difficulty entering the market promptly, which, according to ANACOM, will not currently be the case.
- 3.59. To date, MEO has been obliged to provide wholesale access products, in particular access to the unbundled loop (and to ducts and masts). In addition, MEO and the other operators with relevance in the retail broadband market, in essence vertically integrated operators, provide their retail department with a wholesale service, which is used by this department as an *input* to their retail access products (and electronic communications services). The issue of internal supply is thus related to the existence of vertically integrated operators, i.e. operators operating throughout the value chain

---

<sup>173</sup> Section 3.3.

and having operations in the related retail market, which is the case of operators in the access markets<sup>174</sup>.

- 3.60. It should be noted in this connection that internal supply was, by the end of 2015, responsible for 97 percent of retail broadband access market customers for mass-consumer products. Even in terms of access coverage, it has been found that, for instance, Vodafone already has more installed and active accesses in internal supply (i.e., active customers in own fibre) than active unbundled accesses. NOS and Apax (Cabovisão) also use their own infrastructure - the cable network - to make their mass-consumer electronic communications services available at a fixed location.
- 3.61. In other words, the main source of competition in the retail broadband access market for mass-consumer products, which is non-competitive (in the absence of obligations to access ducts and masts and, to a lesser extent, local loop access), comes from internal supply. In this respect, in a hypothetical situation where there are several operators with their own infrastructure that would give rise to a competitive retail market, it would not be reasonable to analyse a wholesale local access market at a fixed location that would have a reduced representativeness in which MEO would have a market share of about 100 percent and thereby impose obligations on it (where, it should be noted, the retail market would be competitive).
- 3.62. Thus, bearing in mind that the provision of network access is provided in a vertical integration model, as they are the same entities - the network operators - operating in the wholesale and retail markets, the concept of internal supply shall be used in this market analysis, both in the market definition phase and in the assessment phase of SMP.

#### *Definition of the product market – conclusion*

- 3.63. In conclusion, ANACOM is of the opinion that the wholesale local access market to a fixed location includes the copper, fibre and cable-based wholesale accesses.

---

<sup>174</sup> An operator may be fully integrated vertically with no distinction being made between the wholesaler and the retailer or there may even be a formal separation between these entities. In such vertical integration situations, the operator may not act directly in the wholesale market (i.e. it does not offer wholesale products to third parties) or, alternatively, it provides third parties with wholesale services while having a direct or indirect activity in the retail market.

3.64. It should be noted that, irrespectively whether cable accesses are included or not in Market 3a, the conclusions of the analysis would not change, as in any case, MEO's market share - the SMP assessment indicator that can be affected by this assumption - is 50 percent (according to **Table 11** below) in terms of customers, at national level, suggesting the existence of SMP, as set out in Chapter 4.

### **Wholesale local access geographic market at a fixed location**

3.65. After identifying the relevant product market, the definition of its geographic extent is required.

3.66. As mentioned above, the geographic scope of a market has traditionally been defined on the basis of two main criteria: the existence of legal and regulatory instruments and the area covered by a network. If legal or regulatory restrictions on the development of wholesale access to the network do not occur, the analysis according to this latter criterion will be initiated.

3.67. The MEO's copper network covers practically the entire national territory and this company provides the local loop access service under its obligations as having SMP in the wholesale market in question, and it is obliged to provide it throughout the national territory. This service presents uniform prices throughout the national territory.

3.68. The MEO's internal supply offer also leads to identical (retail) prices throughout the national territory.

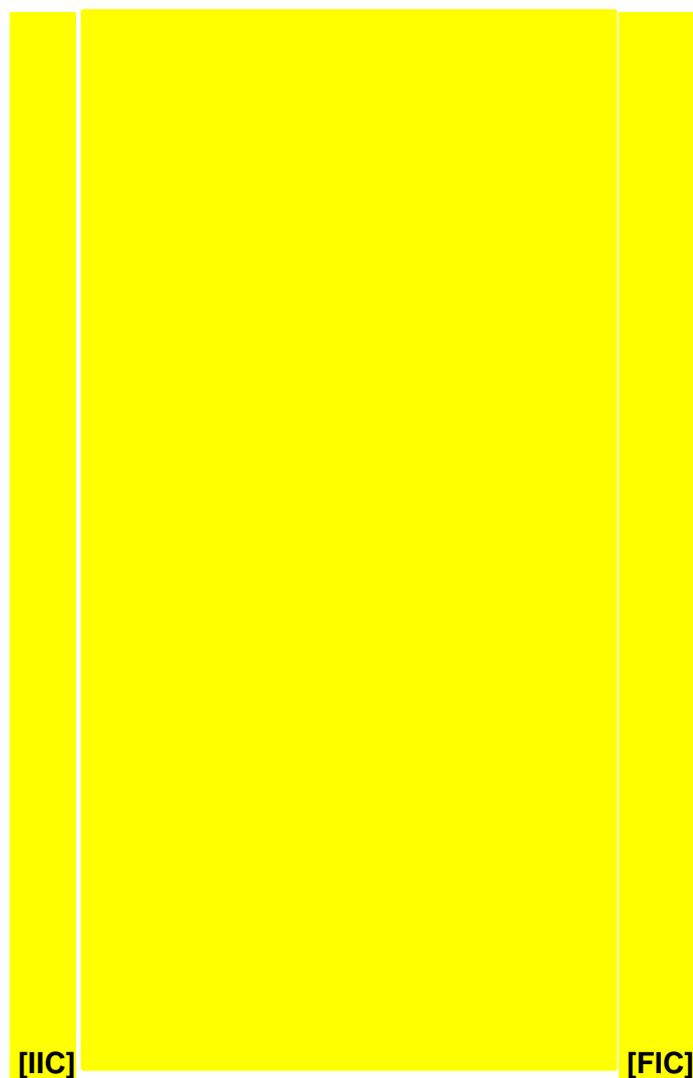
3.69. Since the end of 2011, the increase in fibre-based homes by MEO has been gradually reduced. A fibre optic infrastructure sharing agreement between MEO and Vodafone was signed in July 2014, which will enable MEO to extend the coverage of its fibre optic network.

3.70. The following figure shows a coverage map of the MEO's fibre network, which already covers most of the main metropolitan areas of the mainland Portugal (and the islands regions)<sup>175</sup>, with the Vodafone accesses shared with MEO being also included:

---

<sup>175</sup> For the sake of convenience, the coverage in the Islands Regions of the Azores and Madeira is not represented.

Figure 6. (FTTH) Fibre network coverage of MEO, data from 2015



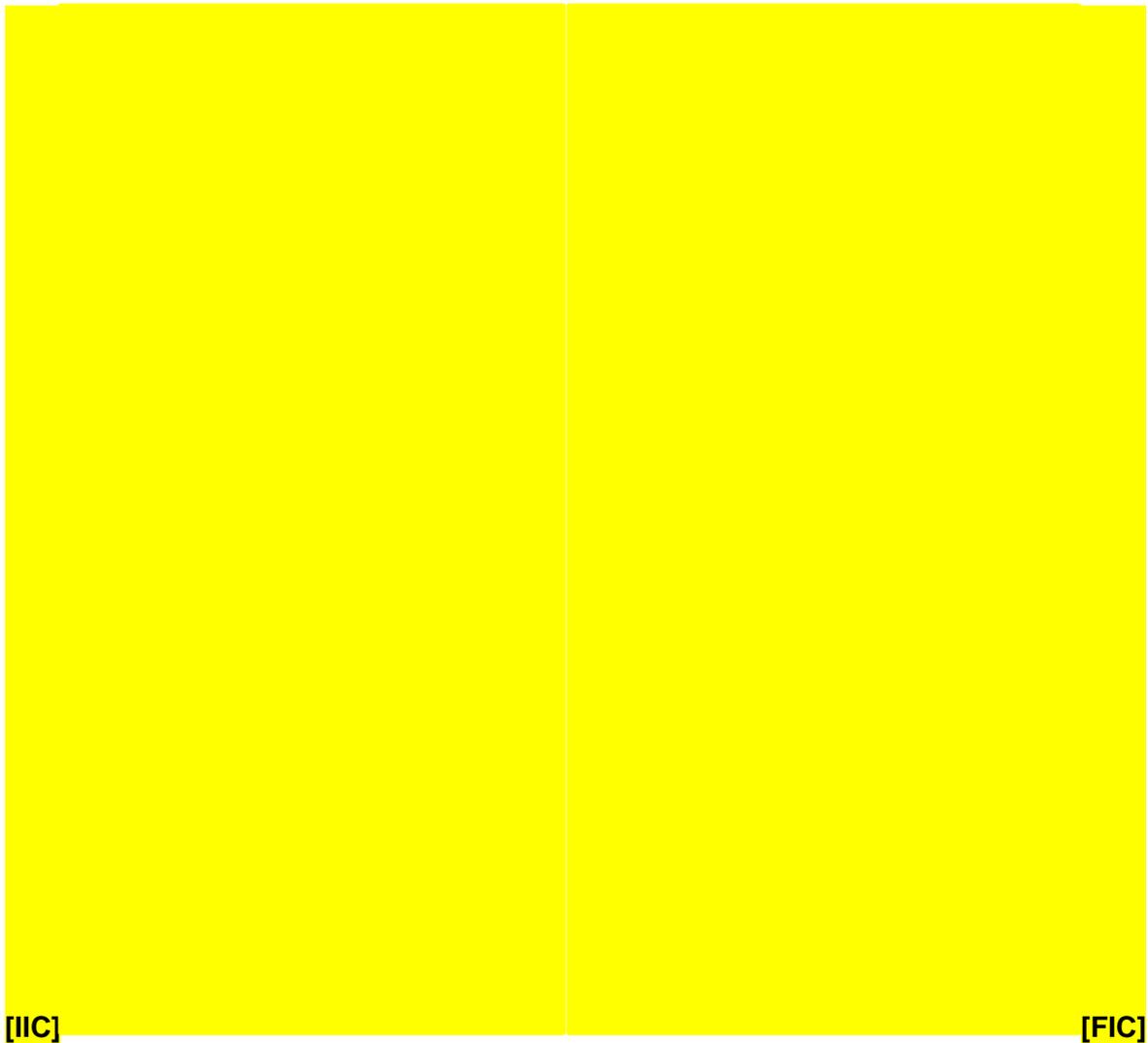
3.71. In turn, since cable networks are digital and bidirectional (and almost entirely with DOCSIS 3.0 already installed<sup>176</sup>), required characteristics for them to support network and electronic communications services access, including particularly the broadband access. The penetration of these networks represents a good approximation to the

<sup>176</sup> It is noted that, according to information from the then ZON in the consolidated results release of 2012 “it has capacity to provide speeds of up to 360 Mbps in all of the 3.2 million homes with its HFC network”. Information available at

<http://www.nos.pt/institucional/Documents/Reportes%20Financeiros/ZONFY12%20PORTUGUES.pdf>.

coverage of the population (which is practically total in the areas of greater population density)<sup>177</sup>, as seen in the following figure:

**Figure 7. Cable network coverage (DOCSIS 3.0) of NOS (map on the left) and Apax (Cabovisão) (map on the right), in 2015**

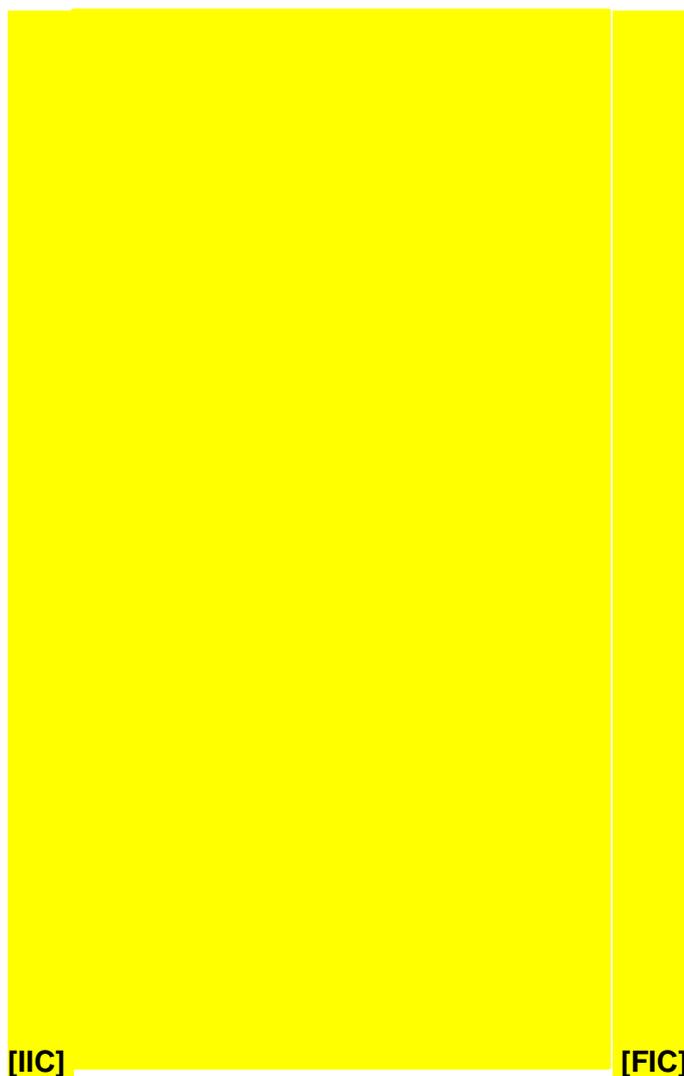


3.72. Since the last market analysis, new entrants have also entered into the broadband access market with their own network, in particular Vodafone (which is also the main LLP beneficiary), that has been developing its own fibre infrastructure, namely its transport network (to the local exchanges where it is co-installed and to other access points / bundling) and NAN, in certain areas, initially in the metropolitan areas of Lisbon

<sup>177</sup> By the end of 2013, the percentage of traditional households cabled with DOCSIS 3.0 (i.e., prepared to connect a subscriber), compared to the total traditional households in the country, was between 61 and 70 percent for the whole territory, covering the most populous areas.

and Oporto, complemented with the fibre optic network sharing agreements, the one signed with NOS (then Optimus) in 2011 and now the agreement signed with MEO, as seen in the following figure:

**Figure 8. Fibre network coverage, data from 2015**

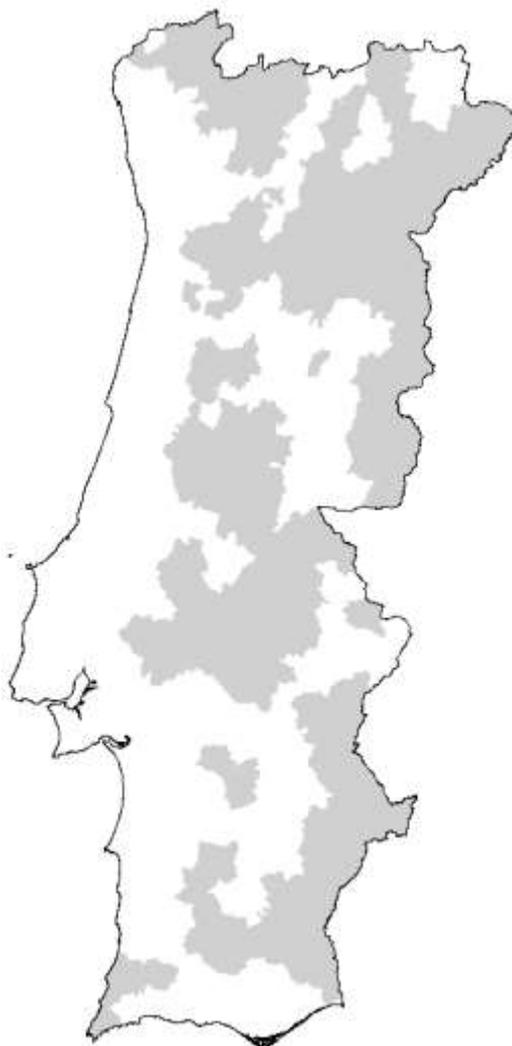


3.73. In addition to these operators, there are also operators with fibre optic networks in rural areas, namely Fibroglobal, in 42 municipalities in the central zone and 12 municipalities in the Azores<sup>178</sup> and DStelecom present in 44 municipalities in the northern region and in 35 municipalities in Alentejo and Algarve, covering in total around 400 thousand homes<sup>179</sup>.

<sup>178</sup> The project related to the Island Region of Madeira (5 municipalities) has not yet been implemented.

<sup>179</sup> Corresponding to about 50 percent coverage in each of the municipalities.

**Figure 9. Municipalities covered by rural fibre networks (from Fibroglobal and DStelecom), data at the end of the 3rd quarter of 2014<sup>180</sup>**



3.74. From this asymmetric coverage of the alternative networks to the MEO's network, with a greater presence in the metropolitan areas of Lisbon and Oporto and in the other main metropolitan areas, it can be observed that MEO's market share in the wholesale local access market at a fixed location (which, once more, includes accesses over copper, cable and fibre) naturally decreases with the increase in the number of operators having infrastructure in a given area and as they connect customers.

---

<sup>180</sup> Additional investments in these networks will not be expected.

3.75. As mentioned above, the provision of access to MEO ducts and masts has been fundamental to get to the current situation of developing cable networks and especially fibre optic networks.

3.76. As stated by MEO, in response to ANACOM's draft decision on market 4, of 10 March 2016<sup>181</sup>, ORAC and ORAP have been playing a key role in the development of operators' networks, which is particularly measured by the strong growth that these offers are registering as shown in the graphs below:

**Graph 3. Development of MEO's ORAC occupation**

**[IIC]**



**[FIC]**

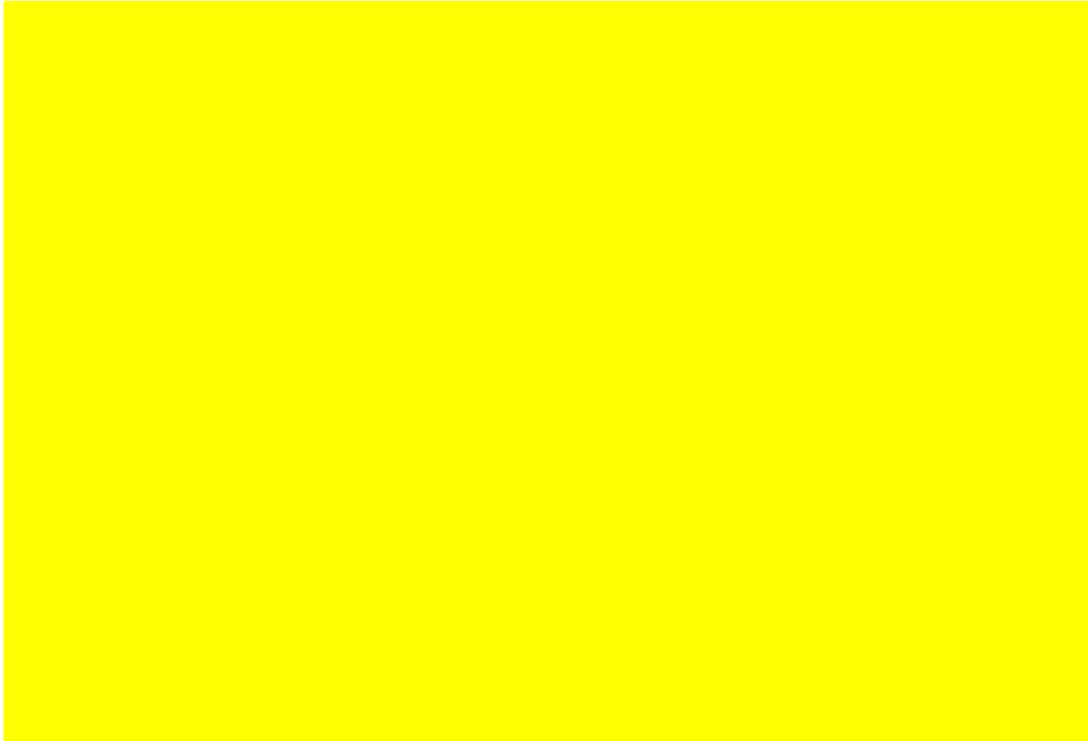
Source: MEO

---

<sup>181</sup> Concerning the definition of product markets and geographic markets, assessments of SMP and imposition, maintenance, amendment or withdrawal of regulatory obligations in the high quality wholesale market at a fixed location (wholesale leased lines).

Graph 4. Development of fixings on MEO's ORAP masts

[IIC]



[FIC]

Source: MEO

- 3.77. In this sense, the competition in own infrastructure that currently may exist in certain parishes is (mainly) the result of the regulated access to ducts and masts, and, in the current situation, it cannot be concluded that, in the absence of these obligations to access ducts and masts - which are fundamentally based on this wholesale market - this Market 3a or part of it is competitive.
- 3.78. If hypothetically it would be found that (part of) Market 3a was competitive and if, consequently, the obligations imposed on access to ducts and masts were withdrawn, MEO could implement access conditions to these less beneficial infrastructures in view of the current situation, in which this access is regulated (and closely followed) in its various aspects <sup>182</sup>, which would most likely result in a reversal of (the investment) to date, as well as necessarily under these competitive conditions in downstream markets.

---

<sup>182</sup> Even if Chapter III, of Decree-Law no. 123/2009, as mentioned above, applies to MEO.

- 3.79. As noted in the retail market analysis, if the obligation of copper local loop access was withdrawn (and if the LLP-based OPS accesses were attributed to MEO), MEO's market share in parishes in C Areas would be 38 percent and in parishes in NC Areas would be 84 percent, noting that in its decision-making practice, the Commission normally has concerns about individual dominant positions as the case of companies with market shares exceeding 40 percent<sup>183</sup>. If the obligation to access ducts and masts was withdrawn, even if access to these infrastructures remained regulated under Decree-Law no. 123/2009, a regression in the access conditions would occur, which would then result in an increase of MEO's market share.
- 3.80. Thus, although in the retail broadband access market the geographical market has been segmented into competitive and non-competitive areas, this conclusion was based on the maintenance of the regulation of Market 3a, which, if not maintained, does not result in evidence of sufficiently heterogeneous competitive conditions between different geographic areas justifying the segmentation of Market 3a, although in some areas there are alternative networks (mainly based on access to MEO ducts and masts) and in other areas MEO is the only operator in the market (with 100 percent market share).
- 3.81. In addition, operators generally do not differentiate between their price and discount strategies and other conditions associated with the provision of broadband access for mass-market products, depending on the areas of the territory, at both the retail and wholesale levels (in the latter level, in the case of MEO, as the remaining operators do not have wholesale offers for wholesale local access at a fixed location, other than Vodafone that entered into a NAN infrastructure sharing agreement with MEO and Fibroglobal and DStelecom, for certain areas of the mainland Portugal and in the Islands Regions of Madeira and The Azores). In this sense, ANACOM maintains its opinion that wholesale local accesses at a fixed location are available in a homogeneous manner throughout the national territory, and some differences in competitive conditions do not allow a clear and permanent identification of their borders.

---

<sup>183</sup> Even though, however, there may be cases with dominant positions even with lower market shares– See Guidelines §75.

- 3.82. Finally, it should be noted that the existence of geographically differentiated restrictions on a SMP operator operating at national level, such as different levels of competition between infrastructures in different parts of the territory, can be taken into account within the scope of the obligations. In this context, ANACOM will return to the matter in a later section.
- 3.83. ANACOM considers that the factors taken into account in this analysis will not significantly change in the short / medium term until the next market analysis, since the increase in the number of effectively connected (active) NAN accesses has been growing slowly compared to the coverage already achieved, and an extension of the (fibre) network coverage to new areas will involve a smaller number of potential customers and the profitability of the investment will therefore be (still) relatively smaller.

## **Conclusion**

- 3.84. Following the analysis carried out, the wholesale local access market at a fixed location in Portugal shall be deemed to be national and it consists of the wholesale accesses based on copper, cable or fibre network infrastructure, that are supplied at a fixed location.

#### **4. ASSESSMENT OF SMP ON THE WHOLESALE LOCAL ACCESS MARKET AT A FIXED LOCATION**

- 4.1. After identification of the relevant wholesale market, it is analyzed with a view to verifying whether or not it is competitive, and in the latter case, the SMP entity(ies) are identified.
- 4.2. Pursuant to Article 60 (1) of LEC (Article 14 of the Framework Directive), “*an undertaking shall be deemed to have significant market power if, either individually[(individual dominance)] or jointly with others [(joint dominance)], 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 ultimately consumers*”.
- 4.3. This assessment of SMP assumes as hypothesis that there is no current or potential SMP regulation on the relevant market under analysis, as this implies to draw conclusions on the need or not for regulatory intervention. Thus, assessing the SMP on this market requires a hypothetical market to be assumed where regulation does not occur.
- 4.4. In addition, in cases where an undertaking has SMP on a specific relevant market, it may also be deemed to have SMP on a closely related market, where the links between the two markets are such to allow the market power held in one market to be leveraged into the other market, thereby strengthening the market power of the undertaking (leverage of SMP) - in this case, this leverage can occur both on the related retail market and on Market 3b.

#### **SMP assessment criteria**

- 4.5. As in the previous assessment of SMP, ANACOM takes the utmost account of the Guidelines(§19), when assessing “*whether the competition is effective. A finding that a relevant market is effectively competitive is, in effect, a determination that there is neither single nor jointly dominance on that market.*”.
- 4.6. Therefore, on the basis of the existing market conditions, a prospective and structural assessment on the relevant market is carried out in this chapter in order to determine as to whether the market is (prospectively) competitive and, thus, whether any lack of effective competition is durable, taking into account the (reasonably) expected

development over a given period of time. Also in accordance with the Guidelines (§20) the “*actual period used shall reflect the market specific characteristics and the expected date for the next review on the relevant market by the ARN. In their analysis, ARNs shall take into account previous data if in a predictable future such data are relevant to developments on that market*”.

- 4.7. Also according to the same guidelines, the Commission presents market shares as an indicator of market power and it considers that it is unlikely that undertakings with a market share below 25 percent will have a dominant position in that market. On the other hand and as already stated, in its decision-making practice, the Commission normally raises concerns as to situations of individual dominance, in the case of undertakings with market shares exceeding 40 percent. However, there may be cases where a dominant position occurs, even with lower market shares or cases where undertakings have higher market shares and they are not deemed to be dominant undertakings<sup>184</sup>.
- 4.8. However, the Commission also reports in such Guidelines (§78) that the existence (or absence) of a dominant position cannot be determined exclusively by high (or reduced) market shares. Therefore, ARNs shall also use other criteria<sup>185</sup>.

---

<sup>184</sup> See Guidelines §75.

<sup>185</sup> Among the various criteria are the following: overall size of the undertaking; Barriers to entry and expansion; Control of infrastructure not easily duplicated; Advantages or technological superiority; Countervailing buyer power; Facilitated or privileged access to capital markets / financial resources; Diversification of products / services; Economies of scale and / or economies of scale; Vertical integration; Highly developed sales and distribution network; Absence of potential competition; Or barriers to expansion, where a dominant position may result from a combination of any of these criteria, which, when taken separately, may not necessarily be decisive.

- 4.9. Regarding the specific criteria to be used in the SMP assessment on wholesale local access market at a fixed location, ANACOM considers for the present case the criteria below as relevant<sup>186</sup>:
- Share markets and market growth.
  - Barriers to entry and expansion (including the control of infrastructure not easily duplicated, economies of scale and range and vertical integration).
  - Rivalry.
  - Potential competition.
  - Countervailing power
- 4.10. With regard to the persistence of strong structural obstacles to the entry and development of competition, it is important, in accordance with the Commission's Recommendation on relevant market, to analyse the "*market structure, its performance, its dynamics, including indicators such as market shares and trends, market prices and trends, as well as the extent and coverage of competitive networks or infrastructures*".
- 4.11. As to other criteria, ANACOM is of the opinion that the arguments (that were presented in Chapter 5 of the previous market analysis) through which they are deemed to be relevant or less relevant in this assessment of SMP remain valid<sup>187</sup>.

### **Individual dominance**

- 4.12. With view to carrying out the said market economic analysis, the extent of competition between installed undertakings, the extent of potential competition and the countervailing buyer power are examined on a continuous base.

---

<sup>186</sup> In this respect, the European Regulators Group (ERG) has published a working document on the Guidelines ("ERG SMP Position"), in which other SMP assessment criteria are developed: Excessive prices; Ease of market entry; Costs and barriers to change; Evidence of previous anticompetitive behaviour; Active competition in other parameters; Existence of standards/conventions; Ability of customers to access and use information; Trend and behaviour of prices and international *benchmarking*.

<sup>187</sup> To this end, account shall also be taken of the arrangements set out in the abovementioned ERG, "ERG SMP Position" document.

### Market shares

4.13. Market shares (and their development) in the wholesale local access market at a fixed location are as follows:

**Table 11. Development of market shares in the wholesale local access market at a fixed location**

Operator	2011	2012	2013	2015
MEO	58%	57%	57%	50%
NOS	34%	34%	33%	33%
Vodafone	1%	2%	3%	12%
Apax	7%	7%	6%	5%

**Note:** In 2007, 2010 and 2013, the market shares were calculated for the exchange areas that are included in C Areas of the previous market analysis, while for 2015 they were calculated for the parishes that are included in C Areas of the current analysis.

- 4.14. It should be noted that market shares are calculated with the allocation of the LLP-based broadband accesses to MEO in mind. However, it is not possible to estimate what the market shares would be in a scenario where there were no obligations to access ducts and masts (under market analyses), in which case MEO's shares would naturally exceed those set out in **Table 11**.
- 4.15. As explained above, the internal supply of both MEO and alternative operators was taken into account. It should be noted that, for instance, if the market was deemed to be only the wholesale offer itself for unbundled access to the local loop (i.e., without taking into account internal supply and considering that there are no alternative wholesale offers), MEO would always have 100 percent market share, whatever the definition of the geographic market, since it is the only company, albeit by regulatory imposition, to provide access to third parties. Likewise, if cable were to be excluded, but if the internal supply of fibre and copper, in addition to LLP, was taken into account, MEO's market share would be 78 percent at the end of 2015.
- 4.16. In that context, whatever the definition of a product market, MEO's market share would always be equal to or greater than 50 percent, i.e. the value above which it would be deemed to be as a dominant position<sup>188</sup>.

<sup>188</sup> According to the Commission, except in exceptional cases, undertaking with market shares in excess of 50 percent are deemed to be dominant – see Guidelines §75.

4.17. ANACOM understands that, based on their market shares and evolution, MEO will continue to hold a position of evident dominance in the wholesale local access market at a fixed location.

*Competition among established companies: barriers to entry and expansion and rivalry*

4.18. The degree of competition among the companies established in the wholesale local access market to a fixed location is analyzed, taking into account the existence of barriers to entry and expansion and rivalry among companies.

4.19. In analyzing the barriers to entry and expansion, it is important to investigate the existence of sunk costs and significant economies of scale and / or economies of scope. However, with operators already operating in a given market and having incurred sunk costs, they become less relevant in the analysis of barriers to entry, eventually becoming a barrier to the expansion (and exit) of the market.

**Economies of scale and scope**

4.20. MEO benefits from strong economies of scale and scope due to the development (with high construction fixed costs) of its ubiquitous local network infrastructure, including copper cables (and ducts and masts), that was built mostly over years of monopoly and, more recently, fibre infrastructure, and the diversity of the services it provides and which are supported on its own network<sup>189</sup>. Thus, given the (large) scale and configuration of the incumbent operator's network, it benefits, all other things being equal, from unit costs lower than its competitors, which allow it to expand its network coverage and products portfolio with comparatively lower costs.

4.21. However, given the characteristics of the downstream markets, there will be some attractiveness for the expansion (and entry) of operators, who invest in their own fibre network, in certain areas, namely in case of easy access to infrastructure, in particular ducts and, to a lesser extent, masts and related infrastructure.

---

<sup>189</sup> The incumbent operator can still achieve additional economies of scale through the equipment installed in its own power plants, and its cost does not substantially increase with capacity. That is, the greater the number of clients / accesses the equipment supports, the lower the unit costs per customer / access.

#### Control of infrastructure not easily duplicated

- 4.22. MEO's access and transport networks have practically total coverage of the national territory, and therefore it is not economically viable for any alternative operator to replicate the entire network, which is a barrier to expansion in this market, and entry , particularly in certain (less densely populated and / or peripheral) areas of the national territory.
- 4.23. On the other hand, NOS, Apax (Cabovisão) and Vodafone, which are the main alternative operators to MEO providing electronic communications services (namely *multiple-play*) in retail, have already invested in infrastructure supporting these services in certain geographic areas, bearing already for this purpose sunk costs. Thus, at least in these particular geographic areas, these operators may be in a position to expand their activities to other customers without incurring any significant sunk costs.
- 4.24. However, MEO also benefits from the fact that it has a higher customer base than that of competitors, which, given the existence of some switching costs (especially in the case of *multiplay-play* offers with loyalty period associated) and some inertia on the part of users regardless of the physical medium supporting the offers (copper or fibre), can ensure a competitive advantage in this and other markets, even in areas where a network from other operators exist.
- 4.25. In fact, there are several data indicating that the intention to change of operator in the fixed network is low. According to data from the “Telecommunications Barometer – Markttest”, in December 2015 about 90 percent of the respondents <sup>190</sup> had no intention of changing operator in the next 3 months. This percentage has been maintained at high levels over time, possibly due to the increase in accessions to bundled services which have a more loyalty effect than that of isolated services. In addition, MEO acknowledges the importance of bundled services by noting that “*The increase in retail fixed access customers was driven by the strong performance of MEO, Pay-TV customers, with the TV customer base increased by 7.3% in 1S14 compared to 1S13 to 1.362 thousand (48 thousand net additions in 1S14), confirming the continued success and attractiveness of MEO in the Portuguese market, even in an adverse economic context and in a market with high Pay-TV penetration. PT's triple-play customers (voice, broadband and pay-TV) accounted for 71 thousand net additions in*

---

<sup>190</sup> In the case of bundled offers' customers and excluding those who answered "Do not know".

*1H14 reaching 1,022 thousand customers (a growth of 14.4% vis-à-vis the previous year)<sup>191</sup>.*

- 4.26. That is to say, it is not expected that MEO's market power will decline significantly over the period up to the next market analysis.

#### **Vertical integration**

- 4.27. The existence of vertically integrated companies may place non-integrated (or "less" integrated) competitors at a competitive disadvantage, since the market power leverage from one market to another may occur, in particular when the integrated competitor provides the non-integrated competitor with a production factor or essential intermediate consumption. Under these circumstances, it becomes more difficult for a non-integrated company to respond to the increase in demand following a price increase by a competitor.
- 4.28. Within this market, MEO stands out, as it is a fully (vertically integrated) company, with presence both in the wholesale market - with wholesale offers to third parties - and in the retail market. MEO uses its own (duct and masts) infrastructure and network to provide retail access services as well as support for other electronic communications services of the group. This planned, high-volume internal demand enables this operator to benefit from large economies of scale and to invest in the development of its networks with a lower degree of risk than its competitors.
- 4.29. Thus, this criterion does not therefore contradict the presumption of dominance resulting from the calculation of market shares, rather the contrary.

---

<sup>191</sup> Results from the first half of 2014 available at:  
[http://conteudos.ptportugal.pt/Documents/informacao-financeira/primeiro\\_semestre\\_2014\\_relatorio\\_contas\\_consolidadas.pdf](http://conteudos.ptportugal.pt/Documents/informacao-financeira/primeiro_semestre_2014_relatorio_contas_consolidadas.pdf).

### **Rivalry**

- 4.30. Price policy and its evolution over time can be a good indicator of the degree of competition in the market.
- 4.31. Regarding wholesale prices, it is important to note that, in addition to offering access to masts, in practice the only relevant wholesale offers (the supply of access to ducts and LLP) have seen their prices reduced only as a result of the regulatory intervention.
- 4.32. Such facts are not indicative of a competitive market, although it has already been concluded that the relevant market also includes internal supply and not only wholesale supply to third parties.
- 4.33. On the other hand, ANACOM still does not identify special technological advantages for MEO, given the high degree of maturity of the technology used in the support of its network and (wholesale) offers, or of relationship with the main suppliers of equipment and / or infrastructures in the wholesale market under review. Major alternative operators have also developed their own fibre networks (notably GPON, such as MEO) as well as other recent access and transport technologies (such as Ethernet and also DOCSIS 3.0 in the case of cable operators).

### ***Potential competition***

- 4.34. As already pointed out, the unrecoverable costs related to the installation and provision of network access throughout the national territory are extremely high and constitute a very strong structural barrier to entry and expansion, at least with a significant coverage of the national territory. This means that an alternative operator (or incoming potential) could not develop an economically viable operation against such investment costs in certain areas of the territory. Indeed, given these costs and the time needed to expand alternative access networks that would ensure full coverage of the territory under conditions closer to those currently provided by MEO throughout the national territory, it would be difficult for effective competition to develop over the period of time that shall be prospectively discussed in this market analysis.
- 4.35. In view of these and of previous findings, ANACOM does not foresee, in the short and medium term, a significant change in the competitive conditions in this relevant wholesale market at the national level, even though there may be a reduction in the market share of the incumbent operator, though it will be necessarily slow, given the circumstances described above, and possibly limited to certain geographic areas.

- 4.36. Indeed, in urban areas with high population and entrepreneurial density, there may be (potential) competition, in particular with the investment in NAN (both fibre and cable) already carried out, and what is projected by the OPSs.
- 4.37. However, regardless of whether in certain parishes MEO's market share is less than 40 percent, especially when considering maintenance of the regulation of access to conduits, access to masts and copper local loop access, differences in competitive dynamics in specific geographic areas sufficiently strong to target this wholesale market were not been currently identified (not even prospectively, i.e. within the timeframe covered by this market analysis) – see **Chapter 3**. Thus, in terms of the assessment of SMP in the national market, any (potential) differences in the competitive dynamics in certain geographic areas (of small size) do not contradict the evidence of MEO dominance at national level.

#### *Countervailing power*

- 4.38. In this market, interventions aimed at improving the conditions of wholesale access offers have almost always been the initiative of ANACOM, which shows that the customers of these offers have a reduced countervailing power.
- 4.39. In addition, the main players in this market seem to have equal access to financial resources / capital market, despite the difficulties of access to funding across all operators, and therefore, there are no advantages from any operator over the rest.

#### *Individual dominance: conclusion*

- 4.40. MEO's market share, the persistence of high barriers (to entry and) expansion, the absence of evidence of effective competition between undertakings (prices and other variables) and the lack of potential competition at the national market level do not allow to contradict the presumption of dominance resulting from market shares. The factors that place alternative operators at a disadvantage vis-à-vis the incumbent operator still remain, which leads to the conclusion that MEO has a SMP (individual dominance) in Market 3a.

### **Joint dominance**

4.41. Once the existence of individual dominance in this market is concluded, no joint dominance occurs within it.

### **Prospective analysis**

4.42. ANACOM considers that all the factors justifying the appointment of MEO as an undertaking holding SMP will remain in a short / medium term horizon until the next assessment of SMP.

### **Assessment of SMP on the wholesale local access market at a fixed location: Conclusion**

4.43. MEO shall be deemed to have SPM on this market.

## **5. OBLIGATIONS IMPOSED ON THE MARKET OF WHOLESALE LOCAL ACCESS PROVIDED AT A FIXED LOCATION**

- 5.1. In the previous sections Market 3ag was identified and reviewed – market of wholesale local access provided at a fixed location –, and it was concluded that MEO holds SMP on this market.
- 5.2. In the markets with SMP, ANACOM shall impose one or more regulatory obligations, or maintain or amend these obligations where they already exist<sup>192</sup>.
- 5.3. The regulatory framework in force gives priority to the imposition of obligations at the level of the wholesale markets and, only as a last resort, regulatory measures may be imposed on retail markets. This priority has the advantage of attempting to fill in the market gaps through measures directly imposed at the level of the root of the problems. Furthermore, the effects of the referred measures affect not only the wholesale market where they are imposed, but also other downstream wholesale and retail markets (in this specific case, on Market 3b), promoting the competition and the general well-being with benefits for final-users. Finally, it should be noted that the principle of priority of the imposition of obligations on wholesale markets shall be in line with the objective of promoting an efficient investment on infrastructures and innovation, which is provided for in article 5 of the Electronic Communications Law.
- 5.4. In this context, whenever ANACOM imposes, maintains, amends and withdraws obligations, it takes into consideration some regulatory principles and objectives arising from the Electronic Communications Law and also from the documents of the Commission and BEREC.
- 5.5. These principles are considered to be duly known and taken into account in the market prior to the imposition of any obligation on market(s) and for this reason they are duly developed in the next section of this document.

### **Principles considered in the imposition, maintenance, amendment and withdrawal of obligations**

- 5.6. In order to reduce or eliminate the competition issues in a specific market, the referred Authority shall select the obligations that, directly or indirectly, affect the strategic

---

<sup>192</sup> See Guidelines §21 and §114 and articles 56 (e) and 59, no. 4 of the Electronic Communications Act.

variables of the company(ies) with SMP, ensuring that such obligations shall have specific requirements, which have already been identified in chapter 1 of this document.

- 5.7. Accordingly, ANACOM shall adopt a proportional and duly justified intervention in compliance with the national and European regulatory framework, imposing the minimum obligations required to overcome the identified competition issues, with no undue discrimination regarding any entity and that effectively contribute to the evolution towards a competitive situation.
- 5.8. The main regulatory objectives of ANACOM are to promote competition in the provision of electronic communication networks and services, to contribute to the development of the internal market of the European Union and to promote the interests of citizens<sup>193</sup>. One specific task of ANACOM is to ensure that the users derive maximum benefit in terms of choice, price and quality and that there is no distortion or barriers to competition in the electronic communications sector, as well as to encourage efficient investment on infrastructures and promote innovation .
- 5.9. For that purpose, in accordance with articles 67 to 72 and 74 to 76 of the Electronic Communications Law, the obligations that may be imposed on the entity(ies) with SMP in the identified relevant markets are the following:
- To answer to reasonable requests for access and use of specific network elements and associated resources.
  - Transparency in the publication of information, including reference proposals.
  - Non-discrimination in the offer of access and interconnection, as well as in the respective provision of services and information.
  - Accounting separation concerning specific activities regarding access and/or interconnection.
  - Price control and cost accounting.
- 5.10. As hereinabove referred, in the review and definition of the obligations to be imposed (or withdrawn) the principles established under the common position of BEREC on this issue are also considered, as set out in document “*Revised BEREC common position on best practice in remedies on the market for wholesale (physical) network*”

---

<sup>193</sup> See article 5, no. 1, (a) to (c) of Electronic Communications Law.

*infrastructure access (including shared or fully unbundled access) at a fixed location imposed as a consequence of a position of significant market power in the relevant market*<sup>194</sup>, dated of December 2012<sup>194</sup>, and the relevant Recommendations of the Commission.

- 5.11. In short, after the identification and review of a market in which the regulation shall (continue to) exist– the market of wholesale local access provided at a fixed location – , it shall be clarified that the imposition (or maintenance/amendment) and detailed and through monitoring of the compliance with the referred obligations are a priority for ANACOM. To successfully meet this objective shall be an important step to develop, in the short-term, an additional competition in the downstream markets, ensuring advantages and benefits both for end- users and operators, resulting in net income for the general well-being.

### **Position of the Commission concerning the next generation networks**

- 5.12. In the prior market review, ANACOM had already mentioned that it is reviewing the issues related to the evolution to NGAs, including any regulatory measures to be imposed in the future. On that same occasion, ANACOM launched a public consultation on regulatory approach to NGAs, following which it had soon identified the existence of different positions concerning the own need to regulate NGAs, among any other major issues, such as horizontal barriers (namely, the access to ducts) and also vertical barriers (access to buildings), as well as the transition of business models based on OLL to NGAs. In the conclusions set out in the consultation report<sup>195</sup>, ANACOM mentioned the possibility of imposing the access to fibre, following the principle of proportionality in the imposition of obligations, with a “step-by-step” approach eventually based on the review of Markets 4 and 5, in

---

<sup>194</sup> See:

[http://www.berec.europa.eu/eng/document\\_register/subject\\_matter/berec/download/0/1127-revised-berec-common-position-on-best-pr\\_0.pdf](http://www.berec.europa.eu/eng/document_register/subject_matter/berec/download/0/1127-revised-berec-common-position-on-best-pr_0.pdf).

<sup>195</sup> See:

[http://www.anacom.pt/streaming/relatorio\\_NRA\\_final.pdf?contentId=850938&field=ATTACHED\\_FILE](http://www.anacom.pt/streaming/relatorio_NRA_final.pdf?contentId=850938&field=ATTACHED_FILE).

addition to obligations of non-discrimination and transparency related to the referred transition<sup>196</sup>.

- 5.13. At that time, ANACOM acknowledged that there might be geographic areas where there would be sufficient to impose any obligations of access to civil infrastructures, such as ducts and poles, besides the access to local loop. At that time, the referred areas were not defined and it was mentioned that the “*definition of these areas may justify an additional assessment, and currently only the non-competitive areas are identified at the level of the review of market 5, which may prove to be too extensive in view of the differences of the development stage between copper and optic fibre networks*” leaving them to a future definition eventually based on the review of Markets 4 and 5.
- 5.14. In fact, the Commission (and also BEREC) acknowledges that, even in a context of development of NGAs, there is no reason to amend the regulatory basis, which means that all obligations to be imposed shall be based on market reviews and identification of SMP.
- 5.15. Subsequent to the understanding of ANACOM hereinabove referred, the Commission published a Recommendation on NGAs, which “*focuses mainly on[the] «measures» to be imposed on operators referred to as holders of a significant market power (SMP) based on a markets review procedure*”, and the “*adequate set of corrective measures imposed by a NRA (...) shall reflect a proportional application of investments progressivity*”<sup>197</sup>.
- 5.16. The Commission foresees that the development of NGAs shall cause major changes in the provision and demand of services and in the competition conditions, both at wholesale and retail level. In this context, in its Recommendation on NGAs, the Commission considers that the NRAs shall carefully examine these new competition

---

<sup>196</sup> “Consequently, and following the principle of proportionality in the imposition of obligations, a “step-by-step” approach is considered as being eventually based on the review of Markets 4 and 5, where in addition to the obligations of non-discrimination and transparency related to the transition of the models based on OLL to those based on NGAs:

- *In competitive areas, only the access to ducts is imposed with some improvements and equivalence of access and other obligations shall be imposed (access to own fibre or dark fibre) only in case there is no space in ducts. As a last resort, where there is an agreement between the parties concerned, and as an alternative to the access to own fibre or dark fibre, the option for virtual access to the network may be taken into consideration;*
- *In non-competitive areas, in addition to the access to ducts, the access to own fibre or dark fibre is also imposed, as well as virtual access to network (advanced bitstream)”.*

See [http://www.anacom.pt/streaming/relatorio\\_NRA\\_final.pdf?contentId=850938&field=ATTACHED\\_FILE](http://www.anacom.pt/streaming/relatorio_NRA_final.pdf?contentId=850938&field=ATTACHED_FILE).

<sup>197</sup> Cf. recitals (3) and (4) of the Commission Recommendation on NGAs.

conditions and “where it may not be concluded that [they] justify the definition of sub-national geographic markets, it may, however, be appropriate that the NRAs answer to the existence of diverging competitive conditions among the different areas of a geographically defined market, which may be caused, for example, by the existence of several alternative infrastructures or operators that use infrastructures of third parties, imposing differentiated access measures and products”<sup>198</sup>.

- 5.17. Somehow, the Commission Recommendation on NGAs already reflected what ANACOM had previously referred in view of the national circumstances (even though on a preliminary basis), on non-imposition of access to fibre and even if there are operators with SMP in Market 3a, in certain geographic areas and under some assumptions.
- 5.18. According to the same Commission Recommendation on NGAs, “it may be required to impose new measures, as well as a new combination of measures, on markets 4 and 5, at the active and passive level”<sup>199</sup>.
- 5.19. According to the Commission Recommendation on NGAs, in case there are situations of SMP in Market 3a, an appropriate set of obligations shall be imposed on the operator with SMP, taking specifically into account the following:
- Access to the civil engineering structure of the operator with SMP, in accordance with the principle of equivalence, as per Appendix II to the referred Recommendation<sup>200</sup>.
  - Access to the terminating segment in a FTTH architecture at cost-oriented prices, as per Appendix I to the referred Recommendation<sup>201</sup>.
  - Unbundled access to fibre loop in a FTTH architecture (including co-deployment and *backhaul*), regardless of the network architecture and technology at cost-oriented prices<sup>202</sup>, except in geographic areas with several alternative

<sup>198</sup> In that same document, the Commission also refers that “if in the past, in market 5 some measures or sub-national geographic markets had been established, depending on access products in market 4, which may become superfluous due to the deployment of NGA networks, such segmentations or measures shall be revised”.

<sup>199</sup> Recital (5).

<sup>200</sup> See Recommendation no. 13 to 17.

<sup>201</sup> See Recommendation no. 13 to 26.

<sup>202</sup> Taking into account the additional and quantifiable investment risk incurred by the operator with SMP and the proposed price regimes – Appendix I.

infrastructures, such as FTTH and/or cable networks, combined with access competitive offers<sup>203</sup>.

- 5.20. Finally, regarding the characteristics of the migration to NGAs, the Commission clarifies that NRAs should establish a transparent framework for migration of copper networks to fibre networks, maintaining the *ex ante* obligations, unless the operator with SMP and the beneficiary operators reach an agreement on an appropriate migration track. In the absence of such an agreement, the alternative operators shall be informed at least five years in advance regarding the potential switch-off of the points of access to copper network, such as MDF.
- 5.21. Within this scope, it is also important to consider the Commission Recommendation on non-discrimination.
- 5.22. The objectives of the referred recommendation are the promotion of an efficient investment and the innovation in new infrastructures (and the upgrading of the existing ones), while maintaining an effective market competition. The recommendation acknowledges that the existence of an effective competition is a relevant incentive to a long-term investment.
- 5.23. The referred objectives shall be met by ensuring equitable conditions through a more accurate implementation of the obligation of non-discrimination, defining stable and predictable prices of wholesale access to copper networks and increasing the certainty about the conditions that may lead to a non-regulation of prices of wholesale access within the scope of the services based on NGA.
- 5.24. The Commission Recommendation on non-discrimination is in line with the Commission Recommendation on NGAs, as it clarifies some points set out in the latter (e.g. paragraph 36 related to the non-regulation of the prices of access to NGAs), also including the guidelines on issues that were not specifically addressed in the referred Recommendation.
- 5.25. Throughout this chapter, ANACOM takes into account the recommendations of the Commission and the specific positions adopted by BEREC on this issue, assessing the level of suitability to the national circumstances.

---

<sup>203</sup> See Recommendation no. 13 to 28.

## **Obligations currently in force**

- 5.26. As mentioned before, in the prior market review this Authority concluded that MEO held a SMP on the market of wholesale local access provided at a fixed location, considering appropriate, proportional and justified to impose the obligations set out Table 17 in the **Appendix I** of this document (all obligations were duly grounded on article 66 of the Electronic Communications Law, because there was no effective competition in the market).
- 5.27. In the following sections of this document, having in consideration the principles to be complied with in imposing any obligations on the relevant markets and the underlying motives for the existence of SMP in this market, this Authority shall see if it is appropriate to maintain or amend the obligations currently in force, assessing them in view of the principles and requirements provided for in the Electronic Communications Law – namely in no. 5 of article 5 of the Electronic Communications Law – in view of the current market conditions.
- 5.28. It should be noted that the current and potential competition issues within the scope of the market under assessment and within the period up to the next market are taken into consideration. Consequently, the imposition of generic obligations in this review (e.g., obligation of access and use of specific network elements and associated resources) does not affect the specification and implementation of the referred obligations in any subsequent autonomous decisions.
- 5.29. On the other hand, any and all specific decision that has been adopted up to now by ANACOM regarding this market shall be in force, unless its withdrawal is specifically referred to.

## **Review of the specific obligations to be imposed, amended or withdrawn**

### *Access and use of specific network resources*

- 5.30. When considering whether or not an access obligation shall be imposed (or maintained) and when considering the proportionality of such decision, ANACOM shall take into consideration article 72, no. 4 of the Electronic Communications Law, which provides that the assessment of the proportionality of the referred obligation depends on the assessment of the “*technical and economic viability of the use or deployment of any competing resources, considering the rate of development of the market, (...) including the viability of other access products to infrastructure, namely to ducts, the*

*viability of the offer of the proposed access in view of the capacity available, the initial investment made by the owner of the resources, considering the risks involved in the investment, the need to safeguard the competition in the long-term, paying a special attention to a competition that is efficient in economic terms, at the level of infrastructures”.*

**To maintain the obligation of access to local cooper loop**

- 5.31. Considering that the obligation of access to loop (in copper) has already been imposed and implemented in the past – imposed in 2005 and maintained in 2009 –, it shall be taken into account that the technical and economic viability of imposing this obligation has already been widely demonstrated. Furthermore, no questions shall be raised concerning any eventual risks in the investment made to provide the referred access offer. On the contrary, the defence of the competition in the medium-/long-term has to be considered, as well as all investments made by the operator with SMP and by the operators that have invested in the referred offer, safeguarding the respective maintenance, provided that the SMP situation is maintained.
- 5.32. Indeed, ANACOM still considers that maintaining the obligation of access and use of specific network resources is appropriate and that an eventual withdrawal of it could bring adverse consequences to the market. It should be noted that, in this case, the investment made by the alternative operators in network infrastructure for purposes of OLL (namely, in equipments such as DSLAMs and in co-deployment or even in the transport network) may be compromised, resulting in a contradiction with the principles of promoting investment and innovation, considering the existence of an “investment ladder” in which OLL was one of the main “steps” and has provided a strong dynamics at the retail level, namely in broadband access , specifically from 2006 to 2011. And after that period, since the end of 2013, this offer had a new boost from Vodafone, even if this operator is currently also reducing the number of unbundled accesses, and uses it to have a wider range of offer based on fibre in areas not yet covered by it.
- 5.33. If this obligation was withdrawn, competition would be jeopardised, even in Areas C of the broadband access retail market, where there are operators with their own network but that do not cover all these areas, thus needing to use this offer from MEO (which covers the majority of the population), in order to attract more customers, making thus its offer of broadband based on fibre optic profitable.

- 5.34. In this context and in theory, an operator with SMP would have an incentive in order not to grant such access, or at least, not to grant such access under appropriate conditions<sup>204</sup>. In order to leverage its downstream market power, the referred entity with SMP in the market of wholesale local access provided to a fixed location, may have a significant incentive to refuse the access to its network, or to refuse to negotiate on reasonable terms with companies that operate (or intend to offer services) in adjacent (wholesale and retail) markets, which are competing with that entity in those markets. Such refusals would introduce changes in competitive terms in these markets<sup>205</sup>, with a real impact on unbundled copper accesses up to now, but would also have a significant repercussion in the future. This would mean that the markets would also be affected by no longer unbundled accesses<sup>206</sup>, based either on copper or, eventually, on fibre.
- 5.35. In fact, the assessment of the competitive conditions and SMP in the retail markets, namely in the prior market review, showed that one of the factors that led to the reduction of the market share and power of MEO (namely in the broadband access, where the market was deemed to be competitive) was the provision of unbundled access to the local loop, with all associated obligations and interventions by ANACOM. The provision of retail offers based on OLL introduced (and still introduces in several areas) a significant competition in the retail market, and the alternative operators using these offers – which is, currently, mainly Vodafone – had a substantial increase in the respective retail market share and presented a range of very competitive offers, including packages with television.

---

<sup>204</sup> In the absence of any access obligation to local loop, ANACOM concludes that there is no guarantee that the company with SMP voluntarily maintains the access to its local loops, and it is expected that, in the absence of an access obligation, the company with SMP refuses to negotiate on reasonable terms, and thus to grant access to its local loops and sub-loops and to associated resources (including the co-deployment in the exchange/bundling points). It should be noted ADSL PT Network offer was continued (in Areas C, subject to deregulation), but it did not happen in the case of wholesale market for transit segments (of "Routes C"), which is subject to deregulation.

<sup>205</sup> Among the wholesale markets located at an adjacent level in relation to the value chain the most affected would be the market of wholesale central access provided at a fixed location (for mass-market products) and the market of public telephone access network provided at a fixed location. With regard to the first one, one should consider that, in view of the notion of internal provision and the existence of indirect price constraints, the market shares calculated include the broadband accesses provided by deployed co-operators within the scope of OLL. It should be noted that if the referred accesses are not taken into consideration in the calculation of the market shares (simulating a hypothetical unavailability of unbundled access provision), a relevant percentage of broadband accesses (currently used by ORALL beneficiaries) would be compromised, corresponding to a clear deterioration of the actual competitive conditions. In this respect, see the next chapters.

<sup>206</sup> It should be noted that, although the total volume of unbundled accesses is decreasing since mid-2009, the number of unbundled accesses per month is still relatively high. During the fourth quarter of 2013, the number of unbundled accesses was around 6 thousand loops per month.

- 5.36. To maintain the obligation of access and use of specific network resources prevents the operator with SMP from denying (or providing on unreasonable terms) the access to resources that are still essential to the provision of the retail offers in question, which would enable it to obtain significant income from this refusal, with a reduction of the competition in the retail market. This would also correspond to significant losses for the end-users, that would no longer have various offer subscription options in terms of price, quality and included services.
- 5.37. Although one main beneficiary of OLL - NOS - has referred that it is not accepting new retail customers for major consumer products in the unbundled access (although it continues to unbundle around three hundred loops per month<sup>207</sup>), to maintain the accesses already unbundled is important<sup>208</sup>, but that option may also be reassessed by the same operator (although it has cable network coverage in these areas). On the other hand, there are other operators focused on specific business segments, such as Oni (currently integrated in Apax together with Cabovisão) and Colt, which are also using unbundled accesses (although Colt has a very small number of accesses, around a few dozens).
- 5.38. In fact, since there were already retail offers based on OLL and some accumulated experience, some aspects of ORALL have however been subject to a thorough revision and updating, with specific attention to:
- improvements in the information to be provided on the access network and changes made to the referred network;
  - forecasting plans and their relation to the payment of compensation for non-compliance

---

<sup>207</sup> According to data of the fourth quarter of 2015.

<sup>208</sup> Namely in order to enable “multi-site” offers in the corporate market.

- direct cable input in the exchanges through MEO ducts and connection of non-adjacent modules;
- rescheduling system of loop unbundling;
- deadlines of exchanges access;
- service quality levels, namely for *Premium* services;
- compensation for non-compliance of service quality levels;
- possibility of OSPs to deploy other standardized technologies - see ANACOM decision adopted on February 17, 2010 on the changes made to ORALL<sup>209</sup>; and
- procedures to be followed in the assessment of service quality of regulated wholesale offers (decision adopted on March 28, 2012)<sup>210</sup>.

5.39. This offer should eventually require additional changes, taking into account the experience accumulated over the years. However, in a review of this offer, one should always consider that the demand is decreasing and that any potential shall take into consideration a commitment in terms of costs and related benefits. Consequently and in principle, ANACOM shall only interfere in specific cases, duly substantiated by the offer beneficiaries and which are essential to ensure the development of their retail offers. ANACOM may also accept changes to ORALL proposed by MEO, provided that they are duly substantiated and after consultation with the beneficiaries.

5.40. Therefore, in the opinion of this Authority, even with the NGA developments - addressed in the next section - it is essential to maintain the obligation of unbundled access to the local loop, one of the forms of access which contributed the most to the promotion of innovation and efficient investment in infrastructures, also contributing to a long-term commitment of the operators who benefit from it. In this regard, it should be recalled that the provision of offers based on the local loop of the incumbent operator affects not only the market of wholesale central access provided at a fixed location (for major consumer products) and the retail broadband access market, but also all other related markets, whose (bundled) offers are based on OLL, ultimately affect, namely pay-TV market, STF market and even high-quality access products market.

---

<sup>209</sup> At <https://www.anacom.pt/render.jsp?contentId=1016769>.

<sup>210</sup> See <https://www.anacom.pt/render.jsp?contentId=1124132>.

- 5.41. In what concerns the obligations of local sub-loop access and shared access, ANACOM considers that up to now the referred accesses had no demand within the scope of ORALL provision. Considering that the demand for copper unbundled accesses has been decreasing for several years and that the obligation of local sub-loop access and shared access is still in force, in a future market review ANACOM may consider their potential withdrawal within the amendments made to ORALL and after consultation with the beneficiaries.
- 5.42. It is therefore concluded that, concerning the need to safeguard competition in the long-term, since MEO holds a significant part of the access to the end-users, the access to the local loop and sub-loop (in copper) is an essential obligation to enable alternative operators to compete with the referred entity, including but not limited to offers of broadband services. If the obligation of local sub-loop access and shared access is maintained, they may be withdrawn following the amendments made to ORALL.

**Access to construction infrastructure (ducts, poles and associated infrastructure)**

- 5.43. Concerning the access to ducts, ANACOM has been intervening in this important area, and namely, on October 28, 2010, it has adopted a decision on a significant number of amendments to be made on ORAC, mainly at the level of information transparency (and *online* provision of information on ducts layout and respective level of occupancy), service quality and provision of access conditions to poles and infrastructures for the transition from underground access to air access<sup>211</sup>.

- 5.44. Consequently, on December 22, 2010, MEO published the Reference Access Offer for Poles (ORAP)<sup>212</sup>, amended ORAC following the decisions adopted by this Authority

---

<sup>211</sup> These amendments involved, among other things, the provision by MEO (on the Extranet) of indicative information on the occupation of the ducts located in the Greater Lisbon, Greater Porto and in the remaining "areas C" of the prior market review, reduction of the deadline to answer to the requests for feasibility review in "areas NC", reduction of the scheduling deadline for monitoring urgent interventions, creation of two new indicators of service quality (deadline for cable deployment service and deadline for the ducts clearing service) and also the amendment to the payment terms of the compensation for non-compliance with the obligations set forth in ORAC. See: <https://www.anacom.pt/render.jsp?contentId=1058577>.

<sup>212</sup> See: <http://ptwholesale.telecom.pt/GSW/PT/Canais/ProdutosServicos/OfertasReferencia/ORAP/ORAP.htm>.

and has provided in *Extranet* (initially for the areas of the Greater Lisbon and Greater Porto) indicative information on the occupation of some duct sections<sup>213</sup>, which allows that the OSP know, with a certain degree of certainty, if there is any space available for the deployment of their cables.

- 5.45. This Authority considers that the developments occurred and still occurring in NRAs – and they shall be addressed in the next section – shall imply that it is mandatory to maintain the obligation of access to ducts, poles and associated infrastructure (in which most of the development of the networks of all operators is based), which is one of the forms of access that has contributed the most to the promotion of an efficient investment in alternative network infrastructures, including cable and fibre optic networks, also contributing to a long-term commitment of the operators that benefit from it.
- 5.46. On the other hand, after the results obtained in Portugal, the Commission has shown an increasing interest in the access obligation to the civil construction infrastructure.
- 5.47. In fact, according to recital 20 of the Commission Recommendation on NRAs "*it is necessary to provide the alternative operators (...) with appropriate access products so that they remain competitive within the scope of NGA networks. In what concerns fibre to the home (FTTH), as the case may be, such products may consist of access to civil engineering infrastructures or (...) access to unbundled fibre loop (Including dark fibre)*".
- 5.48. ANACOM considers that, in the absence of regulation of the access to ducts and poles, MEO would most probably hold a totally dominant position, i.e., it would probably be the only operator (with a slightest relevance) present in the market of wholesale local access provided at a fixed location and, eventually, in downstream markets, considering that without an appropriate offer of access to the almost ubiquitous civil construction infrastructure of MEO, it would be very difficult for an alternative operator to develop its own network and support the respective retail services with a minimum return. With this in mind, one shall take into consideration the decisive weight of this infrastructure on the costs of deployment of new networks, in case it has to be built from scratch.

---

<sup>213</sup> Based on a system with at least four levels (ranges) of occupation (in percentage) together with information on the whole section, in cm, of the duct branches.

- 5.49. In other words, a possible withdrawn of the obligation of access to the civil construction infrastructure (ducts, poles and associated infrastructure) would seriously affect the market and would represent a step back in the investment already made in fibre and cable access networks (and also in the transport networks) by the alternative operators.
- 5.50. In this regard, it should be noted that the provisions set forth in Decree-Law no. 123/2009, of May 21, on the access to civil construction infrastructure is a positive addition to the current regulation of access to MEO civil construction infrastructure. Nevertheless, it is not enough, since the current regulation (focused on MEO) goes beyond the provisions of the referred law and consequently, the capacity of intervention of ANACOM in terms of procedures and processes is very important. Furthermore, notwithstanding Decree-Law no. 123/2009, of May 21, also applies to other operators and entities that have an infrastructure suitable for hosting electronic communications networks, it is also true that the access to infrastructures alternative to those of MEO has up to now been limited.
- 5.51. In fact, the issues are often at the level of the specific procedures and processes, which prevent a proper functioning of the reference offers (e.g. ORAC and ORAP) and require the intervention of ANACOM.
- 5.52. Furthermore, in the prior review of markets, ANACOM informed that it was carrying out a review of the issues related to the evolution towards NGA, as part of a market consultation process, which has began in 2008 with the publication of the public consultation on the regulatory approach regarding NRAs. In the conclusions of this consultation in 2009, ANACOM refers the potential imposition, in addition to the potential unbundling of fibre loops and the obligation of access to ducts (resulting from Electronic Communications Law<sup>214</sup> and that is still essential for the development of competition in this market), the access to dark fibre, namely in the situations where access to ducts was not possible for capacity reasons or otherwise.

---

<sup>214</sup> At the time, this obligation was directly imposed by the Electronic Communications Law (article 26 applicable to the concessionary) but currently it is the result of a market review carried out under the Electronic Communications Law.

- 5.53. It should be noted that dark fibre (access to MEO unlighted fibre infrastructure) is *per se* an infrastructure essentially provided at the *core* network and *backhaul* level (transport to the bundling point of the access network), where alternative operators do not normally face insurmountable barriers to the deployment of cables in ducts, namely using ORAC (which, in the meantime, has been complemented by ORAP), and sometimes, the access to ducts of other entities. The option of deploying own fibre cabling at the *core* and transport networks level shall result in a lower cost than the option of leasing dark fibre (or leased lines) to MEO. In other words, the imposition of a (regulated) "unrestricted" access to dark fibre would not be proportional and, in this context, the existence/feasibility of access to ducts and poles has to be taken into consideration. So, ANACOM considers that the imposition of access to dark fibre only appears proportional when there are no technical conditions for the access to MEO ducts and poles<sup>215</sup>, namely due to lack of space.
- 5.54. One should, therefore, consider that in view of the development of the transport networks, and even of the access to fibre from the alternative operators, the access to MEO dark fibre should be provided only if there is no space in ducts and poles<sup>216</sup>, i.e., if there is no viable (and reasonable) alternative route provided by MEO and there is fibre provided in these specific duct or pole sections. As this is an alternative (and eventually temporary) access to ducts, it should be provided under ORAC and he ORAP or even under a specific offer.
- 5.55. The specific conditions of the referred dark fibre offer, including the respective procedures, SLA and prices, shall be provided by MEO within 2 months of the notification of the final decision on this market review to ORAC and ORAP beneficiaries that intend to install their own fibre<sup>217</sup>, and it may be subject to an intervention by ANACOM, where justified.
- 5.56. In view of the results obtained in Portugal, the Commission has shown a growing interest in the obligation of access to the civil construction infrastructure.

---

<sup>215</sup> Although there might be situations in which there are ducts of other entities, the operators may choose to use these ducts, if they consider that they substitute the MEO ducts, or they may choose to use MEO dark fibre.

<sup>216</sup> This is a situation that is becoming increasingly important.

<sup>217</sup> It makes no sense to provide this alternative offer to operators that do not intend to install their own fibre, for example, to a cable operator that intends to use a certain duct to deploy coaxial cables. If there is no space in the duct, the cable operator shall not be interested in interconnecting 2 coaxial cables (at the "ends" of the section).

- 5.57. In fact, according to recital 20 of the Commission Recommendation on NRAs *“it is required to provide alternative operators (...) with appropriate access products so they may remain competitive within the scope of NGA networks. In the case of fibre to the home (FTTH), such products may consist, as the case may be, of access to civil engineering infrastructures or (...) access to unbundled fibre loop (including dark fibre)”*.
- 5.58. Subsequently, the Directive 2014/61/EU of the European Parliament and of the Council, of May 15, 2014, on measures to reduce the cost of deploying high-speed electronic communications network<sup>218</sup> was published with the purpose to facilitate the access of providers of electronic communications network to ducts, masts, cabinets, antennas, poles and other elements of third-parties networks (operators of electronic communications networks or of any other sectors) for the deployment of high-speed electronic communications networks .

#### **The evolution towards NRAs and the access to fibre optic**

- 5.59. The information provided and the review carried out by ANACOM lead to the conclusion that the alternative operators may have technical and economic feasibility for the deployment and dissemination of resources competing with the fibre optic access infrastructure owned by MEO considering most of the geographic areas where MEO is present. This fact may probably boost the development of competition in the downstream markets supported by the development of alternative infrastructures.
- 5.60. Although one expects that the investment plans of alternative operators (current OLL beneficiaries, as well as cable operators) is limited to certain geographic areas, for technical and economic reasons (e.g. density of potential customers and access to funding), their networks shall probably have, or maintain, a coverage so extensive or even more extensive than MEO fibre optic network.
- 5.61. In November 2013 Vodafone had already announced an increase in fibre optic investment with the objective to cover more than 1.5 million households during 2015<sup>219</sup>. In the meantime, in 2014, Vodafone concluded an agreement with MEO for the

---

<sup>218</sup> See <http://eur-lex.europa.eu/legal-content/PT/TXT/?uri=celex%3A32014L0061>.

<sup>219</sup> Source: Jornal Público, of 14.11.2013 (available on <http://www.publico.pt/economia/noticia/vodafone-vai-investir-mais-240-milhoes-de-euros-em-portugal-1612581>).

development, capacity swap and fibre optic network sharing, which covers the sharing of dark fibre in about 900 thousand households and in which each entity covered approximately 450 thousand households. This agreement enables Vodafone and MEO fibre networks to cover around 2 million households, mostly in the same areas. And, as previously mentioned, Vodafone most recently announced plans to extend its fibre network to 550,000 households and businesses by the end of 2016, increasing its network coverage to more than 2.75 million. This coverage is equivalent to more than 2/3 of the Portuguese families and companies, for a total investment of 125 million euros.

- 5.62. Furthermore, NOS is the operator with the highest coverage of NGA at the national level and, as also mentioned before, it expects to reinforce the NGN coverage and for that purpose NOS was granted a loan in the amount of 100 million euros made by EIB. This amount may not exceed 50% of the total investment, and is intended to extend its network to 574 thousand additional households.
- 5.63. In the meantime, as already mentioned, the Commission recommends that "*if in market 4 there is a situation of significant market power (SMP), an appropriate set of measures shall be applied*"<sup>220</sup>. The Commission also indicates in detail the obligations to be imposed on the entity with SMP in the market of wholesale local access provided at a fixed location (Market 3a), although it allows NRAs to take into due account the national circumstances in drawing up the appropriate corrective measures<sup>221</sup>.
- 5.64. For the Commission<sup>222</sup>, "*it is required to provide alternative operators — some of them having already installed their own connection networks to the unbundled copper loop from the operator with SMP — suitable access products so they may remain competitive within the scope of NGA networks. In the case of fibre to the home (FTTH), such products may consist, as the case may be, of access to civil engineering infrastructures or to the terminating segment, access to unbundled fibre loop (including dark fibre) or to wholesale broadband access*".
- 5.65. In the prior chapters of this document, the referred access market was defined and reviewed, including all its respective local wholesale accesses provided at a fixed

<sup>220</sup> Cf. recital (11) of the Commission Recommendation on NRAs.

<sup>221</sup> Cf. recital (3) of the Commission Recommendation on NRAs: "*It is, therefore, appropriate to provide some guidelines to NRAs, in order to prevent unjustified differences among regulatory approaches, while allowing them to take into due account the national circumstances in drawing up the appropriate corrective measures*".

<sup>222</sup> Cf. recital (20) of the Commission Recommendation on NRAs.

location, regardless of the technology used, copper or fibre (or cable), and MEO has been identified as a company with SMP in the referred national market.

- 5.66. Consequently, with regard to the obligation to "*access and use specific network resources*" previously imposed on copper accesses, one shall assess whether it shall be extended to local MEO fibre loops, since the market of wholesale local access provided at a fixed location was so defined and reviewed, including all accesses in copper or fibre (or cable). In this respect, it should be noted that, in accordance with the framework in force, including the above-referred Commission Recommendation on NRAs, "*NRAs shall make the provision of unbundled access to the fibre loop mandatory, regardless of the architecture of the network and the technology used by the operator with SMP*"<sup>223</sup>.
- 5.67. However, in the same Recommendation, the Commission provides that "*Any exception may only be justified in geographic areas where the presence of several alternative infrastructures, such as FTTH and/or cable networks, in combination with access offers, may result in and effective downstream competition*"<sup>224</sup>.
- 5.68. Consequently, the first step shall be to identify the areas of the national territory where there are several alternative NGA infrastructures, whether fibre or cable networks.
- 5.69. Somehow, this was already carried out with the definition of the retail geographic market for broadband access for major consumer products, and the following parishes have been identified as competitive, taking into account the obligations currently imposed on Market 3a:

- where there are at least two alternative operators to MEO, each with a NGA coverage of more than 50 percent, amounting to 286 parishes.

In these parishes MEO had, at the end of 2015, **[IIC]** **[FIC]** cabled households with fibre corresponding to 92 percent of all households they cabled (including cabled households covered by the fibre optic network sharing agreement

---

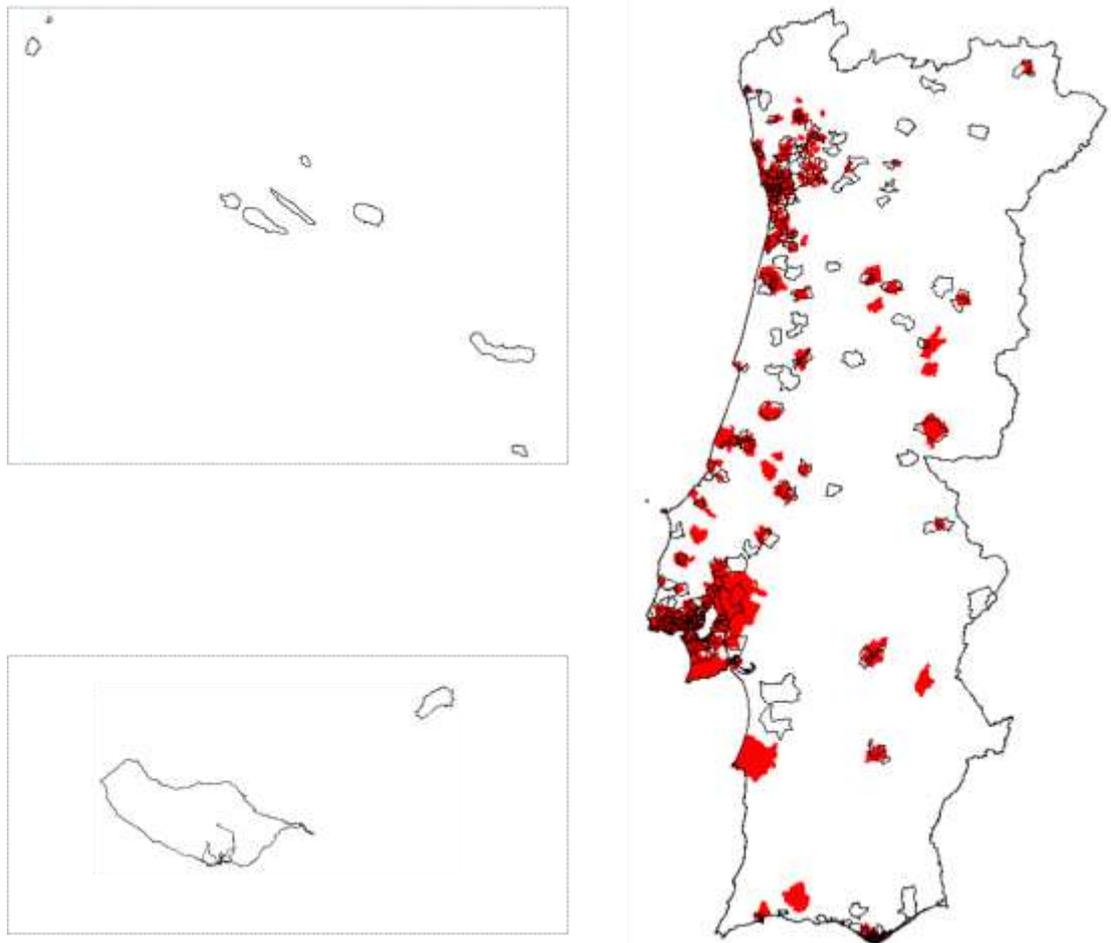
<sup>223</sup> See (23)

<sup>224</sup> See (22)

concluded with Vodafone) and the MEO average market share was of 36 percent. 62 percent of the national broadband accesses are located in these parishes.

In most of these parishes, besides the operators with NGA coverage, there is also at least one co-deployed operator for purposes of OLL, as one may see in Figure 10, which shows the central areas with co-deployed operators and the parishes where there are at least two alternative operators to MEO with a coverage above 50 percent. It should be noted that, since copper, fibre and cable accesses are in the same relevant market, the existence of areas with co-deployed operators is also important to ensure a more extensive coverage by alternative operators to MEO, and they are deemed as areas of relatively high attractiveness and with a potential for development of alternative NGAs.

**Figure 10. Exchange areas with co-deployed operators (black outline) and parishes where there are at least two alternative operators to MEO with a coverage above 50 percent (coloured areas),**

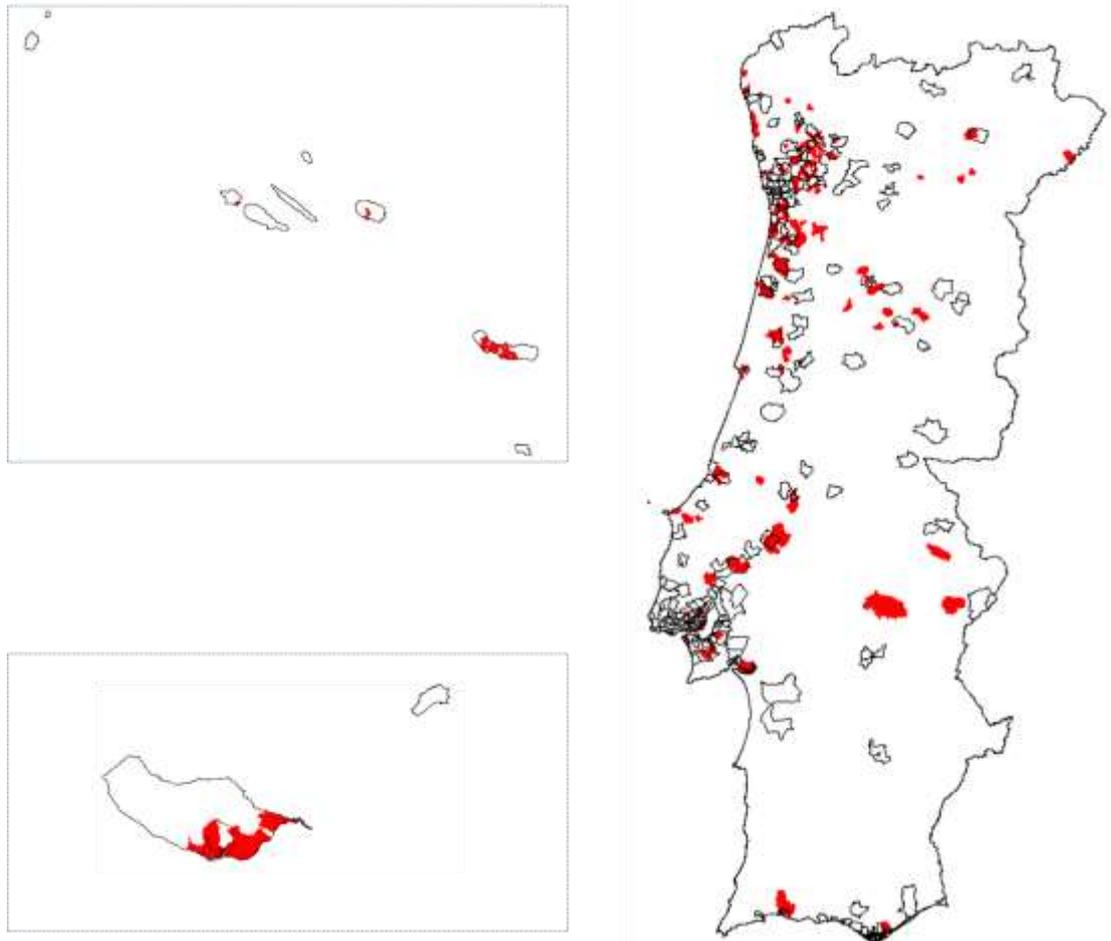


- where there is an alternative operator to MEO with a NGA coverage above 50 percent and where MEO market share in broadband access retail market is under 50 percent, amounting to 180 parishes.

In these parishes MEO had, at the end of 2015, **[IIC]** **[FIC]** cabled households with fibre corresponding to 5 percent of all households they cabled (including cabled households covered by the fibre optic network sharing agreement concluded with Vodafone) and the MEO average market share was of 35 percent (that is to say, which is even lower than MEO average market share in all parishes where there are at least two alternative operators to MEO with a coverage above 50 percent). 11 percent of the national broadband accesses are located in these parishes.

Also in this case, in most of these parishes there is at least one co-deployed operator for purposes of OLL (Figure 11, where the central areas have co-deployed operators and the parishes where there is an alternative operator to MEO with a coverage above 50 percent and where MEO market share in broadband access retail market is under 50 percent).

**Figure 11. Exchange areas with co-deployed operators (black outline) and parishes where there is an alternative operator to MEO with a coverage above than 50 percent and where MEO market share in the broadband access retail market is under 50 percent (coloured areas)**



5.70. In fact, in the above-referred 466 parishes that constitute Areas C, the average coverage for the exchange areas with co-deployed operators is around 78 percent.

5.71. Moreover, the coverage of NOS cable network is considerably higher than MEO fibre network coverage and, consequently, there are not many areas where the households are exclusively covered by MEO network.

5.72. So, in most of the national territory, besides MEO fibre network, there are two or more alternative high-speed networks, namely NOS, Vodafone and Apax (Cabovisão), and also co-deployed operators for OLL purposes.

- 5.73. A more detailed review of these areas C was carried out in this document when the definition of the geographic markets at the retail level took place.
- 5.74. It should also be noted that the NGAs are already deployed in the rural areas within the scope of the calls for tenders launched in 2009, under which these networks shall guarantee a coverage of at least 50 percent of the population of the geographic area of each of the municipalities concerned and the operators that manage them are subject to open network obligations, providing wholesale offers of passive and active access to fibre optic, thus constituting NGA alternatives to MEO.
- 5.75. The imposition of access to fibre optic network of MEO shall not be proportional, which is a principle that shall be followed in all (regulatory) decisions of ANACOM, and is set out not only in the national regulatory framework but also in the applicable Community regulatory framework. Namely:
- According to Article 8, no. 1 of the Framework Directive "... in the performance of regulatory tasks (...) national regulatory authorities adopt all reasonable measures to meet the objectives [of regulation]. Such measures shall be proportional to the referred objectives
  - In accordance with Article 8, no. 5 of the Framework Directive "The national regulatory authorities shall, in achieving their objectives [of regulation], apply objective, transparent, non-discriminatory and proportional regulatory principles...".
  - Article 8, no. 4 of the Directive on Access provides that "*The obligations imposed in accordance [with the Directive on Access] shall be provided and justified in the light of the objectives [of regulation established in the Framework Directive]*".
  - In accordance with Article 12, no. 2 of the Directive on Access "When considering the application of the obligations [of access and use of specific network resources], and namely, in the assessment of the form of proportional application of these obligations to the[regulatory] objectives the national regulatory authorities shall take into consideration the following factors"<sup>225</sup>.

---

<sup>225</sup> Factors identified in Article 72, no. 4 of the Electronic Communications Law.

- 5.76. In assessing the proportionality of the imposition of the obligation of accessing MEO fibre optic, one shall be consider that, with the other obligations to be imposed on Market 3a (namely, the access to ducts, poles and local copper loop):
- In certain areas of the national territory - Areas C -, the retail market for broadband access is competitive, with several operators using NGA.
  - In the remaining areas, in static terms, such an obligation would only **[IIC]** **[FIC]** cabled households with fibre, corresponding to 3 percent of the total number of households they cabled (including cabled households covered by the fibre optic network sharing agreement concluded with Vodafone). In dynamic terms, and although this situation should be duly considered given the specific existing conditions and market structure, the imposition of regulation in areas where MEO is not even present with fibre optic (and where, in several cases, there are already other operators with NGA) could be a disincentive to the investment of MEO in NGA. In any of these hypotheses, there is still in part of Areas NC an open access to high-speed networks in rural areas. In other words, in all these areas there are around 861,000 households covered by NGA of other operators and so, it does not seem proportional to impose access to MEO fibre optic network, which covers a much smaller number of households.
- 5.77. It should be noted that the above-referred 3 percent of households cabled by MEO with fibre included in Areas NC are located in parishes adjacent to those of Areas C, where operators in the latter may expect to expand the coverage of their networks – see Figure 12.

Figure 12. Households cabled with MEO fibre located in parishes NC (light blue) and in parishes C (light coloured areas)

[IIC]



[FIC]

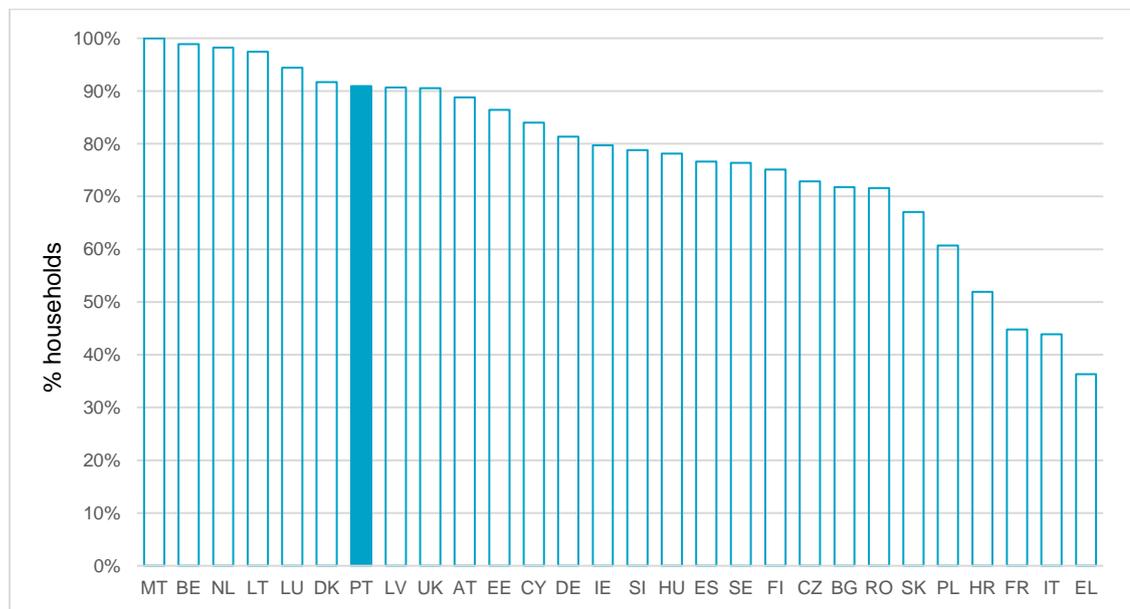
- 5.78. In addition to this, MEO has launched, on March 11, 2016, a wholesale fibre optic access commercial offer<sup>226</sup>.
- 5.79. Therefore, the non-imposition of access to MEO fibre is considered in line with the objectives of the Commission in its Recommendation on NGAs. This non-imposition would be a proportional measure, since the cases where there is exclusivity of MEO fibre optic network are very specific, whenever the benefits of a potential imposition of the obligation of access to these specific accesses would not exceed the respective

<sup>226</sup> See <http://ptwholesale.pt/pt/servicos-nacionais/infraestruturas/Paginas/Access-PON-PT.aspx>.

costs and the imposition of an offer of access to the fibre that covers such a small number of accesses would not be proportional.

5.80. It should also be noted that, even without imposing any obligation to the access to fibre optic, Portugal is one of the European Union countries with the highest NGA coverage, in general terms (see Figure 13)<sup>227</sup> and FTTH in particular (See Figure 14)<sup>228</sup>, ensured by a wide range of operators (with HFC and FTTH networks), which has contributed to a high penetration rate of service packages (see Figure 15)<sup>229</sup>, with a reasonable price level.

**Figure 13. NRA cabled households in various European countries in June 2015**



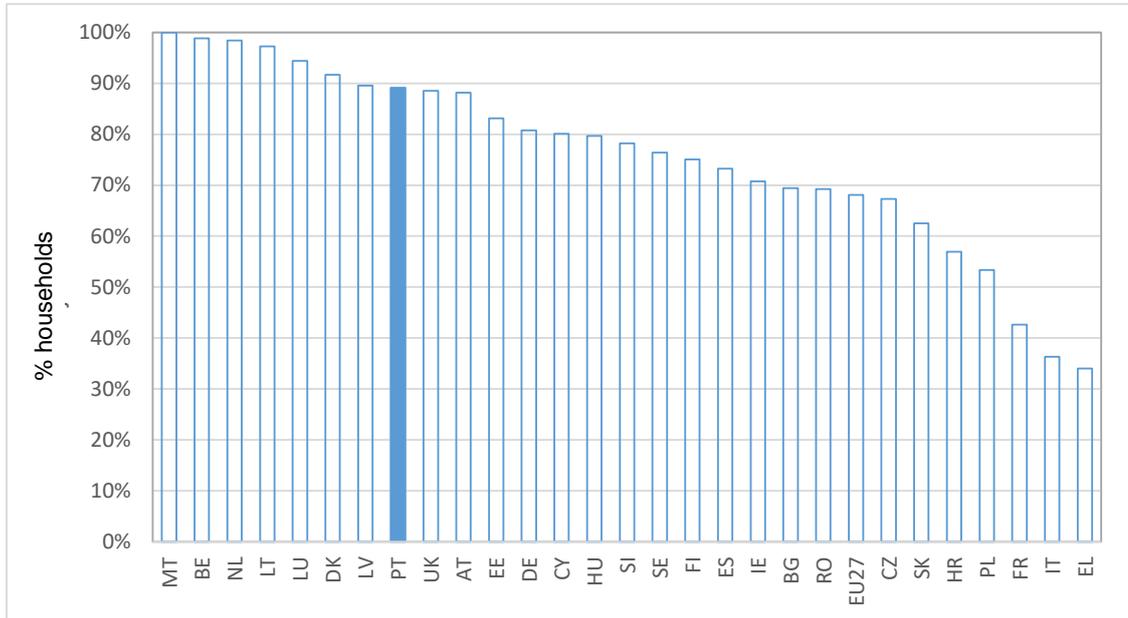
Source: European Commission (digital agenda scoreboard)

<sup>227</sup> See <https://ec.europa.eu/digital-agenda/en/digital-agenda-scoreboard>.

<sup>228</sup> See [http://ec.europa.eu/newsroom/dae/document.cfm?action=display&doc\\_id=15807](http://ec.europa.eu/newsroom/dae/document.cfm?action=display&doc_id=15807).

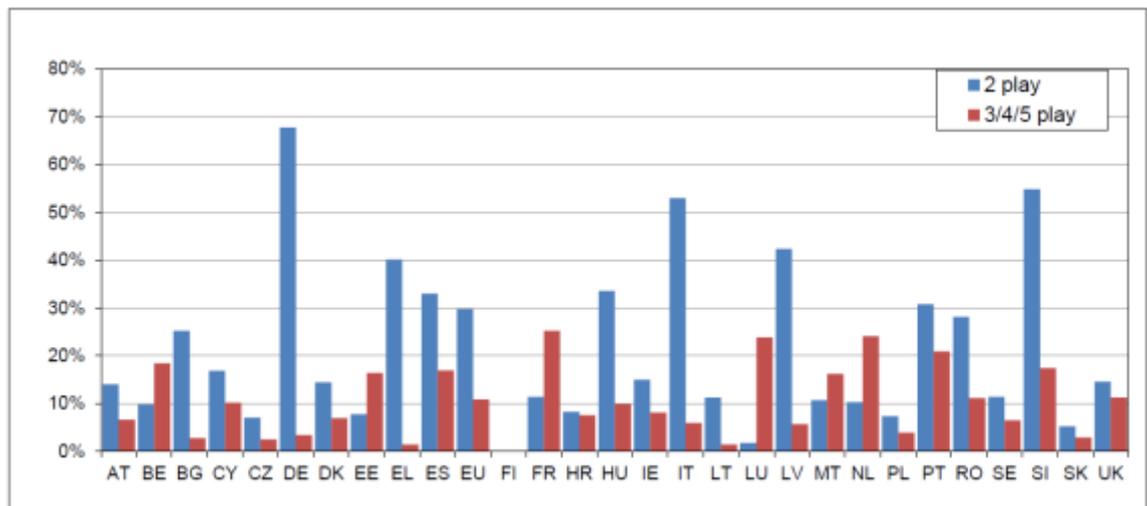
<sup>229</sup> See [ec.europa.eu/newsroom/dae/document.cfm?doc\\_id=9990](http://ec.europa.eu/newsroom/dae/document.cfm?doc_id=9990).

**Figure 14. FTTP (fibre to the premises) cabled households in various European countries in June 2015**



Source: European Commission (Connectivity Broadband market developments in the EU 2016)

**Figure 15. Penetration of 2P and 3/4/5P packages in various European countries in July 2014**



Source: European Commission (Commission Staff Working Document – Implementation of the EU regulatory framework for electronic communication - 2015)

5.81. In fact, the average monthly invoice for services that include broadband access has been reduced over the years, as shown in the following table, which shows an increased competition in the broadband market in Portugal.

**Table 12. Average monthly invoice for fixed broadband services**

		2011	2012	2013	2014	2015
Stand-alone	BLF	21.17	20.96	21.56	22.51	22.92
	BLM tablet/PC	18.07	15.50	15.36	15.95	15.61
	BLM mobile phone	:	11.11	11.67	12.03	11.71
Main modalities of services in package with Internet <sup>(1)</sup>	Double play: BLF+TVS	47.89	45.69	41.49	38.3	38.12
	Double play: STF+BLF	28.64	27.36	27.55	29.13	27.96
	Triple-play: STF+BLF+TVS	52.23	49.08	49.17	46.66	43.43
	Quadruple-play: STF+BLF+BLM+TVS	55.37	54.02	53.34	50.73	48.26
	Quadruple-play: STF+STM+BLF+TVS	:	:	78.23	69.98	66.29
	Quintuple-play: STF+STM+BLF+BLM+TVS	:	:	75.98	76.16	73.78
<p><b>Unit:</b> euros with TVA  <b>Source:</b> ANACOM based on Markttest BTC microdata, 2011 to 2015  <b>Grounds:</b>            BLF: Total number of households using BLF not included in the service package (it does not take into account non-responses)            STM: Total number of persons using mobile telephone not included in the service package (does it does not take into account non-responses) for 10 years or more            BLM tablet/PC: Total number of persons aged 15 or more using BLM via tablet/PC not included in the service package (it does not take into account non-responses)            BLM mobile phone: Total persons aged 15 or more (until 2014) using BLM via mobile not included in the service package (it does not take into account non-responses) for 10 or more years (as of 2015)            Packages: Total number of households using the respective service package (it does not take into account non-responses)            (1) In all these modalities the "Internet on mobile phone" is included in the STM.  <b>Note:</b> The packages have been benefiting from the inclusion of additional features and content (e.g., automatic recordings, more channels, HD channels), mostly without any price increase.</p>						

5.82. It should also be mentioned that in the parishes that are located in Areas NC:

- There are 610 parishes covered by rural NGAs (more than 15%) operating under an open network system – in these parishes there are around 548 thousand households (corresponding to 21 percent of the households located in Areas NC).
- There are 292 parishes where there is(are) (one) operator(s) with more than 15 percent of the households - in these parishes there are around 779 thousand households (corresponding to 30 percent of the households located in Areas NC).
- In 1724 parishes, there is no NGA coverage of any alternative operators to MEO (at least with 15 percent) - in these parishes there are 1.3 million households (or 49 percent of the households located in Areas NC).

- 5.83. There are plans, both by MEO and by alternative operators, to extend their NGAs, as referred to at the beginning of the document:
- Additional investments by MEO, with the strategic objective of implementing fibre optic in another 3 million households and companies, through the construction of 30,000 km of fibre optic cable in 5 years, at a rate of 600 thousand homes per year.
  - Vodafone investments to extend its fibre network to 550 thousand households and companies by the end of 2016, increasing the reach of its network to more than 2.75 million, which is a coverage equivalent to more than 2/3 of households and companies with an investment of 125 million euros.
  - The continued investment of NOS in NGA is made with a EIB loan in the amount of 100 million euros, which may not exceed 50 per cent of the total investment. The objective of this continued investment is to extend NOS network to 574 thousand additional households.
- 5.84. Although part of this investment may occur in Areas C, it is expected that another part may cover Areas NC and, by maintaining (or increasing) the regulation of access to ducts and poles, the barriers to the expansion of networks of alternative operators may be reduced, which shall result in an expansion of the competitive scenario in the retail market.
- 5.85. The imposition of a regulated access to MEO fibre optic could result in a reduction in MEO investment incentives, possibly with a lack of fibre optic offers in a significant part of the parishes located in Areas NC (namely in 1,724 parishes where there is no NGA coverage).
- 5.86. Furthermore, if the practice of uniform tariffs that has been followed in the offers of a same operator based on the same infrastructure throughout the national territory is maintained, the users located in these geographic areas may also benefit from the existing competition in Areas C, even if there are no offers made by alternative operators in Areas NC.
- 5.87. In conclusion, and considering inappropriate at this stage to impose an obligation of access to MEO fibre optic network for the reasons above-referred, in particular for reasons of (dis)proportionality of the obligation and need to encourage investment, it should be stressed that ANACOM may, at any time and given the evolution of the

competitive scenario of the relevant market, carry out a new review and specifically assess the obligations framework imposed on the operator with SMP.

#### **Access to the terminating segment**

- 5.88. According to the Commission Recommendation on NGAs<sup>230</sup>, access to the fibre terminating segment, including cabling within buildings, shall be imposed on the operator with SMP that deploys FTTH.
- 5.89. Decree-Law no. 123/2009, of May 21, provides for mandatory deployment of fibre optic in infrastructures in buildings (ITED) (in addition to the mandatory deployment of copper and coaxial cable that is already in force), promoting the deployment of fibre optic in buildings and avoiding a monopoly of these infrastructures by the first operator.
- 5.90. The second edition of the ITED manual defines (and adds<sup>231</sup>) the mandatory technical regulations and the recommendations (continuing to be in line with European Standardisation) for the deployment of telecommunication systems in buildings, including infrastructures adapted to NGAs.
- 5.91. It is now mandatory, both in new buildings and in structural alterations to be made in buildings already built, to guarantee the fibre cabling support of several operators and the respective connection to the (existing) telecommunications infrastructure, enabling the first operator to accede the building to deploy referred type of infrastructures, namely to deploy the upstream column and the customer connection points. This shall enable each operator to make the connection to each unit with its own means and mainly to share the infrastructure deployed by other operators that want to offer fibre-based electronic communication services (this sharing point shall be located inside the building, within or next to the general distribution frame of the building).
- 5.92. According to the ITED manual, the general fibre distribution frame (to be shared) shall be dimensioned according to the number of units of the building, considering at least two fibres per unit.

---

<sup>230</sup> See §18 and §19.

<sup>231</sup> See <http://www.anacom.pt/render.jsp?contentId=995841#.VH2l42dHi3A>.

5.93. In this context of sharing fibre infrastructure at the level of the terminating segment (in the building) in accordance with law, ANACOM considers that there shall be no restriction to the access to this infrastructure by the alternative operators, minimising such vertical barriers in the access to the end-user and with no need to impose (asymmetric) obligations in this review.

### **Conclusion**

5.94. Considering the above-referred, ANACOM considers that the access obligations provided for in the prior review shall be maintained, namely in what concerns the access to local cooper loops and sub-loops and associated resources, including co-deployment in local MDFs/exchanges and in street cabinets, signal transport, as well as the access to ducts and poles and, additionally, the imposition of an obligation to provide dark fibre when there is no space in ducts or poles and there is fibre available in these specific duct or pole sections. The offer of dark fibre shall be provided by MEO within 2 months from notification of the final decision on the present review and may be included in ORAC and ORAP or constitute an autonomous reference offer.

5.95. Furthermore, ANACOM considers that MEO shall continue to be subject to the obligations to negotiate in good faith with the companies requesting access and not to withdraw the access already granted to certain resources.

5.96. These obligations correspond to the conditions currently offered by MEO through ORALL, ORAC and ORAP, which ANACOM believes should be maintained and, in the short-term, extended to the provision of MEO dark fibre under the above-mentioned conditions, without prejudice to the conditions that may be specified and detailed in any autonomous decisions.

5.97. ANACOM further believes that the definition of a suitable price for wholesale access products (including access to copper, ducts and poles and associated infrastructure, as well as dark fibre) enables competitors to move forward to an efficient investment in their own infrastructure, simultaneously enabling the offer of competitive retail services with clear benefits for the end-user. This has been confirmed by the developments in

the markets concerned<sup>232</sup> - this issue is covered in detail in the next section on price control.

- 5.98. Concerning the non-imposition of an obligation of access to MEO fibre optic network, as mentioned above, ANACOM shall monitor the market evolution, mainly in Areas NC, and may assess this situation in a new market review that may be carried out at any time within a period of three years, in compliance with Article 59-A of the Electronic Communications Law.
- 5.99. In view of the above-referred, this Authority considers that all obligations under the access and use of specific network resources, imposed in the decision of January 14, 2009, remain reasonable, adequate, proportionate and justified. Consequently, all such obligations shall be maintained.
- 5.100. It should be noted, however, that the obligation of access shall not be enough in itself. ANACOM believes that it shall be necessary to maintain the additional obligations provided for in the Electronic Communications Law, in order to solve potential competition problems, such as excessive prices or discriminatory practices, ensuring that a reasonable and adequate access shall be provided under the conditions prevailing in the markets which are relevant to this review. These issues are covered in the following sections.

### ***Non-discrimination***

- 5.101. In general, a wholesale SMP provider, especially when it is required to have an obligation of access, has a strong incentive to discriminate, specifically in view of its own services, in what concerns the conditions under which the wholesale services are provided to alternative operators that operate in downstream markets (namely where the company is vertically integrated and operates at the retail level, as in this case)<sup>233</sup>.

---

<sup>232</sup> Also in the downstream markets (vertical value chain), namely in the broadband access retail market, with a substantial increase of competition in the areas where there are offers based on different infrastructures (OLL, cable and, more recently, fibre), which was in fact based on the proposal for a geographic segmentation of the respective wholesale market.

<sup>233</sup> This competition problem may include discriminatory use or retention of information, discrimination based on quality, delay tactics and undue demands, as well as potential price discrimination.

- 5.102. The provision of lower quality, more complex, time-consuming or more expensive services to such alternative operators shall adversely affect the quality of the services provided by them at the retail level and/or shall significantly increase their costs compared to the costs of the retail division of the company with SMP, substantially reducing its competitiveness in retail and resulting in a form of leveraging of its wholesale market power comparing to the retail market<sup>234</sup>.
- 5.103. More specifically, this type of discriminatory behaviour enables the operator with SMP and its subsidiaries to be in an advantageous position in other markets, whose offers shall ultimately influence, namely the broadband, the subscription television and the FTS markets.
- 5.104. According to Articles 66 and 70 of the Electronic Communications Law, where appropriate, ANACOM may impose non-discrimination obligations on the offer of access. In accordance with Article 5, no. 5, b) of the referred Law, this Authority is responsible for ensuring that “*in similar circumstances, there is no discrimination in the treatment of the companies, which provide electronic communication networks and services*”.
- 5.105. Accordingly, ANACOM considers that it shall maintain the obligation of non-discrimination, whose objective is<sup>235</sup> mainly to prevent MEO - a vertically integrated entity - from discriminating in favour of its own retail activities, and to ensure that competing companies that use wholesale access may be in a position equivalent to the position MEO holds in the retail market. The objective of this obligation is also to prevent undue discrimination among the various operators competing with MEO.
- 5.106. Considering the incentives for discriminatory behaviour in the conditions of provision of access and use of specific network resources and the consequences of such discrimination in the markets, to maintain the obligation of non-discrimination is

---

<sup>234</sup> For example, a company holding SMP in the market of wholesale local access provided at a fixed location may be deemed as negatively discriminating the alternative operators in relation its division with operations in adjacent markets. Namely, the potential effects on the market of wholesale central access provided at a fixed location (for mass-market products) and, sequentially, on the broadband access retail market. A quality of service lower than the one provided to the divisions of the retail business of the operator with SMP could mean that alternative operators could not provide a new access in an equivalent period of time or could not guarantee a failure repair time equivalent to the one ensured by the operator with SMP in the wholesale market (although if only the internal supply is considered) and, consequently, in the broadband access retail market.

<sup>235</sup> And it was its objective, as already mentioned in prior market reviews.

deemed duly justified, appropriate and proportional to the costs involved, even because this obligation was already imposed and implemented in 2005 and maintained in 2009.

- 5.107. In the past, alternative operators have raised their concerns, in particular regarding the differences detected in terms of delivery times for services of access to ducts, unbundling of local loop, times of supply of similar or associated services in the retail markets, as well as other aspects related to the service quality of the wholesale offer of the operator with SMP<sup>236</sup>.
- 5.108. Some of these issues have already been reviewed by ANACOM, namely in what concerns the decisions on ORALL, adopted on February 17, 2010, and ORAC, adopted on October 28, 2010, as well as the decision adopted on March 11, 2009, which approved the final decision concerning the publication of the performance levels concerning the quality of service of ORALL, ORCA, ORAC, ADSL PT Network and SLRO wholesale offers<sup>237</sup>.
- 5.109. In this regard, it shall be noted that non-discrimination is not only ensured by an equal treatment for the most common cases, but also by equal treatment in the cases where more specific or market-related supplies are involved, which have other types of requirements and uses of services, such as corporate customers or customers with *multiple-play services*.
- 5.110. BEREC has also referred that there are several possibilities for putting competitive operators at a disadvantage by discriminating the quality of wholesale services provided by an operator with SMP. In order to prevent this situation, BEREC supports the obligation of non-discrimination to ensure that, under equivalent conditions, the services and information provided by an operator with SMP to competitive operators have a quality similar to the quality ensured to their own services and affiliated companies.

---

<sup>236</sup> These issues have been raised mainly in the case of services of a higher quality, in terms of deployment supply and, above all, failures repair.

<sup>237</sup> According to this decision, MEO shall provide and publicise, with the end-users, the beneficiaries of its wholesale offers and ANACOM, clear information on wholesale offers and respective performance.

- 5.111. In conclusion, the obligation of non-discrimination is continues to be deemed as objectively justifiable, since it ensures that MEO competitors and, consequently, end-users are not put at a disadvantage in relation to MEO own services or to other competitors that are subject to similar conditions.
- 5.112. The Commission Recommendation on NRAs also provides for the application of the principle of non-discrimination, namely to ensure the effectiveness of the access to terminating segment and fibre unbundling. Furthermore, it is also relevant to take into account the Commission Recommendation on non-discrimination, namely on the access equivalence standard to be adopted.

#### **Equivalence Standard to be adopted**

- 5.113. There are two options related to the equivalence standard to be adopted: the equivalence of *inputs* (EoI) and the equivalence of *output* (EoO).
- 5.114. The Commission Recommendation on non-discrimination refers that “*it is particularly difficult to detect and correct discriminatory non-tariff behaviour only by applying a general obligation of non-discrimination*”<sup>238</sup>. It is, therefore, to ensure a genuine access equivalence is deemed important “*through a strict implementation of non-discrimination obligations and the use of effective means to monitor and enforce those obligations*”<sup>239</sup>.
- 5.115. EoI is generally considered as “*the safest means to have an effective protection against discrimination, due to the fact that the entities requesting access may compete with the downstream enterprise of the vertically integrated operator with SMP by using exactly the same wholesale regulated products, at the same prices and with the same transactional procedures*”<sup>240</sup>. The Commission also believes that EoI ensures a safest transparency and a potential resolution of problems of information asymmetry, while ensuring benefits resulting from a stronger competition in the markets located downstream the wholesale level, where the referred equivalence standard is implemented.

---

<sup>238</sup> Recital (12).

<sup>239</sup> Idem.

<sup>240</sup> Recital (13).

- 5.116. Without prejudice of this situation, and according to the existing legislation (and to the above-referred recommendation), the obligations imposed by NRAs and their form of implementation shall be appropriate to the nature of the problem they intend to address to, and ensure proportionality. In this regard, it is acknowledged that to implement an equivalence standard on an EoI basis should imply higher implementation costs for other non-discrimination solutions, such as EoO, and also that the operator with SMP shall no longer benefit from some vertical synergies.
- 5.117. The assessment of the proportionality of imposing an equivalence standard on an EoI basis shall, therefore, consider the importance of any benefits achieved in relation to the costs associated with the respective implementation. In this regard, it should be acknowledged (as indicated in the Commission Recommendation on non-discrimination) that it is more likely to ensure the proportionality for the imposition of EoI on wholesale services associated with NGA, in view of the imposition on wholesale services based on copper network.
- 5.118. EoI in services associated with copper network shall presumably imply the complete reconfiguration of the existing systems and service provision procedures.
- 5.119. At the deepest network level EoI imposition is deemed to provide more benefits, enabling effective and sustained long-term competition<sup>241</sup>.
- 5.120. If one concludes that there is no proportionality in the EoI imposition, an equivalence standard based on EoO shall be applied, as in the case of offers regulated under this market review, in order to ensure that *“the wholesale inputs provided to alternative operators - even if they do not use the same systems and procedures - are similar in functionality and price to the ones used by the vertically integrated operator with SMP”*<sup>242</sup>.

---

<sup>241</sup> In this regard, the Commission Recommendation on non-discrimination refers, in recital (16), that *“ first, NRAs will have to identify at what level, according to the respective national circumstances, EoI imposition shall produce the most substantial benefits for competition and innovation and then determine whether EoI shall also be suitable and proportionate at other levels”*.

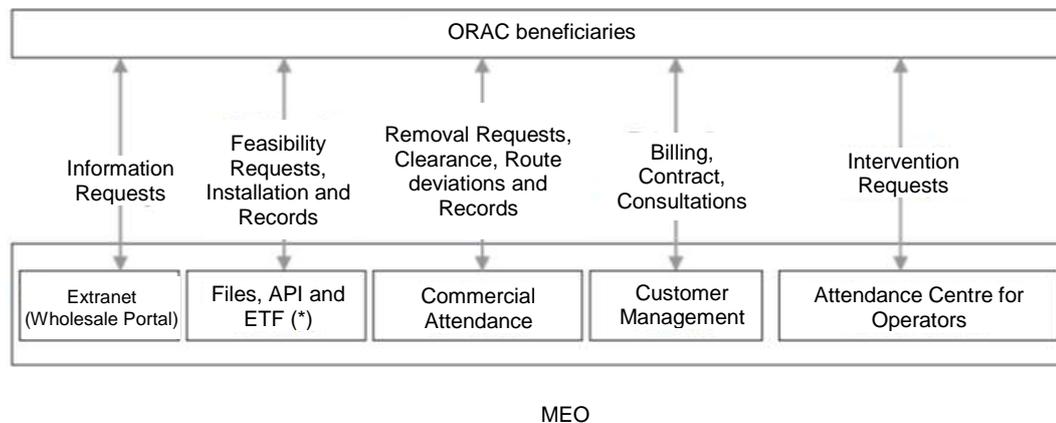
<sup>242</sup> Recital (17).

- 5.121. It should be then concluded that the decision to impose (or not) a equivalence standard on the basis of EoI shall depend on the specific situation of the provision of services under consideration, namely at the level of the value chain concerned. Consequently, the proportionality of the imposition of such an equivalence standard on the various levels of service provision in the market of wholesale local access provided at a fixed location shall be hereinafter reviewed.
- 5.122. As indicated in the Commission Recommendation on non-discrimination, such review begins at the deepest level of the network, which in this case corresponds to the civil construction infrastructure (ducts, poles and associated infrastructure). The information systems and the procedures for supply and provision of services associated with this type of infrastructure to third parties shall be then compared with the systems and procedures used by MEO.

#### **Access to ducts**

- 5.123. Within the scope of ORAC, and in relation to the access to ducts managed and/or owned by MEO (hereinafter referred to as MEO ducts), there are two essential aspects:
- *Online* access to information on the underground infrastructures layout and on the occupation levels of MEO ducts sections, which are included in the database provided to ORAC beneficiaries via an Extranet (also known as ORAC Extranet);
  - The processes and systems related to the management of the various requests of beneficiaries (and MEO responses) for wholesale services provided in ORAC (SI ORAC).
- 5.124. In fact, within the scope of ORAC, the beneficiaries shall have the following interfaces for purposes of exchange of information with MEO:

**Figure 16. ORAC Interfaces**



5.125. So, in what concerns the access to MEO ducts from an EoI perspective, the following aspects are deemed important:

- Access to information on the route (location, profile) and levels of occupation of ducts, which is provided to ORAC beneficiaries through MEO ducts database provided through an Extranet;
- Access to file systems (API and ETF (ORAC - IS)) related to the management of the requests to carry out a review on feasibility, access, deployment and registration.

5.126. There are also other aspects, such as planning and forecasting procedures, which are important from an access equivalence perspective.

5.127. These aspects are autonomously reviewed in relation to the various relevant wholesale services.

***Access to the ducts database via ORAC Extranet***

5.128. The information included in MEO ducts database and provided via ORAC *Extranet* enables ORAC beneficiaries to consult the layout of MEO underground infrastructures (e.g., duct sections and inspection chambers) located throughout the country.

5.129. It is also possible for ORAC beneficiaries to make an independent review on the feasibility of deployment of their cables in the MEO ducts located in competitive areas of the former Market 5 and, in some specific cases, even outside these competitive areas, namely in the case of ducts constructed during 2009 and subsequent years, or ducts which, regardless of the date of their construction, were subject to a feasibility

review<sup>243</sup>. So, the ORAC beneficiaries may not access only what concerns any information on the feasibility of the deployment of their cables in MEO ducts and in ducts located in non-competitive areas of the former Market 5, which were constructed before 2009 and for which there was no feasibility review up to now<sup>244</sup>.

- 5.130. There is no detailed information provided on the information systems internally used by MEO, on the information provided in the referred systems, on the quality of that information, or on the potential variation of the information provided in relation to the geographic area concerned.
- 5.131. However, according to what was verified by the consulting companies Oxera and Ellare in a study carried out in 2009 at the request of ANACOM on vertical functional separation in the electronic communications sector in Portugal<sup>245</sup>, although MEO does not use the procedures established in ORAC when planning the fibre deployment (namely, SI ORAC), it accesses the referred ORAC database (there is only one database with information on MEO ducts).
- 5.132. In other words, and only in what concerns the information on ducts (layout and occupation level), MEO and ORAC beneficiaries, although having different forms of access (MEO has direct access and ORAC beneficiaries have access via *Extranet*), they all use the same database and have access to the same information, which shall, however, have to be unequivocally confirmed by MEO.
- 5.133. It is also acknowledged that the access to MEO ducts database via an Extranet and the information provided have been enough to enable ORAC beneficiary operators to effectively meet their requirements concerning the following:
- Identification of MEO duct sections, which are located in a certain area where they intend to deploy their cables;

---

<sup>243</sup> This feasibility review of cable deployment is measured by the occupation levels of the ducts.

<sup>244</sup> In the ducts associated with these areas, the deadline for responding to requests for occupation feasibility review is of 10 calendar days, in 100 percent of the cases.

<sup>245</sup> Available on <https://www.anacom.pt/render.jsp?contentId=969970>.

- Measurement of the potential of occupation of these duct sections.
- 5.134. Notwithstanding, for example, that one may consider to include in ORAC database, which is accessible via an Extranet, the information on the occupation levels of MEO ducts, which are located in additional areas.
- 5.135. If so, Eol shall already exist at this level (in the access to the database of MEO ducts). However, MEO shall prove that if, in its planning procedure, it exclusively uses its ducts database that is accessible via ORAC Extranet, with exactly the same functionality that it provides to ORAC beneficiaries, or if internally it uses another type of systems and information (and eventually any documentation in a non-electronic format that is not provided to ORAC beneficiaries), providing ANACOM with information on this issue to, within a maximum period of 3 months after the approval of the final decision associated with the market review.
- 5.136. In the remaining non-competitive areas (Areas NC of former Market 5), the information on occupation feasibility of MEO ducts with cables of ORAC beneficiaries may not be measured by them through the ORAC database (accessible via *Extranet*). This information shall be obtained after the submission to MEO of a request for a feasibility review, which shall be made by completing a form or via an electronic interface (ORAC - IS). The respective response deadline is stipulated in ORAC and is of ten consecutive days in 100 percent of the cases (PQS2).
- 5.137. Consequently, it may be concluded that in these cases (Areas NC of former Market 5) it is even more obvious that MEO may internally obtain information on the occupation feasibility of its ducts quicker than ORAC beneficiaries.
- 5.138. From an Eol perspective, MEO shall undertake to use (or access to) the ORAC Extranet in the future under conditions absolutely similar to those of ORAC beneficiaries and it is relevant to know in detail the MEO geographic information system, acknowledging that MEO may internally access the information about its infrastructures network without the exclusive use of ORAC *Extranet*, which is the only means of access to that information that is used by all ORAC beneficiaries.

- 5.139. Furthermore, the access by MEO to more updated information about its infrastructure network (e.g., access to information on the availability of ducts space in a given area of interest for deployment of fibre optic cables) may be obtained before any (more updated) information is recorded in the ORAC database (accessible via *Extranet*), giving the entity that obtains it an advantage over the other competitors.
- 5.140. It should be noted that in the aforementioned study on functional vertical separation, Oxera has concluded that:
- "PTC does not use the same extranet interface to assess space feasibility or plan installations. Potential source of discrimination";
  - "PTC local network planners may be able to work informally – i.e., constantly changing requirements or priorities - with the PTC holders of duct information. Such information is not available to altnets. Rather, they have to follow a formal process with a formal product, which entails a cash charge for each request";
  - "Once a request is made by an altnet, by definition information is held by PTC about the precise local intentions of an altnet".
- 5.141. Consequently, if ANACOM imposes an EoI obligation on MEO, this operator, as any other ORAC beneficiary under equivalent conditions, shall access the ducts database it manages and/or holds only via ORAC *Extranet*, and it may/shall not access the information on the ducts managed and/or held by MEO through any other different channel (e.g., through the access to documents or through the direct access to the database).
- 5.142. In this sense, an audit carried out on MEO shall conclude that MEO may not access the information on ducts it holds or manage through any channels other than ORAC *Extranet*.
- 5.143. It is also essential and necessary to ensure that MEO wholesale services that manage ORAC database (e.g., recording of new duct sections in the database, introducing/removing cabling in the duct sections, may result in the changing of the colour of "traffic lights") are not in any way related to the entities that may specifically use such information (e.g., MEO retail services), since, unlike MEO, the operators benefiting from ORAC have no access to ORAC database management.

5.144. In short, an audit carried out under these conditions shall detect:

- That, unlike the beneficiaries of ORAC, MEO may a priori internally have access to the information on the ducts it manages or holds (for example in the context of a registration update made by MEO technicians - data recording);
- The potential existence in MEO geographic information system of any internal access points to ORAC Extranet upstream information (which is the only access point that may be used by the beneficiaries of ORAC) to obtain information on MEO conducts.

*ORAC - IS and order management*

5.145. ORAC (ORAC - IS) information system consists of MEO providing the ORAC beneficiaries with electronic interfaces based on files and ETFs, and on API and ETF (public FTP), for the transfer of requests and responses associated with ORAC wholesale services, namely:

- Feasibility review service;
- Access and deployment service;
- Registration.

5.146. The documents including the specifications of the referred electronic interfaces (between MEO and the ORAC beneficiaries) enable all beneficiaries to adapt their own information systems, in order to automate the orders and responses exchanged with MEO, which are related to the above-referred wholesale ORAC services.

5.147. After ANACOM has adopted several measures to obtain a better coordination between MEO and the ORAC beneficiaries, a new version of the information system (ORAC - IS 2.0) was implemented in July 2011, in order to enable the beneficiaries to directly submit their deployment requests in areas where information on the occupation of ducts is provided (i.e., without requiring any prior feasibility requests).

- 5.148. Under the circumstances, issues concerning equivalence relate only to the management of requests/responses made by ORAC wholesale services that, for the time being, only apply to the beneficiaries of this offer, since in the case of cable deployment, the beneficiaries or subcontracted companies, provided that they are certified (by means of a certification issued by ORAC), may (as well as MEO) deploy the cables in MEO ducts in an equivalent situation (however, this issue shall be hereinafter addressed in detail).
- 5.149. In the afore-mentioned study on functional vertical separation, in what concerns the management of ORAC wholesale procedures and services (products), Oxera concluded that:
- “PTC does not use the ORAC product when it is planning its own fibre installations”;
  - “PTC does not use the same processes to submit requests. Potential source of discrimination ”;
  - “The ORAC product is basically an information product. Both PTC and altnets require the same information in order to install their own fibres in existing ducts. Altnets buy ORAC, while PTC uses internal processes”.
- 5.150. Subsequently, in June 2011, MEO informed (confirmed) that the internal procedure used for access to its ducts does not follow in all aspects the procedures for access to ducts stipulated in ORAC (for the beneficiaries). However, this internal procedure is allegedly not different from the procedures used by the beneficiaries as of the moment they are authorized to deploy their cables. Consequently, all the procedures followed up to a confirmation to carry out the on-site deployment are at stake.
- 5.151. Nevertheless, in the current context of ORAC, MEO has always the option of monitoring the on-site deployments carried out by the beneficiaries, unlike the beneficiaries (i.e., they may not follow the on-site deployments carried out by MEO). Consequently, at this level, there is also no similarity between MEO and the beneficiaries.
- 5.152. ANACOM has preliminarily identified the following two options, in order to ensure that there is EoI within the scope of ORAC information systems:

- To maintain the systems and procedures stipulated in ORAC (possibly with some adjustments), and MEO shall, in the future, fully use those systems and procedures;
- To maintain the systems and procedures used internally by MEO (possibly with some adjustments), enabling ORAC beneficiaries to have full use those systems.

5.153. Under the circumstances, the review of all aspects within the scope of MEO compliance with the obligation of access equivalence (from an EoI perspective) is considered as depending on the specific option taken and, in any case, it shall be important, among other things:

- To check if MEO actually submits all its requests for feasibility review (in this case, concerning Areas NC of the prior Market 5), for access and deployment, as well as for registration via ORAC - IS, in a situation of total equivalence (in this case, of EoI) with ORAC beneficiaries, with no discrimination in what concerns the respective processing (e.g., through a potential stipulation of processing priorities for certain MEO requests).
- To check if, in what concerns urgent (and non-urgent) intervention requests, MEO requests are equally processed comparing with similar requests made by ORAC beneficiaries.
- In the case of clearing requests submitted by ORAC beneficiaries, to check if MEO presents some potential for discrimination in reviewing the referred requests (and therefore, in the resulting budgets) in view of MEO equivalent needs for clearing some ducts sections.

5.154. Finally, by applying EoI to ORAC, it shall be possible to obtain some indicators applicable to MEO (such as ORAC PQS, which are currently applicable to beneficiaries) and to check the compliance with the principle of non-discrimination through the review carried out on the quarterly reports provided. In this regard, in June 2011, MEO informed ANACOM that it had no indicators or measurements specifically designed to measure the internal times (in relation to MEO itself) concerning the deployment of cables in ducts and, consequently, the available data did not correspond to any of the service level indicators provided for in ORAC, and are, therefore, not comparable.

- 5.155. In what concerns other order management procedures, e.g., procedures related to the intervention (urgent and non-urgent) on cables, the removal of cables and equipment, the clearings, the provision of registers and any other activities within the scope of ORAC, the respective relevant procedures are described in detail in the referred offer.
- 5.156. A key aspect of the access to MEO ducts, which under the circumstances is compatible with EoI, is the possibility (already provided for in ORAC) of the operators who are beneficiaries of the referred wholesale offer (or the companies subcontracted by them) deploying their own cables in MEO ducts (eventually accompanied by a MEO representative).
- 5.157. However, there are other situations in which ORAC beneficiaries depend (on a response of) on MEO and they have to be subject to certain procedures, with associated response times that might be different from those that MEO uses internally for its own services.
- 5.158. Thus, even more important than describing and reviewing the wholesale procedures concerned is to compare them with the procedures internally carried out by MEO for similar activities. In this respect, there is also no detailed information on the procedures of access to ducts and on any other procedures comparable to the activities associated with ORAC, which are internally carried out by MEO within the scope of the access to ducts.
- 5.159. However, in June 2011, MEO informed ANACOM that the internal procedure for access to ducts does not follow, in all its steps, the procedure stipulated in ORAC. Therefore, regardless of the specific details associated with the processes and systems set out in ORAC, there are differences between them and those internally used by MEO.
- 5.160. In this respect, it will be important to consider that, for example, in situations of urgent (and even non-urgent) interventions, the beneficiaries are required to send MEO a request for intervention scheduling and MEO, on the contrary, is not required to submit such a request, since it does not require any monitoring. It should be noted that even if the MEO decides that, in relation to a given intervention in its conduct that has been requested by a beneficiary, it is not required to carry out a monitoring (accompanied by one of its employees), the ORAC beneficiary shall have to wait for a communication from MEO on that regard.

- 5.161. The same applies in the case of a request for access and deployment, where MEO has a maximum period of 5 working days to respond to the referred request (which is generally similar to the prior request for feasibility review) and the time window to the beginning of the first scheduled access and deployment corresponds to the period between the seventh and the fifteenth business days after MEO has received the request for access and deployment. I should be underlined that if MEO intends to deploy cables in its ducts, it shall carry out (like ORAC beneficiaries) an occupation feasibility review. Nevertheless, in a later stage and if the conclusion of the review is positive, MEO (unlike the referred operators) shall not be bound to wait for an additional period to carry out the referred on-site deployment.
- 5.162. There are many other on-site situations that may unbalance the conditions incurred by ORAC beneficiaries in relation to those in which the MEO technicians may incur. For example, the situations related to any delays in the arrival of technicians at the deployment site, to the required authorizations and to a more or less easy way to find alternative solutions or solve any problems that may arise during the deployment works.
- 5.163. Consequently, there is no EoI standard in relation to the wholesale services provided within the scope of the access to ducts. Taking into account that the wholesale supply systems and procedures are already implemented, in the review of the proportionality of the imposition of an EdI standard, the costs associated with the alteration of the current wholesale and/or internal procedures shall be taken into consideration, in order to ensure the use of the same systems and procedures either by MEO or by the alternative operators in the access to ducts.
- 5.164. It should also be taken into account that the MEO internal procedure for access to ducts was not designed to enable the retrieving of indicators<sup>246</sup>, which may make difficult to choose an equivalence standard based on EoO and also imply relevant costs, since it would be required to adjust the delivery procedures and the information systems internally used, in order to ensure the comparability of the existing indicators in the internal procurement procedures, as well as in third parties procedures.

---

<sup>246</sup> As indicated in MEO communication of June 2011.

- 5.165. It is also important to take into account that the type of provision in cause in this situation would entail a very hard regulatory effort to ensure an EoO, since in case different systems and procedures were used, it would have been required not only to account for the provision and repair times in a comparable way, but also to periodically carry out an audit on the referred indicators. To ensure that this control would have a high level of certainty and safety, there would be very high regulatory costs, which may possibly be even more significant than the costs of adapting the current procedures and systems (internal or of ORAC) or even than the costs of their definition and root implementation.
- 5.166. In accordance with the Commission Recommendation on non-discrimination, ANACOM also considers in this proportionality assessment the fact that in Portugal there is only one operator with SMP, which is clearly the operator with the most significant size<sup>247</sup>.

#### *Conclusion*

- 5.167. ANACOM opinion is that a specific importance should be given to the fact that the access to MEO ducts is the deepest level of wholesale service provision that may be ensured (i.e., at the level of the civil infrastructures where the networks are deployed) and, as such, it is at this level that special priority shall be given to EoI. The deepest level of wholesale provision is also where the benefits associated with EoI have a higher expression and potential to contribute to the development and maintenance of an effective and sustained competition in the market of wholesale local access provided at a fixed location, as well as in the remaining downstream markets.
- 5.168. In view of the costs associated with the imposition of EoI (comparing with the costs associated with the alternative of imposing EoO) and the benefits associated with this imposition, the wholesale services provided by MEO and which are associated with the access to the ducts are considered proportional in terms of ensuring an EoI standard, and in any case, some proposals that, although they do not formally take EoI into consideration (i.e. the use by MEO and by the beneficiaries of exactly the same regulated wholesale products, at the same prices and using the same transaction procedures), may lead to the same results, corresponding to the expectations and requirements of the beneficiaries. In this regard, it should also be underlined that, as

---

<sup>247</sup> § 7 of the Commission Recommendation on non-discrimination refers that the number and size of the operator(s) with SMP should be one of the aspects to be considered in assessing the proportionality of EoI imposition.

indicated and according to the information available, there is a very significant part of the activities related to the provision of wholesale access to ducts with EoI, which is ensured, for example, by the access to MEO ducts database, which provides information on ducts layout and on feasibility of cable deployment, although this has to be duly confirmed by MEO.

5.169. It should also be noted that Appendix II of the Commission Recommendation on NRAs specifically provides for the need to ensure a non-discriminatory access to the ducts of the operators with SMP, and that the objective of ensuring a sustainable competition - *level playing field* - may be sustained by pursuing the principle of equivalence in the provision by the operator with SMP of an access to its civil engineering infrastructure.

5.170. The same Recommendation underlines that the “*access to the civil engineering infrastructure is crucial for the deployment of parallel fibre optic networks (...) and it [is] appropriate for alternative operators to be able to deploy their own fibre optic networks simultaneously with the operator with significant market power, dividing the costs of the civil engineering works*”<sup>248</sup>.

5.171. Furthermore and in order to ensure that there is proportionality in this form of equivalence, MEO should choose the most suitable way to guarantee the existence of an equivalence standard based on EoI. In principle, the following options are identified to ensure the existence of EoI:

- The systems and procedures stipulated in ORAC shall be maintained, possibly with some adjustments, and MEO internal companies and departments shall have to make a full use of the same systems and procedures;
- The systems and procedures used internally by the MEO, possibly with some adjustments, shall be maintained, and the beneficiaries of the access services to ducts shall have to make a full use of the same systems and procedures.

---

<sup>248</sup> Recital (12).

- 5.172. Taking the second option into consideration, it shall be possible for MEO to grant a greater independence to ORAC beneficiaries (and/or subcontractors) in all ducts intervention procedures, and MEO shall not make their case-by-case authorisations depend, for example, on the subjection of the operators to a notification subsequent to the intervention made in the conduct. Consequently, the exact comparison between the procedures followed by MEO or by ORAC beneficiaries would not even be relevant, and the possibility of each operator to choose the (internal) procedures it considers most appropriate shall be ensured, notwithstanding the obligation to comply with the access procedures and the use of MEO ducts (which have been provided for in ORAC).
- 5.173. However, as this option diminishes MEO control over all intervention procedures in ducts, it requires, on the other hand, that ORAC beneficiaries<sup>249</sup> have a stronger commitment in relation to an adequate implementation of the access to MEO ducts. ANACOM shall pay a close attention to that, namely by eventually applying penalties for non-compliance with the procedures stipulated in ORAC.
- 5.174. In any case, it should be noted that MEO has a better knowledge of the information systems and internal provision procedures, as well as of the procedures used within the framework of ORAC. So, it is also MEO that is in a better position to assess and choose the option that shall imply lower implementation costs and a greater proportionality, ensuring that MEO and the alternative operators shall use the same systems and the same procedures (or shall give full autonomy to ORAC beneficiaries), in an efficient and appropriate manner concerning all services provided in connection with the access to ducts.

#### **Access to poles**

- 5.175. The wholesale access service to MEO poles is at the level of wholesale services similar to the services of MEO ducts, as in both cases there are infrastructures intended to support the deployment of the cables of operators - in the first case, aerial cable installation and, in the second case, underground cable installation. Although, as indicated, the ducts access service and the poles access service are at the same level in the value chain, it should be recognized that their use is expected to depend in part on their geographic location. A more intensive use of ducts in urban areas and a more

---

<sup>249</sup> Notwithstanding the fact that their employees, or the employees of their subcontractors, shall be duly accredited with a certification issue by ORAC.

intensive use of poles shall be probable in rural areas and in areas with low population density (even due to the availability of the referred infrastructures).

- 5.176. As a starting point for the assessment of the proportionality of Eol imposition on MEO poles access services, it should be referred that the systems and procedures used by the operators that beneficiaries of ORAP are different from those used by MEO internal companies and departments. It means that the imposition of Eol shall imply changes in the systems and procedures currently used by the beneficiaries of ORAP and/or by MEO internal companies or departments.
- 5.177. There is a relevant difference between ORAC and ORAP, as in ORAP there is no database or platform implemented or operational to provide *online* information to ORAP beneficiaries concerning the location of poles and the feasibility of cable deployment on poles, or an information system enabling an automatic processing of service requests. In fact, the management of the services provided under ORAP is currently carried out only through forms sent by electronic mail.
- 5.178. It is, therefore, concluded that, although the Commission Recommendation on non-discrimination was not in cause, in prospective terms, it would be suitable and required to amend (or even define from sketch) some of the procedures associated with the access to poles, in order to obtain a more efficient provision of wholesale services, suited to the needs of the alternative operators and, therefore, more favourable to the interests of the end-users. It shall be noted that the demand for poles access services has been maintained at high levels, and it is only natural that this situation remains in case the operators continue to expand their networks outside the more densely populated areas, where poles are more common due to the existence of ducts.

- 5.179. That is why the costs of implementing the systems and procedures in ORAP, required to obtain an Eol standard, are not significant as, in any case, it would always be required to change the associated systems and procedures. In this regard, §7 of the Commission Recommendation on non-discrimination refers that “*incremental costs of compliance with Eol are likely to be low if new systems are being designed*”.
- 5.180. An eventual implementation of an equivalence standard in ORAP based on EoO (in case it was concluded that the option was the non-proportionality of Eol) would imply significant costs for MEO, which would naturally be reflected in the beneficiaries of ORAP, since the internal supply indicators, which are comparable with the indicators of supply to third parties, are not currently stipulated and their potential implementation is unknown.
- 5.181. In this case, it should also be noted that MEO is the only operator with SMP in the local wholesale access market provided at a fixed location and, obviously, the operator with the largest size.
- 5.182. Consequently, as in the case of the access services to MEO ducts under ORAC, also in the access services to MEO poles within the scope of ORAC there is an imposition of Eol on the access services to poles, which has advantages associated with the fact of the referred obligation is being imposed at the deepest level of the network, with clear net benefits resulting from its implementation. Notwithstanding, it may consider proposals that although not formally following Eol (i.e., the use by MEO and the beneficiaries of exactly the same regulated wholesale products, at the same prices and using the same transaction procedures), may lead to the same results, corresponding to the expectations and needs of the beneficiaries.
- 5.183. This conclusion is reinforced by the fact that no access to fibre optic is imposed and the investment in infrastructure is encouraged, creating symmetrical conditions, in order that both MEO and the other operators may invest in the expansion of their network coverage.
- 5.184. Also in this case concrete options regarding the most efficient and proportional form to implement Eol shall to be mainly associated with the choices to be made by MEO and subsequently accepted by ANACOM. In any case, it should always be ensured that ORAP beneficiary operators shall always use the same delivery systems and procedures as MEO uses.

### **Copper loops unbundling**

- 5.185. Concerning the services related to copper loops unbundling, the situation is totally different comparing with the other services considered hereinabove.
- 5.186. As far as wholesale services to third parties are concerned, there are already information systems and procedures implemented, in which significant investment has already been made, in order to make these procedures more efficient and adequate to the interests of the operators benefiting from the wholesale services (unlike what happens, for example, in ORAP). It is also known that the procedures and systems internally used are already consolidated and, in general, they are different from those used by the beneficiaries of ORALL. So, one may conclude that the cost of the opportunity of fully adapting or changing the systems and procedures internally used and/or used by third parties would be high, without expecting that the potential benefits associated with EoI might justify the referred costs (even because these benefits would inevitably be limited in time, due to the transition from traditional networks to NGA) due to the fact that this service is no longer the main focus of the operators.
- 5.187. Another relevant point to be considered under these circumstances is the fact that a potential imposition of EoO on the provision of wholesale services associated with local copper loop unbundling is a relatively easy issue. Taking this fact into consideration, it has been verified that ANACOM has been for a long time, in a position to adjust the conditions of provision of the wholesale services in question, as well as to define the wholesale and internal indicators that may somehow allow to compare the times and quality of the provision of services to the ORALL beneficiaries with the services internally provided by MEO. It should be noted that the latest ANACOM decisions, which have had some effects on OLL were just focused on issues related to the suitability of the quality of service provided to the beneficiary that are also operators<sup>250</sup> and the obtaining of more reliable service quality indicators, which are more suitable to the actual service quality provision<sup>251</sup>. In compliance with the Commission Recommendation on non-discrimination, the

---

<sup>250</sup> Decisions concerning the quality of the service levels, namely for *Premium* services and compensation for non-compliance with the service quality levels.

<sup>251</sup> Decision adopted on March 28, 2012 regarding the procedures to be followed in the measurement of the service quality of regulated wholesale offers.

service quality levels (SLA<sup>252</sup>) are already stipulated for the relevant services provided in connection with the local copper unbundling, as well as the compensation for non-compliance with the referred levels (SLG<sup>253</sup>) and the indicators of the quality ensured in the provision of services (KPI<sup>254</sup>).

- 5.188. Under some circumstances, the comparability of the existing indicators may still be improved. However, in most service provisions, the investment in additional resources in improving EoO in the local copper unbundling is not deemed proportional. This does not mean however that, where justified, it is not possible to intervene in ORALL, in order to adjust it to the market needs and to speed up certain processes.
- 5.189. In view of the above-referred, it is concluded that it will not be proportional to adopt an equivalence standard based on EoI in the case of the provision of wholesale services associated with the local copper loop unbundling. Consequently, within the scope of the local copper unbundling, an equivalence standard based on EoO should be adopted.

#### **Access to dark fibre**

- 5.190. ANACOM considers that the provision of services related to the access to dark fibre shall occur only in exceptional circumstances<sup>255</sup> (whenever there is no space in poles or ducts in the connection an operator intends to carry out) and consequently, to request the implementation of EoI shall not be proportional within the scope of the provision of exceptional services.
- 5.191. For that same reason, ANACOM considers that, only in this specific situation, more flexibility may exist in requirements related to EoO if, however, it does not jeopardise the existence of non-discrimination and its efficient monitoring.

---

<sup>252</sup> Referred to in the Commission Recommendation on non-discrimination as Service Level Agreements (SLA).

<sup>253</sup> Referred to in the Commission Recommendation on non-discrimination as service level guarantees (SLG).

<sup>254</sup> Referred to in the Commission Recommendation on non-discrimination as key performance indicators (KPI).

<sup>255</sup> Even though this situation has become increasingly important.

### **Conclusions on the equivalence and implementation standard**

- 5.192. As referred above, it is concluded that it is appropriate and proportional to define an equivalence standard in the obligation of non-discrimination based on Eol in what concerns the provision of wholesale services related to the access to ducts and poles. In fact, in the case of the services concerned, Eol implementation costs are significantly lower than the advantages associated with the creation of incentives to investment in alternative networks and the increase of competition in infrastructures. Notwithstanding, one may consider some proposals that may not formally follow Eol (i.e., the use by MEO and by the beneficiaries of exactly the same regulated wholesale products, at the same prices and using the same transaction procedures), but that may lead to the same results, corresponding to the beneficiaries expectations and needs.
- 5.193. It should be noted that, as in the reply to the prior hearing and public consultation on SPD that gave rise to this decision, MEO has submitted a series of proposals for amendments to ORAC and ORAP, in order to bring them closer to Edl, it is recommended that MEO amends those offers in accordance with its proposals, within 30 days after notification of the final decision. In introducing the referred amendments, MEO shall always take into consideration the preliminary opinion of ANACOM in what concerns the deployment procedure in ORAC (notification not later than three working days in advance) and the deployment of customer drops in ORAP, which were referred to in the prior hearing report. In case MEO does not follow such recommendation, it shall duly justify its option, which shall be taken into account in a specific decision on this matter within the framework of the implementation of Edl. In this regard, it is also important for MEO to ensure that the changes in the Extranet shall be implemented, taking into account the remarks of ANACOM on the respective deadline(s), and, within two months, provide ANACOM with the details on the costs involved, including the costs of access to Extranet and taking into account the most recent costs, including the amortisation of investments.
- 5.194. On the other hand, one shall conclude that, in the case of access to local copper loop and in the exceptional case of access to dark fibre, it is not proportional to impose a non-discrimination standard based on Eol and, consequently, it is appropriate to maintain EoO.

- 5.195. In what concerns wholesale services where a standard of non-discrimination was adopted on the basis of EoI, and in order to increase the proportionality of the adopted measure, different options were established in relation to how such a standard would be obtained. It was concluded that MEO would choose the most efficient method and the specific way to get the required form of equivalence. ANACOM considers that, regardless of the choices made by MEO, the precise definition of the option to be implemented and the details of its implementation should be a procedure involving all parties concerned (ORAC beneficiaries and potential beneficiaries) and ANACOM that shall approve the option (and implementation) chosen by MEO.
- 5.196. If MEO does not follow the Recommendation above-referred to in paragraph 5.193, a maximum period of 3 months as of the approval of the final decision associated with the market review shall be stipulated and, within the referred period, MEO shall have to clearly identify the systems and procedures it intends to use in each offer under the imposition of EoI, which shall obviously be used by MEO and by any third parties. Within the same period, MEO shall also provide detailed information on the implementation of the solution it intends to adopt, by means of an offer, including any options and detailed and duly based flowcharts related to the activities to be carried out in the implementation of EoI<sup>256</sup>.
- 5.197. Within the above-referred maximum period of 3 months as of the notification of the final decision, MEO shall also justify in detail to the mentioned Authority that the option it has chosen fully and properly ensures the existence of EoI. It is expected that the effective implementation of this equivalence standard shall be duly audited by an external entity.
- 5.198. After MEO has provided this information, ANACOM shall, within a 6 month reference period, approve and eventually carry out the audit, and, in any case, the effective implementation of EoI shall be completed within a maximum period of 6 months as of the date of approval by ANACOM (until the completion of EoI implementation, the procedures and systems stipulated in the current wholesale offers shall be maintained, regardless of any improvements that might be introduced in the meantime).

---

<sup>256</sup> It should also be noted that there shall be several categories of activities associated with EoI, namely some activities related to the development of new systems or changes in the existing ones, or activities related to the procedures and relationships to be established with alternative operators and even with internal departments of MEO, in order that EoI is fully ensured.

- 5.199. As hereinabove mentioned, and in addition to the procedures of feasibility review (where applicable), orders, deployment and faults management, there are other issues, such as the forecasting plan, that shall also follow an Eol standard. It is the responsibility of MEO to prove that this pattern is followed and to identify the procedures internally followed, as well as the activities to be implemented in order that Eol becomes a reality, also in what concerns these matters.
- 5.200. Some potential differences between the internal provision and the provision to third parties, which are necessarily very specific and have a very low impact, have to be duly identified and justified in detail. In any case, these potential differences shall only be accepted under totally exceptional conditions and if the costs of their cancellation are unequivocally out of proportion.
- 5.201. In line with the Commission Recommendation on non-discrimination, the planning to be carried out by the MEO is deemed to ensure that technical replicability and effective implementation of SLAs, compensation and KPIs in the main regulated wholesale services<sup>257</sup> shall be implemented “*not later than six months as of the imposition of the Eol obligation*” (i.e., not later than six months as of the date of notification of the final decision). In detailing the obligations to be implemented within this market, ANACOM shall ensure that all the referred implementations shall be carried out.
- 5.202. With regard to the provision of wholesale services related to copper loop access and dark fibre access, where it was decided to impose a non-discrimination standard on the basis of EoO, for the time being and notwithstanding the intervention at any time within the framework of the obligation of non-discrimination imposed, if required:
- The conditions currently stipulated for OLL shall be maintained, and there is no need to consider any amendments at this level, unless there is an evolution in the demand or some specific circumstances justify it;
  - The supply of dark fibre shall not be charged with disproportionate costs and resources, in view of its complementary nature in relation to ORAC/ORAP and due to the fact that the predictability of the demand for this offer is very specific. Consequently, MEO shall only have to define and submit, together with the

---

<sup>257</sup> One should note that there are no SLAs, compensation and KPIs only in dark fibre access offers.

performance indicators related to the provision of dark fibre, a range of similar internal provision indicators.

#### **Levels of service quality and compensation**

- 5.203. There is a connection between the obligation of non-discrimination and the obligation of transparency, namely in what concerns the need to provide information on the service quality levels effectively ensured in the provision of wholesale services (or in English, KPI – “*key performance indicators*”), but also in what concerns the awareness of the alternative operators in what concerns the service quality levels (SLA – “*service level agreements*”) and on the compensation for non-compliance with the referred levels (in English, SLG – “*service level guarantees*”).
- 5.204. The Commission Recommendation on non-discrimination recognises this association and refers that the imposition of an obligation of non-discrimination shall additionally result in an imposition on the companies with SMPs to publish KPIs, in order that the monitoring of compliance with the non-discrimination obligation is ensured<sup>258</sup>.
- 5.205. It should be noted that whether an equivalence standard based on EoI or based on EoO is established, the following issues shall always be essential for all beneficiaries of the offers:
- to be aware of the service quality levels (SLA);
  - to be duly compensated for any losses caused in case of non-compliance with the Service Level Guarantees (SLG) stipulated in the offers; and
  - to be informed on the performance of MEO in what concerns service provision (KPI).
- 5.206. So, the definition of appropriate SLAs<sup>259</sup>, the definition of an appropriate and proportionate compensation in case of non-compliance with SLAs<sup>260</sup> and the respective publication of the performance levels of all access products shall be maintained, where necessary and appropriate<sup>261</sup>. In this context, MEO shall include the SLAs and the

---

<sup>258</sup> Also complying with Article 10 of Directive 2002/19/EC (§19).

<sup>259</sup> See no. 27 of the Commission Recommendation on non-discrimination.

<sup>260</sup> See no. 28 of the Commission Recommendation on non-discrimination.

<sup>261</sup> See no. 24 of the Commission Recommendation on non-discrimination.

compensation for non-compliance and shall also publish the KPIs related to dark fibre provision.

- 5.207. As hereinabove referred, it is acknowledged that the information requirements on KPIs may differ, depending on EoI or EoO implementation. Consequently, the need to adapt and/or reinforce the information provided on indicators related to the services provided to alternative operators and/or to MEO internal companies and departments may be considered whenever an equivalence standard based on EoO is established (i.e., in the case of local loop copper unbundling services), in order that both categories of indicators ensure their comparability and, simultaneously, an appropriate monitoring of the compliance with non-discrimination obligation. However, this is not proportional, given the fact that the demand for this offer has been sustainably decreasing for several years and the operators no longer provide OLL-based services to new customers (which, under these circumstances, could mean that any increase in the comparability of the indicators should only focus on the indicators associated with the repair of faults).
- 5.208. The Commission Recommendation on non-discrimination also refers that the monitoring of the performance of companies with SMP in relation to the regulated wholesale services shall consider the following activities and services<sup>262</sup>:
- Order procedure;
  - Service provision;
  - Service quality, including faults;
  - Faults repair time; and
  - Migration between different regulated wholesale products (excluding single bulk migrations).
- 5.209. In this regard, the Commission Recommendation on non-discrimination explicitly refers that the imposition of KPIs shall take into account the existing implemented indicators (even if they are used by the operator with SMP only for internal purposes)<sup>263</sup>.

---

<sup>262</sup> See (20)

<sup>263</sup> See (23)

- 5.210. Except in what concerns the specific indicators on the supply of dark fibre and the indicators on migration between different regulated wholesale products, and as far as the service provision within the scope of wholesale offers is concerned, the KPIs are already established and published for all activities listed above. In this market review, ANACOM already determines that MEO shall also publish the performance levels related to the supply of dark fibre. It is obvious that following the implementation of Eol in certain offers, it may be necessary to review the specific indicators to be published.
- 5.211. With regard to KPI of the activities and services related to the migration between different regulated wholesale products, the most appropriate and proportional decision shall eventually be the review of their needs in terms of an autonomous intervention subsequent to this market review. The same type of measure shall be implemented if, during the process of implementation of the equivalence standard in the provision of the various types of regulated wholesale services provided by MEO, an additional need is identified in terms of adequacy of the service quality indicators.
- 5.212. According to the Commission Recommendation on non-discrimination, the specific details of KPIs shall be agreed between the operator with SMP and the beneficiaries of the wholesale services and, if necessary, they shall be regularly updated<sup>264</sup>. As hereinabove mentioned, in what concerns the existing offers, the KPIs are stabilised, notwithstanding the need to update some of them after the implementation of Eol in some of the offers, or to improve the SLAs, or even to include a specific additional indicator, which ANACOM has been (and shall continue to do) regularly doing.
- 5.213. So, in the dark fibre offer, the principles set out in ANACOM decision adopted on March 11, 2009, on the publication of the performance levels in the service quality of wholesale offers shall be applied<sup>265</sup>. It should be stressed that, within the scope of this decision, to each SLA shall correspond a KPI. Furthermore, in the definition of SLAs, MEO shall also take into consideration the principles adopted in the deliberation of March 28, 2012 on the procedures to be followed in the assessment of the service quality of the regulated wholesale offers<sup>266</sup>.

---

<sup>264</sup> See (22)

<sup>265</sup> See <https://www.anacom.pt/render.jsp?contentId=885299>.

<sup>266</sup> See <https://www.anacom.pt/render.jsp?contentId=1124132>.

- 5.214. In any case, it is essential that KPIs make possible to compare the services provided to the internal departments of the operator with SMP and the services provided to third parties that benefit from the regulated wholesale services of the referred operator, as provided for in §21 of the Commission Recommendation on non-discrimination.
- 5.215. According to this Recommendation, KPIs shall be quarterly published, in an appropriate format, “*on the NRA website or on the website of an independent third party indicated by the NRA*”<sup>267</sup>. Currently, the information on the KPI addressed to the beneficiaries of the offers and to ANACOM is available on an *Extranet*. In this regard, the publication of this information on the website of the referred Authority or of a third entity is not dependent on any action taken by MEO. ANACOM will assess the need and suitability of this publication. It should be noted that currently, as a result of the decision adopted on March 11, 2009, on the publication of the performance levels of the service quality of wholesale offers, MEO already publishes on its own *website* information addressed to the end-users<sup>268</sup>.
- 5.216. In case the review carried out on KPIs proves that the obligation of non-discrimination is not being adequately ensured, ANACOM may review in detail the provision of the affected wholesale services and may also identify and impose measures to ensure the effective compliance with the obligation of non-discrimination and with the agreed service quality levels<sup>269</sup>.
- 5.217. In line with the Commission Recommendation on non-discrimination, it is possible that, whenever ANACOM deems it necessary, the indicators provided by MEO may be audited by the referred Authority or by an independent entity<sup>270</sup>.

---

<sup>267</sup> See (24)

<sup>268</sup> See <http://conteudos.meo.pt/meo/Documentos/Qualidade-Servico/Qualidade-Servico-Telefonico.pdf>.

<sup>269</sup> No. 26 of the Commission Recommendation on non-discrimination

<sup>270</sup> See (25)

### *Transparency*

- 5.218. It should be previously reaffirmed that ANACOM considers that, in order to ensure and monitor the compliance with the obligation of non-discrimination, this obligation shall be implemented with the simultaneous imposition of the obligation of transparency. This connection has already been developed in detail in the previous sections in what concerns the imposition of an obligation of non-discrimination and the references of the Commission Recommendation on non-discrimination.
- 5.219. In the opinion of ANACOM, there are few situations related to wholesale provision of local access where the transparency constitutes a obligation sufficient to remedy *per se* any eventual anti-competitive practices (with downstream impact). In any case, it acts as an additional limitation to anti-competitive behaviour, as far as the prices and offer conditions are monitored both by the referred Authority and by the companies competing with the company with SMP, thus making it more obvious to establish any anti-competitive conditions.
- 5.220. Furthermore, transparency is a natural complement to the obligation of non-discrimination, since the ability to identify behaviours with possible harmful effects, through discriminatory practices, depends on the potential detection of such behaviour. So, if there was no obligation of transparency, the potential detection and prove of the existence of any discriminatory behaviour would be significantly affected.
- 5.221. BEREC also argues that, by imposing an obligation of non-discrimination, it shall also make sense to impose an obligation of transparency (since it is particularly complex for a NRA to monitor the quality of the services provided), which may consist of the imposition to publish minimum quality levels for wholesale services and periodically report their respective performance levels to NRA and, where appropriate, to other operators — this issue was already addressed in the previous section, due to the fact that it is also related to non-discrimination. In the opinion of BEREC, this report shall include the services provided to alternative operators and internally to their companies, in order to enabling the monitoring of the compliance

with the obligation of non-discrimination, which is reflected in an increased confidence for the market players in relation to the effectiveness of this obligation<sup>271</sup>.

- 5.222. Electronic Communications Law provides, in Article 66, that it is the responsibility of NRA to impose or maintain the obligation of transparency in the publication of information, including the reference proposals, in accordance with Articles 67 to 69. Article 69 provides for the obligation of publication of a reference offer for unbundled local loop access, providing that “*whenever an operator is subject to the obligation to offer unbundled local loop access, it shall publish its respective reference offer for local loop access (ORALL)*” specifying the elements that shall be mandatorily included in the offer. Following the prior market review, MEO published the above-mentioned reference offer, which was subject to ANACOM interventions and decisions.
- 5.223. As already indicated in the section on non-discrimination in the provision of wholesale services, for ANACOM the quality of service is essential in any wholesale reference offer, and it is decisive to take into account how this characteristic is ensured, in order to ensure suitable competitive conditions and a provision of (retail) services that meet the end-users requirements. For this purpose, reference offers have to be precise in relation to the indicators and service quality parameters (including, for example, the metrics and the exact stipulation of failures start and closing times and the processing of closed but still unresolved failures), and stipulate a minimum level of performance in relation to each indicator, as well as the compensation to be incurred in case of non-compliance.
- 5.224. Consequently, ANACOM understands that the principle of transparency may also be ensured by the obligation to publish and keep ORAC, ORAP and ORALL updated, and also by the publication of the conditions for provision of dark fibre whenever there is no space in the duct.

---

<sup>271</sup> BEREC refers that the most critical issues to be considered by the NRAs regarding the quality of wholesale services are related to:

- the identification of all service quality indicators;
- the minimum level stipulated for each service quality indicator;
- the compensation for non-compliance with the service quality, and
- how these indicators shall be provided.

- 5.225. In addition, since the aspects related to migration to NGAs are essential to the Commission, it considers that “a transparent framework for the migration of copper networks to fibre optic networks” has to be introduced, ensuring “that the systems and procedures implemented by the operator with SMP, including the operational support systems, are designed to facilitate the transfer of the alternative providers to access products based on NGA networks”<sup>272</sup>.
- 5.226. More specifically, the Commission recommends that “unless the operator with SMP and the operators currently enjoying access to their network agree on an appropriate migration track (...), NRAs shall ensure that alternative operators be informed at least five years in advance, taking into account the national circumstances, where appropriate, of a potential switch-off of interconnection points, such as the local loop switch exchange”<sup>273</sup>.
- 5.227. ANACOM also considers that, with the evolution to NGAs, namely with the relocation of accesses between local exchanges/bundling points and the potential withdrawal of some of these points/exchanges, the provision of detailed and timely information on developments in the access network is of key importance and it is essential, in order that the OPSs may assess their impact and the different investment options.
- 5.228. For this purpose, the Commission Recommendation on NRAs (§41) refers that “NRAs shall use the powers conferred on them by Article 5 of Directive 2002/21/Commission to obtain from the operator with SMP all information on any plans to change the network, which may affect the competition conditions in a specific market or submarket. If an operator with SMP intends to replace part of its current copper access network with fibre optic network and has plans to switch-off the currently used interconnection points, the NRAs shall, in accordance with Article 9 (1) of Directive 2002/19/Commission, ensure that the companies benefiting from the access to the operator with SMP network receive all the required information in due time, in order they may adjust their own networks and, consequently, the plans for their extension. NRAs shall define the format and level of detail of the referred information and ensure its absolute confidentiality”.

---

<sup>272</sup> Commission Recommendation on NRAs, no. 40.

<sup>273</sup> Idem, no. 39. According to the same Recommendation, “the referred deadline may be less than five years, if a totally equivalent access is provided in the interconnection point”.

- 5.229. Specifically regarding the access to ducts, the referred Recommendation (in recital 12) refers that the “*access to civil engineering infrastructure is essential to install parallel fibre optic networks. It is, therefore, important that NRAs obtain the information required to determine whether and where ducts and other local loop infrastructures are available for purposes of deployment of NGAs networks. NRAs shall use the powers conferred on them by Directive 2002/21/Commission to obtain all relevant information on the location, capacity and availability of such infrastructures*”.
- 5.230. Therefore, MEO shall provide detailed and timely information to operators benefiting from the wholesale offers in relation to the adjustments introduced in its access network infrastructure (including ducts and poles) prior to the introduction of any amendments that may affect the conditions that were in force when the investment decision was adopted by the referred operators.
- 5.231. In what concerns the access to copper, it seems important (also taking into account the obligation of non-discrimination) that MEO informs the beneficiaries of the current ORALL, within a reasonable time, about:
- the date on which MEO intends to deploy a new local bundling point/exchange — MDF — in order that, as far as possible, it can take into account in the dimensioning of this point the co-deployment needs (firm requests) of the beneficiaries of the offer;
  - the existence, or not, of space in the duct between these bundling points and the points of the beneficiary operators network (if there is no dark fibre for the backhaul/connection, it has to be made available to a node of the network); and
  - potential copper loops to be relocated/switched-off.

- 5.232. In what strictly concerns the copper network, these issues were already detailed in an autonomous decision included in the aforementioned decision on the alterations to ORALL adopted on February 17, 2010<sup>274</sup>, in which ANACOM maintains its opinion.
- 5.233. In fact, more specifically and in line with the stipulations of the Commission, ANACOM considers necessary to maintain the five-year notice period stipulated for the information on the total switch-off of an MDF, local exchange or access/connection point (and of the associated copper loops) with co-deployed operators. In case an equivalent access is guaranteed by MEO, this period may be reduced to 3 years.
- 5.234. As it has already been mentioned above, transparency is essentially a natural complement to the obligation of non-discrimination and a guarantee of its implementation, since the ability to identify behaviours with possible harmful effects through the use of discriminatory practices depends on the detection of such behaviour. So, in case this obligation of transparency was withdrawn, the detection and confirmation of discriminatory behaviours would be significantly affected. In other words, in withdrawing the obligation of transparency, the effectiveness of the non-discrimination obligation would be compromised, leading to some identified consequences caused by a potential suppression of the referred obligation and negatively affecting the markets.
- 5.235. In view of this, it is important to maintain in association with the obligation of transparency, some appropriate reference offers, which are easily accessible and include all the information required, in order that alternative operators that use, or intend to use, the relevant wholesale services may do so in a predictable and efficient way.
- 5.236. In order to ensure predictability and easy consultation of a reference offer (namely, when it has been amended) it is still required to duly identify the amendments made to the offers and they shall always be available on the Website of MEO.

---

<sup>274</sup> Namely imposing that “*In case of relocation of loops for reasons attributable to PTC, and for the PA where there are co-deployed operators, PTC shall give notice with at least:*

- *12 months in advance, for a number of active loops to be relocated lower than 1/3 of the total of active loops in the referred PA;*
- *36 months in advance, for a number of active loops to be relocated higher than 1/3 and lower than 2/3 of the total active loops in the referred PA;*
- *60 months in advance, for a number of active loops to be relocated higher than 2/3 of the total number of active loops in the referred PA (including the switch-off of the PA). This period may be reduced to 36 months in case an equivalent active access is ensured”. Under these circumstances, PA is equivalent to a local MDF/exchange.*

- 5.237. In order to ensure that the above-mentioned objectives are met, the changes made to a reference offer at the initiative of the MEO shall be communicated 1 month prior to the moment they enter into force. This is the only way to ensure that operators have time to make decisions and carry out operational activities or any other activities related to the strategic changes resulting from any amendments to be introduced in a specific wholesale reference offer, whenever such amendments are made in the initiative of the referred entity.
- 5.238. One should clarify that, in case the amendment introduced to the wholesale reference offers results from ANACOM decisions, the amendment shall come into force on the date stipulated in the decision of the referred Authority or, alternatively, on the date of introduction of the amendment to the wholesale offer, if the decision does not refer the date on which the decision shall enter into force.
- 5.239. Finally, in line with the Commission Recommendation on non-discrimination and as was already referred to within the scope of the imposition of the obligation of non-discrimination, ANACOM also considers that although the publication of the performance levels is made on a disaggregated basis, in accordance with the decision adopted on March 11, 2009, the referred publication is deemed proportional and shall be maintained within the framework of the general obligations of transparency and non-discrimination, namely contributing to comply with the service quality objectives and discourage any discriminatory practices. This obligation has reduced implementation (and maintenance) costs, since only the information that ensures that there are no adverse conditions to competition is required.
- 5.240. As hereinabove referred, in case it is required to adapt the currently published service quality indicators, or even to define new service quality indicators in the wholesale offers, may be subject to a review when an independent intervention subsequent to this market review shall be carried out. Notwithstanding and in addition to maintaining the conditions already imposed on the current offers, this market review already stipulates that, as of now, MEO shall provide service quality indicators in relation to the provision of dark fibre.

*Price control and cost accounting*

- 5.241. Article 74 of the Electronic Communications Law enables ARN to impose amortisation of costs and price control obligations, whenever a potential lack of effective competition leads to a situation where the prices are maintained at an excessively high level or a margin squeeze is imposed to the detriment of end-users.
- 5.242. Under these circumstances, and according the same law, ANACOM shall ensure that amortisation of costs mechanisms or pricing methods promote efficiency and a sustainable competition, and maximize the benefits to the end-user. In what concerns this issue, ANACOM may also take into account the prices charged on comparable competitive markets.
- 5.243. In the absence of an effective competition in the market of wholesale local access provided at a fixed location, the dominant operator has few incentives to reduce wholesale costs and operate efficiently, since such high costs may be transferred to the wholesale customers through excessive prices and, ultimately to end-user companies and consumers, which have no choice in non-competitive markets.
- 5.244. In fact, facing a wholesale market where (i) there is no effective competition, (ii) there are significant barriers to entry, (iii) the development of competition is not predictable, and (iv) the operator with SMP may act independently comparing to other market players, it is predictable that this operator has all the incentives to set the prices of wholesale offers at a level significantly higher than the costs incurred in the provision of services.
- 5.245. Thus, if the obligation of cost accounting was withdrawn, an important instrument for setting prices associated with the reference offers concerned would be lost. As this instrument is not available, the market would be led to a situation of greater uncertainty in relation to wholesale prices level. It should be noted that this greater uncertainty would not be in line with the principle of achieving predictability and efficiency in the conditions of wholesale offers.
- 5.246. In this context, and under certain circumstances, there might be incentives offered by the dominant operator to implement a strategy of margin squeeze in relation to the alternative operators that use the wholesale offers imposed on the market of wholesale local access provided at a fixed location, in order to extend its dominance in this market

to the downstream markets and even to the associated retail markets. Such strategies shall inevitably result in damages both for the competition and for the end-users.

- 5.247. It must be acknowledged that the current challenges related to cost accounting and definition of wholesale prices are particularly relevant. On the one hand, and as it has been mentioned before, the predictability and efficiency in wholesale prices has to be ensured. Adequate incentives have also to be ensured so that the investment by the dominant operator and the alternative operators is not jeopardised. All those actions shall be taken and reconciled in terms of defence and promotion of the competition already existing in infrastructures.
- 5.248. The Commission Recommendation on non-discrimination includes a certain number of recommendations, which intend to reconcile the above-mentioned objectives and are specifically linked to the obligation of price control and cost accounting.
- 5.249. So far, OLL and the related resources prices (e.g., co-deployment), as well as access to ducts and poles, have been regulated in accordance with the principle of cost-orientation of prices. In imposing this principle, ANACOM has based its cost estimates on:
- MEO analytical accounting system, which is subject to an annual audit;
  - the budgeted costs and the current costs of the resources consumed and of the activities required to provide the services; and
  - also having as an additional reference the practices in force in the European Union, where available. In assessing prices, economic efficiency criteria are also taken into consideration.
- 5.250. In this regard, it should be noted that, so far, all price reductions related to ORALL or ORAC have been imposed by ANACOM and did not result from any MEO initiatives. In the case of ORALL, the reason for a reduction in the current use of the offer does not seem to (mainly) result from the costs associated with its use, but rather from the process of development and migration to NGA (also based on a high competitiveness of certain retail offers, such as subscription television). This migration justifies the importance and suitability of the adoption of the costing method recommended by the Commission, in order to avoid any future artificial increase of the unit costs associated with ORALL.

- 5.251. Unlike ORALL, at the access to ducts level (and, more recently, to poles as well), i.e., within the scope of ORAC and ORAP, there is a high and sustained demand and dynamic performance. Having a detailed cost revision into consideration, there might be in the future an opportunity to revise the prices associated with the referred offers, as they continue to play an essential role in the support of a continued investment in networks (alternative) throughout the national territory. That is one of the reasons why the obligation of access to fibre is not imposed. In relation to price regulation, the Commission Recommendation on non-discrimination refers that, unlike other assets where, whenever certain conditions are met, there might be no price regulation, this option “*shall not apply to the access to civil engineering infrastructure, regardless of the fact of whether it is part of the product market or is imposed as an ancillary remedy.*” In other words, in accordance with the referred recommendation, access prices to civil engineering infrastructure shall always be regulated<sup>275</sup>.
- 5.252. ANACOM considers that, in order to encourage the implementation of networks alternative to MEO network and to contribute to maintain a competitive pressure on the retail market, it shall maintain the principle of cost-orientation of prices in the regulation of the price of access to ducts, poles and local copper loop.
- 5.253. In the case of the access to dark fibre, the prices currently charged for the (commercial) provision of the referred services are (commercially) stipulated by MEO. ANACOM also considers that the prices to be included in the access conditions to dark fibre shall comply with the principle of cost-orientation of prices. It should be noted that the access to dark fibre will only be granted under circumstance where it is not possible to accede poles and ducts. Consequently, it shall make perfect sense that the price stipulation based on the respective costs is maintained also in relation to the access to dark fibre.

---

<sup>275</sup> See (53)

- 5.254. It should also be clarified that it is required that the products or the services that MEO uses internally have internal transfer prices stipulated on the basis of their own cost-orientation of prices. Otherwise, MEO may be benefiting from excessive margins on these intermediate products and, simultaneously, ensuring excessive margins on the regulated wholesale products, without showing it in the available cost-accounting data.
- 5.255. In applying the principle of cost-orientation of prices, the costing methods mentioned in the following section shall be taken into account.
- 5.256. Furthermore, in accordance with the Commission Recommendation on non-discrimination<sup>276</sup>, regulators may, if they consider it appropriate and required, carry out other *ex antetests* on the regulated wholesale *inputs*, either to ensure that the of wholesale access pricing of the access products based on copper network shall not prevent competition in the retail market, or to ensure an appropriate economic area between the different access *inputs* in the copper network. However, for the reasons hereinabove referred to, a (reduced) demand for new accesses supported on OLL does not justify, for now, to carry out the referred tests.

#### **Costing method and respective implementation**

- 5.257. In the decisions on wholesale offer prices, ANACOM has attempted to stipulate prices at an efficient level and that would result from a market in a situation of effective competition. Consequently, following the principle of cost-orientation of prices, ANACOM considers that a cost-accounting method shall be used to enable a stipulation of prices in accordance with the principles hereinabove identified.
- 5.258. The Commission Recommendation on non-discrimination, besides upholding the above-mentioned principles, also refers that the costing method shall be based on a modern and efficient network and shall result in cost-oriented prices in what concerns wholesale access to copper networks that, over time, shall be stable and resilient to migration to NGA<sup>277</sup>, in order to ensure predictability and favour investment conditions.

---

<sup>276</sup> Recital (63).

<sup>277</sup> The decrease in the volume of copper accesses resulting from the transition from copper networks to NGAs may result in an (artificial) increase in wholesale access prices via copper networks, due to the reduction of the quantities.

- 5.259. In any case, the Commission also considers that it is essential that the adopted costing method ensures that operators are able to cover the costs of efficient investments (including an adequate return of the invested capital)<sup>278</sup>. The purpose of this consists of having a costing method that, given the current specific circumstances in what concerns the implementation of NGAs, provides the appropriate investment incentives, according to the provisions set forth in recital (27) of the Commission Recommendation on non-discrimination. This opinion is also shared by ANACOM.
- 5.260. In this regard, according to the referred recommendation, the costing method *bottom-up long-run incremental costs plus*<sup>279</sup> is the method that best meets the above-mentioned objectives and challenges<sup>280</sup>. The recommendation also refers that the costing method adopted by regulators “*shall ensure transparency and consistency in the Union*”. In any case, it is acknowledged that specific national circumstances have to be consistently taken into account<sup>281</sup>.
- 5.261. In view of the specific characteristics of the Portuguese market and in line with the Commission Recommendation, ANACOM considers that, in general terms, BU LRIC + model is the costing method that ensures more appropriate investment incentives, while ensuring the predictability and stability of wholesale prices and the maintenance and promotion of the market competition<sup>282</sup>.
- 5.262. As it is not probable that an operator constructs a pure copper network, the Commission Recommendation on non-discrimination specifies that the BU LRIC + method shall estimate “*the current costs of implementing a modern and efficient NGA network*”. It is also mentioned that this network would consist wholly or partially of optical elements (depending on the specific national circumstances) and should “*enable the compliance with the objectives set by the Digital Agenda for Europe set out in terms of bandwidth, coverage and take-up*”<sup>283</sup>.

---

<sup>278</sup> Recital (26) of the Commission Recommendation on non-discrimination.

<sup>279</sup> Hereinafter BU LRIC +. This model provides for a «*bottom-up*» approach modelling that uses LRICs as a costing model plus a margin for recovery of common costs.

<sup>280</sup> Recitals (29) to (31).

<sup>281</sup> Recital (28).

<sup>282</sup> According to the Commission Recommendation on non-discrimination, the lifetime of civil engineering assets, namely ducts, is normally not less than 40 years (No. 36).

<sup>283</sup> Recitals (31) and (32)

- 5.263. It should be noted, however, that NRA modelling shall consider both the existing civil engineering assets and those that shall have to be built from scratch to support such networks. That is, the BU LRIC + model shall not assume the need to build an entirely new network of physical infrastructures<sup>284</sup>. In this context, NRAs shall<sup>285</sup> value the assets that constitute the regulatory asset base (RAB) of the network modelled based on the replacement costs (e.g., assets such as technical equipment and transmission support), except in what concerns civil engineering reusable legacy assets. The referred historical assets shall be valued in accordance with the indexation method.
- 5.264. Consequently, in the case of the assets corresponding to ducts and poles, ANACOM shall initially consider the net regulatory accounting value net of the accumulated depreciation, indexed by an appropriate price index.
- 5.265. In line with the principle of technological neutrality and the potential differences and specificities of each market, the Commission Recommendation on non-discrimination (recitals (40) and (41)) refers that to model a modern and efficient NGA shall be carried out with some flexibility degree. It may, therefore, it may be a modern and efficient NGA network with various access technologies and different topologies<sup>286</sup>.
- 5.266. ANACOM understands that the specificities of the model to be adopted in Portugal shall correspond to the characteristics of the NGA that has been implemented by MEO and that, in general terms, corresponds to the characteristics of the NGA that has been implemented by other operators, such as Vodafone.

---

<sup>284</sup> See (32)

<sup>285</sup> See (33)

<sup>286</sup> E.g., FttH network, FttC network or a combination of both may be considered as a modern efficient NGA.

- 5.267. It should be noted that one of the arguments to model a single efficient NGA, in order to estimate the costs of the copper network access products is to minimise the inflationary effect on the access price to a copper network due to customer and traffic transfer from the copper network to NGA<sup>287</sup>.
- 5.268. The cost of the NGA should be adjusted to reflect the different characteristics of a copper network<sup>288</sup>. This adjustment requires estimating the cost “*difference between an access product based on a NGA network and an access product based entirely on copper by making the required network engineering adjustments to the NGA model to determine the wholesale price of copper network access*”<sup>289</sup>.
- 5.269. In the construction, definition and implementation of the model to be used in Portugal, ANACOM shall follow the principles and procedures provided for in the Commission Recommendation on non-discrimination. The definition of the specificities associated with this model shall be carried out through an autonomous procedure, subsequent to this market review.
- 5.270. The Commission Recommendation on non-discrimination provides for a transitional period until the NRAs apply the recommended costing method. This transitional period shall end on December 31, 2016<sup>290</sup>.
- 5.271. A key aspect to consider during the transitional period is the monthly rental price of the full local loop which, at the time of the entry into force of the Commission Recommendation on non-discrimination, is charged in the country.
- 5.272. In this respect, the Commission stipulates – §41 of the Recommendation – a band of prices between EUR 8 and EUR 10 (net of all taxes and expressed in 2012 prices), in which falls the average monthly prices for access to the local copper loop<sup>291</sup> resulting

---

<sup>287</sup> In this situation, only the transfer to cable networks or to mobile networks shall have a positive effect on prices of copper networks access. See recital (39) of the Commission Recommendation on non-discrimination.

<sup>288</sup> In cases where the topology of the NGA to be modelled is different from the copper network and the adjustments to the NGA engineering model are not feasible, NRAs could obtain the copper cost by modelling an NGA overlay network, where two parallel networks (copper and fibre, either FttH or FttC) share to an extent the same civil engineering infrastructure network. Under this approach, the inflationary volume effect would be neutralised for civil engineering assets because the modelled copper and fibre networks would share civil engineering assets. The unit costs of these assets, which represent the largest part of the costs of an access network, would therefore remain stable. Recital (42) of the Commission Recommendation on non-discrimination.

<sup>289</sup> Recital (41).

<sup>290</sup> Recital (43).

<sup>291</sup> Loop rental in full access mode.

from the application of the recommended costing method<sup>292</sup>. According to the Commission, the purpose of defining this price range is “*to guide NRAs when implementing the costing method, in order to meet the recommendation overall objective of stability and predictability of copper access prices*”<sup>293</sup>.

- 5.273. Currently, the OLL monthly fee in Portugal, in the amount of EUR 8.99, is within the referred price band. Also taking into account the principle of regulatory transparency and predictability, as well as the need to ensure stability without any significant wholesale price fluctuations based on the Commission Recommendation on non-discrimination, ANACOM confirms that it does not predict to introduce any changes in the price concerned during the period relevant to this market review, more specifically during the period until the date the recommended costing method enters into force. Consequently, when this recommendation enters into force, the monthly rental price of the local loop in the full access mode will be within the above-indicated price range.
- 5.274. It should be also noted that the recommendation in question specifies (§42) that, “*in those Member States, where at the time of entry into force of this recommendation, the monthly rental prices of the full unbundled local loop fall within the price band, as adjusted according to the Union average (annual) retail price index, NRAs may continue to apply, until December 31, 2016, the costing method they use on the date of entry into force of this recommendation*”.
- 5.275. In view of the above-referred, ANACOM chooses to continue to use, in stipulating the local copper loop access price during the transitional period, and adopts the BU LRIC+ model only in case MEO does not give any guarantees that the price of copper loops access under ORALL shall not increase.
- 5.276. In case of adopting this method, ANACOM shall consider, in the implementation and operationalisation of the costing method, the stipulations set forth in the Commission Recommendation on non-discrimination (§46 and §47) concerning the maintenance of the referred method, the data updating to be considered in the respective application, as well as the publication of updated results of the costing method and the resulting access prices.

---

<sup>292</sup> Or the methods used in accordance with paragraph 40.

<sup>293</sup> Recital (45).

5.277. In what concerns the provision of dark fibre, MEO shall justify its prices to ANACOM based on the costs incurred.

5.278. In conclusion:

- The costs of the assets corresponding to ducts and poles shall be based on the regulatory net accounting value of the accumulated depreciation, indexed to an appropriate price index and taking into account a proper depreciation period. The BU LRIC + model shall not be adopted for the definition of the price of these services.
- Concerning OLL, in case MEO does not give any guarantees that the price of copper loops access under ORALL shall not increase, a BU LRIC + model shall be used, otherwise the cost-accounting method currently in force shall be maintained.
- In the case of dark fibre, MEO shall justify the prices to ANACOM based on the costs incurred.

#### *Accounting separation*

5.279. As in the case of the obligation of transparency, the obligation of accounting separation is essential to ensure the fulfilment and effectiveness of the obligations of non-discrimination, price control and cost accounting. If the obligation of accounting separation was withdrawn, the identified loss caused by the withdrawal of the above-mentioned obligations would affect the relevant market.

5.280. For example, if there was no obligation of accounting separation, ANACOM would have some difficulty to carry out a correct monitoring of the compliance with the obligations associated with price control and cost accounting of a company with SM. It would also be very difficult to identify situations of cross-subsidisation.

5.281. The accounting format and method adopted shall comply with the requirements that were duly submitted to MEO by ANACOM and ANACOM shall periodically review these requirements, in order to update the cost-accounting method and the information provided.

- 5.282. Furthermore, a potential implementation of the BU LRIC + costing model shall be considered. As referred above, the details associated with the definition and implementation of this model, if it is adopted, shall be specified in an autonomous decision subsequent to this market review.
- 5.283. The imposition of the obligation of accounting separation is still considered as objectively justifiable in terms of ensuring non-discrimination (it enables the review of wholesale prices and internal transfer prices), as well as to prevent cross-subsidisation.
- 5.284. It is a proportional provision, as far as only a detailed provision of information is required to meet the objectives of checking other obligations.

#### *Financial report*

- 5.285. In order to check the compliance with the obligations hereinabove stipulated, namely the obligations of transparency, non-discrimination, accounting separation and costing, and in accordance with Article 71 (3) of the Electronic Communications Law, the company with SMP shall provide its accounting records to ANACOM, including any data on revenues from third parties.
- 5.286. So, in case there was no financial report obligation, the effectiveness of the above-mentioned obligations would be jeopardised, leading to significant losses to the market of wholesale local access provided at a fixed locate and any other related markets.
- 5.287. In line with the review carried out in 2009, the accounting records required for an appropriate compliance with the financial report obligation are deemed to constitute the analytical accounting method that shall be submitted under duly stipulated conditions.
- 5.288. One shall consider that it is required to adjust the accounting records and the information provided within this scope in accordance with the definition and implementation of the BU LRIC + costing model.
- 5.289. It is concluded that to maintain the obligation of financial report is required, proportional and appropriate.

## Conclusion

5.290. The market of wholesale local access provided at a fixed location covering the entire national territory has been identified as relevant, for the purposes of *ex ante* regulation and in accordance with the principles of competition law.

5.291. After reviewing the above-referred market and taking into utmost account the respective Guidelines, ANACOM concludes that MEO has SMP in the identified relevant market and, therefore, the obligations provided for in Table 13 shall be imposed (all obligations are based on Article 66 of the Electronic Communications Law, given that there is no effective competition in this market).

**Table 13. (Non- exhaustive) overview of the obligations to be imposed on MEO in Market 3a - Market of wholesale local access provided at a fixed location**

Obligations	Market of wholesale local access provided at a fixed location
Access and use of specific network resources	<ul style="list-style-type: none"> <li>▪ Unbundled access to copper local loops and sub-loops and related resources (including co-deployment at bundling points and <i>backhaul</i>).</li> <li>▪ Access to ducts, poles, inspection chambers and any other infrastructure suitable for housing networks.</li> <li>▪ Access to dark fibre whenever there is no access to ducts and poles<sup>294</sup>.</li> <li>▪ To negotiate in good faith with the companies requesting access.</li> <li>▪ The access already granted to certain resources shall not be withdrawn.</li> </ul>
Non-discrimination in the provision of access and interconnection and in the respective provision of information	<ul style="list-style-type: none"> <li>▪ No undue discrimination in the provision of access to local copper loops and sub-loops and related resources<sup>295</sup>.</li> <li>▪ To implement EoI within the scope of ORAC and ORAP<sup>296</sup>.</li> <li>▪ To implement EoO within the scope of ORALL and of the offer of access to dark fibre.</li> </ul>
Transparency in the publication of information, including reference offers	<ul style="list-style-type: none"> <li>▪ Publication of ORAC, ORAP and ORALL.</li> <li>▪ 1 month notice for amendments made on MEO initiative in the offers, which shall be duly identified. If the amendment made to the wholesale offers was due to ANACOM stipulations, the referred amendment shall enter into force on the date stipulated in the decision of this Authority or, alternatively, on the date of amendment of the wholesale offer, in case the decision does not refer any date of entry into force of the resolution.</li> </ul>

<sup>294</sup> Under ORAC, in the absence of space in the existing ducts. The specific conditions of this offer, including procedures, SLA and price, shall be provided to all ORAC beneficiaries that intend to use access to ducts (for the deployment of their own fibre) within a maximum of 2 months after notification of the final decision on this market review.

<sup>295</sup> To impose conditions of equivalent access, to be followed by MEO and by the beneficiaries of the offers (namely ORALL) whenever they access them.

<sup>296</sup> Any proposals that may not formally follow EoI (i.e. the use by MEO and the beneficiaries of exactly the same regulated wholesale products, at the same prices and using the same transactional processes), may achieve the same results, corresponding to the expectations and needs of the beneficiaries.

	<ul style="list-style-type: none"> <li>▪ Provision to OPSs of detailed and timely information on developments in the access network.</li> <li>▪ 5-year notice for total switch-off of a MDF, a local exchange or an access point/connection (and associated copper loops)<sup>297</sup> with co-deployed operators.</li> <li>▪ The provision and publication of indicators and levels of performance in the service quality in wholesale offers and also comparable indicators related to the provision of internally equivalent services (whenever stipulated by ANACOM).</li> </ul>
Accounting separation for activities related to access and/or interconnection	<ul style="list-style-type: none"> <li>▪ Potential implementation of BU LRIC+<sup>298</sup>.</li> <li>▪ To include specific income statements in the cost-accounting and accounting separation method.</li> </ul>
Price control and cost accounting	<ul style="list-style-type: none"> <li>▪ To offer cost-oriented prices in ORAC, ORAP, ORALL, and in the access to dark fibre (the products or services that MEO uses internally shall also consider cost-oriented internal transfer prices).</li> </ul>
Financial report	<ul style="list-style-type: none"> <li>▪ To make accounting records (ACS) available, including data on revenue from third parties.</li> </ul>

<sup>297</sup> If an equivalent access is guaranteed by MEO, the above-referred period may be reduced to 3 years.

<sup>298</sup> In case MEO does not give any guarantees that the price of copper loops access under ORALL shall not increase.

## **6. DEFINITION OF THE CENTRAL WHOLESALE ACCESS MARKET PROVIDED AT A FIXED LOCATION FOR MAJOR CONSUMER PRODUCTS (MARKET 3B)**

6.1. Once the retail markets for broadband access have been characterised and defined, as well as the competitive pressures on them, both on the demand and on the offer side, and once a lack of effective competition in the retail market of broadband access for major consumer products in Areas NC as been deemed as a reality, even with *ex ante* regulation in Market 3a, this chapter shall define the market of wholesale central access provided at a fixed location for major consumer products - Market 3b of the Commission Recommendation on relevant markets. This market is located downstream the provision of network access covered by the above-referred Market 3a, due to the fact that the provision of wholesale broadband access may be carried out by using this resource in combination with other elements.

### **Market of wholesale central access product provided at a fixed location for major consumer products**

6.2. In 2009, ANACOM concluded that the retail and wholesale provision of broadband access included broadband access services based on copper and cable networks.

6.3. In this review, a similar conclusion has already been confirmed at the retail level and it was also concluded that, in accordance with the principle of technological neutrality, the product retail market included all broadband access services, regardless of the respective basic technology (copper, cable or fibre). In fact, as it was concluded in the previous chapter, the market for broadband access retail product consists of broadband access services provided in the major consumer segment, regardless of the respective technology.

6.4. The current conclusions are fundamentally based on the substitutability relationship in the retail market (and also on the network access markets), between copper, cable or fibre broadband access, presenting similar functionalities from the point of view of the end-user: technical characteristics (namely speed and service quality) and equivalent prices, as well as the integration in packages that already include other services (namely television services), which is currently more demanded by the end-users. In what concerns the offer, it was also concluded that there is also substitutability, since all the main operators in the market have (similar) offers based on different

technologies, either in copper and fibre (such as MEO or Vodafone) or in cable and fibre (such as NOS and Apax - Cabovisão).

- 6.5. Therefore, in this context, as the wholesale central access market is provided at a fixed location (for major consumer products) connected to the retail market, the referred wholesale market are considered to include both copper-based products and fibre or cable-based products, even if there are no wholesale offers based on these networks<sup>299</sup>.
- 6.6. It means that if ANACOM maintains an approach, which is in line with the principle of technological neutrality – as referred to in the Framework Directive and in the Electronic Communications Law, the market definition shall be neutral in relation to the network or technology used in the service provision –in principle, the market of wholesale central access provided at a fixed location (for major consumer products) shall be deemed to include all access products, irrespective of the technology or infrastructure that supports the referred accesses and that, in case they have homogenous characteristics, the wholesale users consider them as equivalent products and, therefore, they are replaceable.
- 6.7. The arguments set out in Market 3a review shall also be taken into consideration in relation to the fact that there are enough indirect constraints in the retail market, which affect the wholesale market.
- 6.8. In this regard, ANACOM considers that it is appropriate to identify and represent, within a single market, all (direct and indirect) constraints that are faced by a company that produces a specific wholesale *input*, leading, in the market definition phase, to a competitive characterization that is closest to reality. Consequently, the estimated market shares shall also be more representative of the market competitive situation, considering that the ultimate objective of *ex ante* regulation is to produce benefits to end-users, making retail markets competitive on a sustainable basis.

---

<sup>299</sup> In what concerns fibre optic networks, it is possible to identify the agreement that has been concluded between MEO and Vodafone related to the sharing of fibre optic network, also the agreement that has been concluded between NOS and Vodafone relating to the sharing of fibre optic network and the wholesale access within the scope of the offers made available under public tenders for deployment, management, operation and maintenance of high-speed electronic communications networks in rural areas.

- 6.9. Up to now, there is a single wholesale central access product provided at a fixed location (for major consumer products): ADSL PT Network offer <sup>300</sup>, which has been imposed on MEO.
- 6.10. Furthermore, MEO, the cable operators and even other alternative operators that are composed essentially of vertically integrated operators, provide a wholesale service to their own retail departments. So, this service shall be used by the referred retail departments as *input* in relation to their retail products, i.e., as an internal supply<sup>301</sup>. And, in fact, they also compete with products based on a retail infrastructure. See, for example, that in-house provision in terms of customers is responsible for more than 99 percent of the accesses to the retail broadband access market for major consumer products<sup>302</sup>. In other words, the main source of competition in the retail broadband access market is related to in-house provision.
- 6.11. In this context, in circumstances where there are several operators with their own infrastructure (and/or leased/wholesale upstream based) based on copper, cable and fibre, to review the market of wholesale central access provided at a fixed location (for major consumer products) would be not very reasonable, as it is based only on copper network, in which MEO would have a very high market share and would (re)impose obligations on it, when the retail market in certain areas is already competitive, either using own infrastructure or OLL's. And considering indirect constraints in the SMP evaluation phase may result in an underestimation of these constraints.
- 6.12. In addition, it should be noted that OLL represents only 3 percent of active physical accesses in retail<sup>303</sup>, and the remaining physical accesses are based on own infrastructure, which shows a poor representativeness in the wholesale offer market, including a tendency to decrease.

---

<sup>300</sup> Reference offer is regulated since 2005, but in Areas NC, only since 2009.

<sup>301</sup> That is, from the operators acting in the value chain and simultaneously in an associated retail market, such as the main operators acting in the broadband access markets.

<sup>302</sup> For example, both Optimus and Vodafone have much more broadband accesses from their internal supply (i.e., they have their own deployed fibre and unbundled accesses), tending to increase.

<sup>303</sup> End of 2015.

- 6.13. So, given that broadband access is essentially provided under a vertical integration model and since the same entities - the network operators - operate in the wholesale and retail markets, the concept of using internal provision shall be maintained.
- 6.14. Even if one could question the absolute necessity of carrying out the test suggested by the Commission for purposes of reviewing the importance of indirect constraints at a stage of definition of the market, and since these constraints shall be taken into consideration at this time, we may conclude that in this case the test is fulfilled, if:
- Taking into account the ADSL PT Network offer, wholesale cost represents more than 60 percent of the price of MEO ADSL retail offers. Therefore, in view of a small but significant increase of the price of a hypothetical monopolist in Market 3b (i.e., 10 percent), and since the retail market in Areas C is competitive (i.e., the price is close to the price charged in competitive markets) in view of the regulation of Market 3a (including the obligation of access to ducts, poles and local copper loop), alternative operators would have to increase the wholesale price they charge to their retail customers, in proportion to the burden that wholesale price represents to the retail price (i.e., at least 6 percent).
  - In line with the results of the prior market review, there is still sufficient degree of substitutability in the retail demand, in areas with other infrastructures (even in Areas NC, there are areas where other operators have network) which, based on indirect constraints, makes the increase in the wholesale price unprofitable.
  - The integrated hypothetical monopolist retail operator is forced to increase retail prices as a result of the increase in wholesale prices, since the current margins are very low and make the increase in wholesale price unprofitable due to customer transfer to alternative offers (such as, cable and fibre).
- 6.15. Taking into account the prior market review (on this issue) and namely, the different market definitions carried out in this document, both at retail and wholesale levels, in line with the relevant markets indicated by the Commission in its Recommendation (on relevant markets) and also taking into account the principle of technological neutrality, ANACOM still considers that, in Portugal, the market of wholesale central access provided at a fixed location for major consumer products is composed of copper, cable and fibre optic broadband access services.

6.16. Ultimately and as previously referred to, the option to include or not the indirect constraints in the market definition shall not change (as it did not change before) the final conclusions concerning SMP review in the referred market.

### **Geographic market of wholesale central access provided at a fixed location for major consumer products**

6.17. In view of the definition of geographic markets concerning the access to broadband retail market for major consumer products - broadband access markets for major consumer products in Areas C and Areas NC - from the beginning, the definition of the geographic market would be expected to be identical at the related wholesale markets level, even due to the different competitive pressures within the two (retail) markets supported on them.

6.18. On the other hand, according to the Commission Recommendation on NRAs, *“the transition from copper to fibre networks may change the competition conditions in the various geographic areas and may require a revision of the geographic scope of Markets 4 and 5 or of the remedies applicable to Markets 4 and 5, in cases where those markets or remedies have been segmented on the basis of competition resulting from local loop unbundling”*.

6.19. In fact, ANACOM has already taken these principles into account in the previous chapter, in which the competitive situation in the various areas of the national territory was reviewed in detail. As the different competitive conditions in the different areas continue to exist at the retail level, ANACOM has concluded again that there are geographic areas with various competitive conditions that justify the definition of a different geographic market in the national territory, which shall have repercussions on the segmentation at the wholesale level, as well as on the obligations imposed at that same level.

- 6.20. The adoption of another geographic unit, such as the exchange area, in spite of allowing a better connection between the structure of the currently regulated network - copper network - and any obligations to be imposed, does not include other benefits and, furthermore, is also the parish area that, on average, is smaller than the exchange area.
- 6.21. Even taking into account that the process of market review is sequential, if the market of wholesale local access provided at a fixed location is the first to be reviewed, including the obligations to be imposed, and only then, the market of wholesale central access provided at a fixed location for major consumer products is also reviewed<sup>304</sup>, ANACOM considers that the obligations imposed at the level of Market 3a shall lead, namely in the short-term, to an effective competition in downstream markets in Areas CN (Areas C were already deemed as competitive at the retail level, in view of the regulation imposed on Market 3a).
- 6.22. In fact, in the short-term a major development in the fibre-based (wholesale) offers is not expected in Areas NC, since most of the investment of operators, including the incumbent operator is, grosso modo, confined to Areas C. That means that the broadband access market in Areas NC shall be kept as non-competitive due to a lack of alternative access infrastructures and with a competitive dynamics substantially different from Areas C, even taking into account the networks implemented under public tenders for deployment, management, operation and maintenance of high-speed electronic communication networks in rural areas.
- 6.23. Consequently, also at the wholesale level, ANACOM intends to maintain the segmentation of the market of wholesale central access provided at a fixed location (for major consumer products) due to effective competition differences in various areas, by defining of the following markets:
- Market of wholesale central access provided at a fixed location (for major consumer goods) in Areas C<sup>305</sup>; and
  - Market of wholesale central access provided at a fixed location (for major consumer products) in Areas NC.

---

<sup>304</sup> The review of the competitive conditions in the market(s) associated with the wholesale central access provided at a fixed location (for major consumer goods), and any other obligations that should be imposed on those market(s), shall take into consideration the expected effects of the obligations already imposed on the market located at a higher level in the vertical value chain.

<sup>305</sup> The list of parishes forming Areas C may be found on **Appendix III**.

6.24. To a large extent, the Areas C that are now defined correspond to Areas C referred to in the previous market review. In most of these areas there are at least two operators with their own network (the average coverage of the two largest alternative operators to MEO in these parishes is of 78 percent) and there are also operators co-deployed for ORALL purposes. In these parishes OLL has an average range of coverage of about 78 percent.

### **Wholesale markets that may have *ex ante***

6.25. The Commission considers that markets identified for *ex ante* regulation purposes shall comply with three cumulative criteria<sup>306</sup>:

- Presence of strong and non-transitory barriers to entering the market, whether structural, legal or regulatory nature.
- Market structure that does not tend to an effective competition over a relevant time horizon.
- Insufficiency of competition law to, alone, adequately address the market failure(s).

6.26. In this case, the review of these criteria represents the application of the so-called 'three criteria test' to the markets of wholesale central access provided at a fixed location (for major consumer products).

#### ***Market of wholesale central access provided at a fixed location (for major consumer products) in Areas NC***

6.27. In the previous chapter, it has already been concluded that the retail broadband access market in Areas NC has strong and persistent barriers to entry and is not prospectively competitive. Furthermore, the prior market review concluded that Competition Law is not enough to fill the gaps still existing in the market. The related wholesale market has also similar characteristics, considering that it meets the three criteria test and is relevant for the purposes of *ex anteregulation*. For this reason, the existence of SMP is reviewed in the same chapter.

---

<sup>306</sup> See Recommendation (No. 5).

6.28. Furthermore, according to the Explanatory Memorandum (§2.2), the Commission acknowledges that for the markets identified in the relevant markets Recommendation, NRA assumes that the three criteria are met and, therefore, ANACOM does not need to apply the test.

***Market of wholesale central access provided at a fixed location (for major consumer goods) in Areas C***

6.29. The previous market review considered that the market of wholesale central access provided at a fixed location (for major consumer products) in Areas C is a competitive market (although, in this review, Areas C did not fully coincide with the areas referred to in the previous market review). The previous chapter concluded that the related retail market is (also) considered competitive, in view of the regulation in Market 3a. As previously referred, there are also characteristics showing that the referred wholesale market is still considered competitive and, consequently, it shall not be subject to *ex ante* regulation.

6.30. In this context, ANACOM deems required and suitable to check if the referred market meets the test of the three criteria and if not, it shall not be considered as a relevant market for the purposes of *ex ante* regulation (even if it is included in the Commission Recommendation on relevant markets).

6.31. It should be noted that the criteria are cumulative and shall, therefore, be applied together. The market concerned is considered as a relevant market and it may be subject to *ex ante* regulation, if all the criteria are fulfilled.

**Criterion 1 - Presence of strong and non-transitory barriers to entry**

6.32. First of all, there are no legal, administrative or regulatory barriers to enter the market in Areas C.

6.33. In what concerns the persistence of strong structural barriers to the entry and development of competition and in accordance with the Commission Recommendation on relevant markets, it is important to review the indicators relating to “*the structure of the market, its performance and dynamics, including indicators, such as the respective market shares and trends, the market prices and respective trends, as well as the extent and coverage of competing networks or infrastructures*”.

6.34. As explained before, the existing competition at the retail market level among the broadband offers based on the various networks (copper, cable and fibre) leads to indirect constraints at the wholesale level. In view of the fact that broadband access services are essentially provided in accordance with a vertical integration model and since the same entities - the network operators - operate either in the wholesale, or in the retail markets, the concept of in-house provision shall be used in estimating of market shares<sup>307</sup>.

6.35. According to these assumptions, it is estimated that the shares in the market of wholesale central access provided at a fixed location (for major consumer products) in Areas C, and their respective evolution, are as follows:

**Table 14. Evolution of market shares in the market of wholesale central access provided at a fixed location (for major consumer goods) in Areas C**

Operator	2007	2010	2013	2015
MEO	27%	34%	39%	35%
NOS	62%	52%	44%	42%
Apax	10%	8%	6%	5%
Vodafone	1%	6%	10%	18%

**Note:** In 2007, 2010 and 2013, the market shares were calculated for the exchange areas that are included in C Areas of the previous market analysis, while for 2015 they were calculated for the parishes that are included in C Areas of the current analysis.

6.36. As in the retail market, in the market of wholesale central access provided at a fixed location (for major consumer products) in Areas C, MEO share market is less than 40 percent, even lower than NOS market share in around 7 percentage points. Vodafone has been increasing the market share, having significantly expanded its operations and number of accesses, and therefore ANACOM considers that barriers to entry and market expansion remain low.

<sup>307</sup> The same applies, for example, to the OLL beneficiaries that, in practice, provide a wholesale service to their own vertically integrated retail department that is used as *input* to their broadband retail access products. In practice these operators do not provide a wholesale broadband access, although they are able to do so. Consequently, they may compete with MEO in this market, as it has already happened in the past with alternative operators.

- 6.37. In the previous market review (in the SMP review carried out on the same wholesale market), ANACOM acknowledged that *“the majority of operators offering broadband retail access services in this market, including ZON, have already invested in the capacity to provide those services and, for that purpose, they have also born the sunk costs. So, in general, the referred operators are in a position to expand their business to other customers without incurring any significant sunk costs (...). The alternative operators used the reference offer for access to ducts and also the reference offer for local loop unbundled access, namely in areas of high density of population”*.
- 6.38. In fact, the referred areas (Areas C) correspond, grosso modo, to economically more attractive urban areas, where it is possible to monetize the costs associated with the development and expansion of broadband services, which are subject to significant economies of scale. Alternative operators have entered the market and continue to expand their networks and operations, either cable operators, and they only used their own network, or the network of other operators. At first, they have essentially used OLL - which covers all Areas C - and more recently, they also use their own fibre network - see the above-referred review of Market 3a - with parallel coverage, that is, in certain parts of Areas C. On the other hand, MEO has also made a strong investment and has been increasing its market share in a sustained manner.
- 6.39. Furthermore, and in view of these developments, the main operators in this market seem to have identical access to financial resources/capital markets, and, therefore, there are no situations of significant advantage of one operator over the others.
- 6.40. Given the characteristics of this market, and as it has already been referred to, the entry and expansion of operators is still attractive, either by investing in their own infrastructure or by using MEO wholesale offers within the scope of Market 3a (including ORAC and ORAP<sup>308</sup>), which leads to the conclusion that there are no high and no transitory barriers to the entry in the market in Areas C.

---

<sup>308</sup> It should be noted that in Areas C, alternative operators have access to ducts and poles and this has enabled them to effectively develop their cable and/or fibre network and, consequently, their broadband offer based on their own networks.

- 6.41. So, ANACOM considers that the market of wholesale central access provided at a fixed location (for major consumer products) in Areas C does not meet the first criterion for the identification of a market as being likely to be subject to *ex ante* regulation.
- 6.42. As the three criteria are cumulative, the fact that the first one is not automatically met implies the non-compliance with the test and also that the market in question is not subject to *ex anteregulation*. Nevertheless, a brief review of the two other criteria shall be carried out.

## **2. Criterion - Market trend for effective competition**

- 6.43. For the Commission, in what concerns the dynamic aspects of market review, the second criterion is considered as not fulfilled if the characteristics of the market lead to an effective competition within a relevant timeframe, with no need for an *ex ante* regulatory intervention.
- 6.44. In areas where alternative operators have sufficiently invested in their own network infrastructure, whether in cable or fibre, there is a tendency for competition to exist.
- 6.45. From a prospective point of view, ANACOM predicts that this trend of development of multiple new generation network infrastructures (fibre and cable, the latter with the upgrade to DOCSIS 3.0) shall be maintained or even expanded, what enables to maintain a future competitive dynamics in the market for Areas C.
- 6.46. In fact, as already mentioned in the this review, investments in fibre networks<sup>309</sup> within the scope of NRAs are expected to continue to be made, mainly in Areas C (although certain areas belonging to Areas NC are already covered by fibre and other areas shall be covered in the longer-term - as mentioned in relation to Market 3a).
- 6.47. The intention of several entities to continue to expand their (fibre) networks, namely as a basis for new offers provided by NRA, is thus a clear indicator of the high competitive dynamics of the market in Areas C and also of the tendency of the market for a deeper effective competition (or, at least, to maintain the current competitive levels).

---

<sup>309</sup> Even cable operators are investing in fibre, extending their networks to points closer to the end-user and even to the buildings, in order to enable higher rates to be simultaneously offered to several customers (since the coaxial cable is shared and still has limitations at the level of the whole bandwidth provided).

6.48. The market of wholesale central access provided at a fixed location (for major consumer products) in Areas C is considered as not meeting the second criterion for the definition of a relevant market likely to be subject to *ex ante* regulation.

**Criterion 3 - Competition law is not sufficient**

6.49. The absence of complaints or disputes regarding wholesale central access provided at a fixed location (for major consumer products) in Areas C, even following the non-regulation of ADSL PT Network offer (but which in these areas is still commercially provided by MEO) also leads us to conclude, on a first approach, that the competition law shall be sufficient to solve any problems that may occur in the referred wholesale market.

6.50. Given the lack of dominance of a company in the market of Areas C, it is neither possible nor required to impose *ex ante* regulation, and the competition law is sufficient to ensure an effective operation of the referred wholesale market. The third criterion is also not met.

6.51. Notwithstanding, ANACOM shall seek to safeguard situations of illegitimate leverage for retail markets and anti-competitive practices in broadband markets, namely, at the margin squeeze level. It shall also actively collaborate with the Competition Authority in any processes associated with the markets that are no longer subject to *ex ante* regulation.

**Conclusion**

6.52. As a result of this review, no barriers to entry and expansion were identified that could be significant and insurmountable in the market of wholesale central access provided at a fixed location (for major consumer products) in Areas C.

6.53. In fact, neither the expansion of the operators own network, nor the obligations that have been imposed mainly at the wholesale level seem to have been sufficient to reduce barriers to entry and expansion, and enable alternative operators (in case they want to) to overcome those barriers and enter the market. This is actually happening, namely in what concerns the investment made by alternative operators in NGA.

- 6.54. ANACOM considers that with *ex ante* regulation at the wholesale level in areas where it is required, potential barriers to development of an effective competition in the wholesale market and corresponding retail market are not insurmountable. Consequently, in this case, the first test criterion was not met and the regulatory intervention and imposition of corrective measures by *ex anteregulatory* controls were not required.
- 6.55. Also the level of intervention of the referred Authority in this market has been residual and, consequently, if there is any need to intervene in this market, the law of competition shall be, *per se*, quite sufficient.
- 6.56. In conclusion, the market of wholesale central access provided at a fixed location (for major consumer products) in Areas C does not meet the "three criteria test" and, in these circumstances, it is not a market likely to be subject to *ex anteregulation*.

## **7. ASSESSMENT OF SMP IN THE MARKET OF WHOLESALE CENTRAL ACCESS PROVIDED AT A FIXED LOCATION (FOR MAJOR CONSUMPTION PRODUCTS) IN AREAS NC**

- 7.1. As above-mentioned in Chapter 4, according to the regulatory framework in force, “a company shall be deemed to have significant market power if, either individually [(individual dominance)] or jointly with others [(joint dominance)], it enjoys a position equivalent to dominance, i.e., a position of economic strength giving it the power to behave, to an appreciable extent, independently of competitors, customers and consumers”.
- 7.2. This assessment of SMP assumes as hypothesis that there is no current or potential SMP regulation on the relevant market under analysis, as this implies to draw conclusions on the need or not for regulatory intervention. Consequently, the review of SMP in this market requires that a hypothetical market is created, where regulation does not exist (although regulation in upstream markets is taken into consideration).
- 7.3. Reference already made on this subject (prior markets reviews and chapter 4 of this document) is also applicable to the criteria for assessment of SMP in markets of wholesale central access provided at a fixed location (for major consumer products). So, the most relevant criteria to be used in the assessment of SMP in the referred wholesale market are considered to be the following:
- Share markets and market growth.
  - Barriers to entry and expansion (including economies of scale and scope and vertical integration).
  - Price trends and behaviour.
  - Countervailing power
  - Potential competition.
- 7.4. It should be noted that the assessment of SMP in this market takes into account the conclusions of the SMP assessment carried out in relation to the market of wholesale local access provided at a fixed location, as well as the obligations imposed on that market. Namely in this context, fact that there is a regulated supply of access to ducts and poles is taken into account, as well as the associated infrastructure and a

wholesale offer of access to copper loop, which is also regulated and through which some operators provide their retail offers.

### Individual dominance

7.5. The review of an effective competition shall begin by making an estimation on the market shares, thus identifying, at an early stage, the candidate(s) to be SMP holder(s).

7.6. A review of the economic characteristics of the relevant market is hereinafter referred, in which the degree of competition between the installed companies and the degree of potential competition shall be assessed.

### Market shares

7.7. MEO continues to have the majority of accesses in this market, with market shares consistently above 70 percent, a rate well above 40 percent – which is the limit defined by the Commission in its decision-making practice as the rate above which it may consider that there are concerns in terms of situations of dominant positions.

**Table 15. Evolution of market shares in the market of wholesale central access provided at a fixed location (for major consumer products) in Areas NC**

Operator	2007	2010	2013	2015
MEO	72%	73%	72%	82%
NOS	18%	18%	20%	10%
Apax	10%	8%	6%	4%
Vodafone	0%	2%	2%	4%

**Note:** In 2007, 2010 and 2013 the market shares were calculated for the exchange areas included in the NC Areas of the previous market analysis, while for 2015 they were calculated for the parishes included in the NC Areas of the current analysis.

7.8. Once again, all alternative infrastructures were taken into consideration in relation to the referred offer of wholesale central access at a fixed location (for major consumer products) (which shall be the base for retail access to the broadband to be contracted by the end-user), i.e. the accesses based on copper, cable and fibre<sup>310</sup>. The internal supply of both the incumbent operator and the alternative operators was also taken into consideration.

<sup>310</sup> The number of fibre wholesale accesses is currently residual in Areas NC.

### *Barriers to entry and expansion*

- 7.9. In the past, MEO, as a provider of universal telecommunication services, has expanded its copper network to areas characterized by a low density of population (including some areas where costs may be higher than the benefits of the service provision), and has already incurred significant sunk costs, including the incremental cost of providing the wholesale ADSL PT Network service based on the referred network. These incremental costs are, therefore, significantly lower than those incurred by an operator that has built a dedicated root network. This means that, due to the existence of economies of scale and scope and given the scale and configuration of MEO fixed network and, while everything else remains stable, the referred operator benefits and shall benefit from lower unit costs in relation to its competitors.
- 7.10. So, even if there is a potential access to regulated wholesale offers, such as the offer of access to ducts, the provision of access to poles or ORALL in most of the territory covered by Areas NC, the barriers to entry and expansion are high. In fact, an operator that intends to expand its business shall always have to conquer a significant share of the market, because unit costs are higher in these areas than in Areas C, as they have to compete with the operator with SMP at the infrastructure level. However, ANACOM acknowledges that this would now be technically and economically infeasible, since the geographic area covered by this market is characterised by a low density of population and companies, which makes it difficult to reach the referred scale<sup>311</sup>. For example, while in Areas C the population density is about 728 inhabitants per km<sup>2</sup>, in Areas NC the population density is only 50 inhabitants per km<sup>2</sup>, that is, more than fifteen times lower.
- 7.11. As already mentioned in other sections, the fact that MEO is a vertically integrated company may place its competitors at a competitive disadvantage. This may result from a potential leverage of power from one upstream market to another downstream market, which may affect competition, namely when MEO provides the competitor with a key intermediate production or consumption factor, such as wholesale central access provided at a fixed location (for major consumer products). Namely, when there is some difficulty in getting *inputs* in the wholesale market, or in obtaining the referred *inputs* at

---

<sup>311</sup> This situation has also been evidenced by MEO within the scope of ADSL PT Network offer. In fact, while the offer provided at the end of 2000, which initially had a coverage limited to some exchange areas of Lisbon and Oporto, just after 6 years, has reached the total coverage of the national territory. This demonstrates that the expansion for these areas is not immediate.

a competitive price, barriers may become higher in relation to the entry at the retail level.

7.12. Therefore, notwithstanding its low usage level, it is still important to maintain the regulation of ADSL PT Network wholesale offer, to promote the entry and expansion of PSOs in this market without incurring in substantial unrecoverable costs associated with the construction of their own access network .

7.13. In conclusion, this criterion does not enable to contradict (on the contrary) the presumption of dominance resulting from the calculation of market shares.

#### *Price trends and behaviour*

7.14. As a result of the competition faced by MEO at the retail (and wholesale) level in Areas C, it has offers with lower prices in the retail market in Areas C, compared to the offers provided in the retail market in Areas NC (due to STF monthly payment in the second referred offers and not in the first). MEO has also maintained the prices of ADSL PT Network wholesale offer stable, also taking into account the "retail-minus" rule imposed by ANACOM in order to prevent any margin squeeze.

7.15. As MEO has opted to maintain the ADSL PT Network offer throughout the national territory (even in Areas C), it continues to practice uniform wholesale prices throughout the territory and has not, on its initiative, reduced the supply prices, which is another indicator of lack of competition on the part of alternative operators in this market.

#### *Countervailing power*

7.16. In this market, operators have no countervailing power since, in addition to the offers of access to ducts, to poles and to local copper loop - which, in these areas, require heavy investments, involving economies of scale and an investment over an extended period of time - there is no other wholesale central access offer provided at a fixed location (for major consumer products) other than ADSL PT Network offer.

7.17. Furthermore, in Areas NC, the network coverage of the alternative operators is scarce, namely when compared to the coverage of MEO network.

#### *Potential competition*

7.18. In terms of potential competition, access to MEO ducts and poles is noteworthy and may be useful in order that alternative operators may develop their own network. In fact, they have used these offers for that purpose, but since it implies heavy investments, they have been mainly concentrated in large urban centres and coastal areas, as well as areas of great density of population and economic activities, grosso modo, in Areas C.

7.19. Therefore, in the near future, the geographic area covered by the market under review is not expected to have extensively developed offers to increase competition in the wholesale market concerned.

#### *Individual dominance: conclusion*

7.20. MEO market share, the high barriers to entry and expansion, the lack of evidence of effective competition among companies (prices and other variables) and the lack of potential competition, lead to the conclusion that MEO holds SMP (individual dominance) in the market of wholesale central access provided at a fixed location (for major consumer products) in Areas NC.

#### **Joint dominance**

7.21. Once the existence of individual dominance in this market is concluded, no joint dominance occurs within it.

#### **Prospective analysis**

7.22. ANACOM considers that all factors that justify the designation of MEO as a SMP company in the market of wholesale central access provided at a fixed location (for major consumer products) in Areas NC shall remain on a short/medium term horizon up to the next SMP review.

### **SMP Rating: Conclusion**

- 7.23. MEO is deemed to hold SMP in the market of wholesale central access provided at a fixed location (for major consumer products) in Areas NC.

## **8. IMPOSITION OF OBLIGATIONS ON MARKET OF WHOLESALE CENTRAL ACCESS PROVIDED AT A FIXED LOCATION (FOR MAJOR CONSUMPTION PRODUCTS)**

- 8.1. In what concerns the market of wholesale central access provided at a fixed location (for major consumption products) in Areas NC, the conclusion was in the sense that MEO holds SMP in this market and may act independently in relation to other companies operating in it.
- 8.2. Once it is concluded that a company has a SMP in a market, ANACOM shall impose, maintain or amend the existing regulatory obligations<sup>312</sup>, taking into account the same principles already referred in chapter 5. As mentioned above, these principles are set out in the documents issued by the Commission<sup>313</sup> and by BEREC<sup>314</sup>, in the Electronic Communications Law and also in the regulatory principles and objectives stipulated by the referred Authority.
- 8.3. Taking into account the review carried out and the conclusion in the sense that there is a market in which regulation shall continue to exist, it should be stressed that to impose and control the compliance with these obligations in a detailed and thorough manner remains a priority for ANACOM. To successfully meet this objective is considered as an important step to develop competition in a market where regulation is still maintained, ensuring that there are advantages and benefits, mainly to end-users, which shall result in net gains in social well-being.

### **Obligations currently in force**

- 8.4. In the prior market review and taking the Guidelines into consideration, the referred Authority concluded that MEO holds SMP in the market of wholesale broadband access in Areas NC, and to impose the obligations set out in **Appendix I**<sup>315</sup> is appropriate, proportionate and justified.

---

<sup>312</sup> See Guidelines §21 and §114.

<sup>313</sup> Namely, the Commission Recommendation on NRAs.

<sup>314</sup> Namely, in the best practices on imposition of obligations on broadband access wholesale market. See: [http://berec.europa.eu/files/document\\_register\\_store/2012/12/BoR\\_%2812%29\\_128\\_CP\\_WBA.pdf](http://berec.europa.eu/files/document_register_store/2012/12/BoR_%2812%29_128_CP_WBA.pdf).

<sup>315</sup> All obligations were based on Article 66 of the Electronic Communications Law, given that there was no effective competition in the market.

- 8.5. In the following sections, based on the existing obligations and taking into account the relevant principles on the imposition of obligations on the relevant markets and the reasons underlying SMP in this market, the referred Authority shall review whether it is appropriate or not to maintain or change the obligations currently in force, in assessing them in terms of the principles and requirements set forth in the Electronic Communications Law in view of the current market conditions. The Commission recommendations applicable to the obligations to be imposed on the framework of the market of wholesale central access provided at a fixed location (for major consumer goods) (Market 3b) shall also be taken into consideration.
- 8.6. It should be noted that current and potential competitive problems shall be considered within the scope of the market under review and during the period up to the next market review. Consequently, the imposition of general obligations in this review shall not negatively affect the specification and implementation of them at a later date and in separate documents.
- 8.7. On the other hand, unless explicitly referred, any and all specific decisions adopted by ANACOM up to this date and related to this market shall remain in force.

### **To impose obligations on the market of wholesale central access provided at a fixed location (for major consumer goods) in Areas NC**

#### *Access and use of specific network resources*

- 8.8. Article 72 of the Electronic Communications Law provides for various types of access obligations that may be imposed. In the current context, it must be taken into account that the obligation of access has already been imposed and implemented on this market and its technical and economic feasibility is well evidenced. Consequently, there are no relevant questions regarding any potential risks for the investment made to provide access to the network resources in question.
- 8.9. On the contrary, and as it has occurred on other occasions, the investments made by and operator with SMP and any other operators that have invested in this offer shall be taken into consideration, while safeguarding their maintenance while appropriate and promoting long-term competition. In this regard, by maintaining or changing an access obligation and by assessing the proportionality of such a decision, ANACOM shall have to take into account the provisions set forth in Article 72 (4), by reviewing the “*technical*

*and economic viability of using or deploying competing resources, depending on the rate of market development, taking into account the nature and type of interconnection and access involved, the feasibility of providing the proposed access in relation to the available capacity, the initial investment by the owner of the resources, taking into account the risks involved in making such investment and the need to safeguard competition over the long-term”.*

- 8.10. According to the review carried out on the market definition and the SMP assessment, it is not expected that in Areas NC and up to the next market review there shall be any technical and economic viability of using, deploying and widespread disseminating the network infrastructure alternative to MEO, making the development of competition impossible in the broadband market based on an alternative infrastructure.
- 8.11. So, in view of the existing incentives, it is expected that, in lack of a specific access obligation, the vertically integrated company with SMP in the referred wholesale market tries to restrict access to its wholesale products and services as far as any new entry in the retail market reduces its market power at the referred retail level. Given the size of MEO network and the consequent economies of scale that the companies of this group have in the provision of services, the refusal to provide wholesale central access at a fixed location (for major consumer goods) or its offer under unreasonable terms , would severely restrict competition in downstream markets.
- 8.12. In order to prevent these potential problems, the obligation to access and use specific network resources shall be maintained to promote competition in the broadband access retail market for major consumer products, namely in areas where there are no offers based on own network or OLL network, so that users residing in the less populated regions and the less favoured populations may benefit from increased competition and reduce the total costs of broadband access.
- 8.13. In this regard, and subsequent to the previous review of the broadband market and implementation of the referred obligation, this Authority has made an intervention in the market, to impose for several times changes in the conditions of offer, in order to ensure reasonable and appropriate access conditions. The referred interventions have been related not only to the specific conditions of access granting, but also to the components of the network to which access is to be granted, as well as to their (geographic) location, namely, the introduction of :

- Bundling at regional level<sup>316</sup>.
- Bundling in ATM mode and, subsequently, Ethernet<sup>317</sup>.
- Naked DSL Offer<sup>318</sup>.
- New access categories and containment rates and setting of other parameters of service quality (including “Premium” quality services)<sup>319</sup>.

8.14. BEREC still considers that to maintain the access obligation in order to enable some control over the main characteristics of the offer made by the OSPs shall ensure a higher degree of certainty and predictability and shall promote higher competition in the long term in what concerns the provision of broadband services, with an ultimate benefit to end-users. It shall also give those stakeholders an opportunity to optimise their network infrastructure in addition to the existing upstream offers.

8.15. In what concerns future (technological) developments at the network level, the previous market review considers that *“it may be possible that the ADSL PT Network offer has to be adjusted, in order to accommodate higher debit services, such as VDSL services and any other services that may result from the development of NGAs. This aspect may become more important in terms of evolution towards NGAs, which will be reviewed in a separate document in which the possibility to impose, under certain conditions, a wholesale access offer to optic loops may be assessed”*.

---

<sup>316</sup> In this regard, BEREC position in the referred Common Position is that, since bitstream access may be granted at various points of the network hierarchy (traffic points), the points on the network where the wholesale central access provided at a fixed location (for broadcasts) shall be provided shall depend on national circumstances, such as network topology and development stage of the broadband market.

<sup>317</sup> Concerning the adequacy of the imposition of intermediate levels of access to the operator with SMP network based on different technology platforms and framed within the principles considered in the imposition of obligations on the relevant markets, namely, the promotion of efficient investment in infrastructures by the alternative operators, BEREC considers that, to a reasonable and appropriate extent, access shall be provided at the regional delivery points, whenever possible, on the various efficient technology options: e.g., IP, ATM and Ethernet. ANACOM considers important that ADSL PT Network offer evolves in order to include more efficient transport and access technologies, namely when they are used by MEO to provide equivalent retail services, such as broadband access offers based on Ethernet technologies. Those potential services were introduced in the offer and shall be offered in a non-discriminatory manner.

<sup>318</sup> The provision of a Naked DSL offer was considered important to enable a greater diversity of retail offers (also at a lower price) for the population located in the most disadvantaged areas.

<sup>319</sup> In this regard, BEREC position in the referred Common Position is that the following characteristics shall be considered: bitstream access is a product, which enables new operators to differentiate (directly or indirectly) their services from the services of the operator that grants the access, changing (directly or indirectly) the technical characteristics, constituting more than a simple resale, which is the case where the operator with SMP has control of the technical parameters and manages the service, while the new operator may only market a similar service.

- 8.16. Within the scope of fibre networks, the Commission Recommendation on NRAs considers that *“If in market 5 there is an operator with significant market power (SMP), the measures at the wholesale supply of broadband access shall be maintained or amended in what concerns the existing services and their substitutes in the chain. NGAs shall consider the wholesale provision of broadband access by VDSL technology as a substitute in the chain of the current wholesale broadband access provision via pure copper loops”*<sup>320</sup>.
- 8.17. ANACOM considers that it should maintain the access obligation on this market, which shall cover the copper accesses of the operator with SMP, that is, MEO, in the broadband market.
- 8.18. The non-imposition of the obligation to access fibre-optic loops is due to the fact that it was concluded that, in the market of wholesale local access provided at a fixed location, the charge was not proportional.
- 8.19. Finally, the Commission Recommendation on NRAs focuses on the migration towards NGAs, referring that the *“obligations in force concerning the operator with SMP for markets 4 and 5 shall be maintained and shall not be invalidated by any changes Introduced in the existing network architecture and technology, unless the operator with SMP and the operators that currently have access to their network agree on an appropriate migration route. In the absence of such an agreement, NRAs shall ensure that alternative operators are informed at least five years in advance, taking into account the national circumstances, where appropriate, of a potential switch-off of the interconnection points, such as the local loop switch exchange. The referred deadline may be less than five years, if a totally equivalent access is provided in the interconnection point”*<sup>321</sup>.

---

<sup>320</sup> No. 31.

<sup>321</sup> See (39)

- 8.20. Although this recommendation also concerns Market 3b, it should be noted that if, in the future, MEO intends to transfer its retail customers, and/or the wholesale accesses provided to third parties, based on ADSL PT Network, with the subsequent switch-off of the bundling point(s), this possibility is, in practice, covered by the rule established in this document in what concerns the switch-off of local exchanges or MDF in Market 3a (namely, the five-year notice period, or three year-period, if a totally equivalent access is provided).
- 8.21. Taking into account the factors above-mentioned (provided for in Article 72 (4) of the Electronic Communications Law), ANACOM concludes that, based on the experience accumulated in the monitoring of broadband access offers, the development of these products and the review carried out throughout this document, the viability of MEO continuing granting access to (copper) network resources, which constitute the wholesale central access provided at a fixed location (for major consumer products) is fully evidenced.
- 8.22. In line with what has been previously mentioned, the referred Authority, therefore, considers that all obligations in relation to the access to and use of specific network resources, including to negotiate in good faith with companies requesting access and not to withdraw any access already granted, imposed in the decision adopted in January 2009, remain reasonable, suitable, proportionate and justified. Consequently, all such obligations shall be maintained.
- 8.23. Finally, it should be noted that, as in the market of wholesale local access provided at a fixed location, the imposition of an obligation to access shall not be sufficient in itself. To maintain the additional obligations provided for in Electronic Communications Law is deemed important to prevent potential competition problems, such as excessive prices or discriminatory practices, ensuring that access is provided on terms that are proportionally equivalent, transparent, reasonable and appropriate to the conditions in force in this relevant market. These obligations are hereinafter specified.

### *Non-discrimination*

- 8.24. Theoretically, when an obligation to access a company with SMP is imposed, this company shall have an incentive to discriminate between the offers provided to its own services/companies and the offers provided to other companies<sup>322</sup>, jeopardising their retail activity, resulting either in the reduction of their service quality<sup>323</sup> or in the increase of their costs comparing with those of the retail division of the operator with SMP. Ultimately, it may result in a leverage of the market power of the operator with SMP at the wholesale level to the retail market (and the alternative retail operators may lose its competitiveness).
- 8.25. In this regard, as provided for in Articles 66 and 70 of the Electronic Communications Law, ANACOM considers that it is objectively justifiable, appropriate and proportional to maintain the obligation of non-discrimination to which MEO is subject in relation to its offer of wholesale access provided at a fixed location (for major consumer goods), in order to prevent MEO to use discrimination in favour of its own services/companies, in view of its size and vertical integration in the market in question, preventing potential attempts to leverage its market power to adjacent markets. It should be stresses that to maintain this obligation, as well as the existing specifications regarding the compliance with it, implies very low costs (since it is already implemented) and is proportional and appropriate to ensure equality and competition conditions.
- 8.26. Concerning the application of the obligation of non-discrimination to wholesale central access provided at a fixed location (for major consumer goods), it is also important to consider the references included in the Commission Recommendation on non-discrimination in relation to this issue, namely, in what concerns the equivalence standard to be adopted when providing these services.

---

<sup>322</sup> This competition issue includes the discriminatory use or retention of information, quality discrimination, delay tactics and undue demands, as well as potential price discrimination.

<sup>323</sup> A service quality lower than the one provided to the retail division of the operator with SMP would mean that the alternative operators could not provide new broadband access during an equivalent period of time or could not ensure a repair time equivalent to the one provided by the retail division of the operator with SMP in the retail market. This would correspond to a reduction of effective competition in the broadband retail market, resulting in strong losses to the alternative operators and end-users.

**Equivalence standard to be adopted and technical replicability**

- 8.27. As it has already been referred, the adoption of an equivalence standard based on Eol shall depend on the assessment of the proportionality of such imposition by the regulator. In the event that Edl imposition is considered as non-proportional, an EoO-based equivalence standard shall be applied, to ensure that the “*wholesale inputs provided to alternative operators – even if they do not use the same systems and processes – are comparable in terms of functionality and price to those used by the vertically integrated operator with SMP*”<sup>324</sup>
- 8.28. At first, it should be noted that the wholesale central access services provided at a fixed location (for major consumer products) under consideration are at a lower level in the value chain in relation to all wholesale access products reviewed within the scope of the market of wholesale local access provided at a fixed location (Market 3a). Consequently, the potential of competitive benefits in the value chain, associated with the implementation of Eol in the wholesale central access provided at a fixed location (for major consumer products), shall be lower than the benefits potentially obtained in the wholesale services in Market 3a.
- 8.29. Furthermore, the wholesale service in question has currently a limited competitive importance and, with a continued investment in NGAs (made by MEO and by other operators) and the transfer of users to offers based on these networks, the competitive importance of this wholesale offer is expected to be reduced in the time period relevant to this review (at least in the areas covered by such networks).
- 8.30. This evidence suggests that the decision to impose Eol on wholesale central access provided at a fixed location (for major consumer products) has a significantly reduced probability to be proportional. In fact, considering that the investment is currently focused on NGAs, it shall be difficult to predict sufficient benefits associated with the implementation of Eol in the wholesale central access provided at a fixed location (for major consumer products) that may compensate for the costs of such implementation.

---

<sup>324</sup> Recital (17).

- 8.31. Furthermore, in what concerns wholesale central access services provided at a fixed location (for major consumer products) to third parties, there are already information systems and procedures implemented, which had already involved a significant investment, in order to increase its efficiency and suitability. There are thus procedures and third party delivery systems, which are already duly stabilised. It is also known that the procedures and systems internally used by MEO are stabilised and are, in general, different from those used by the beneficiaries of ADSL PT Network offer. Consequently, one may conclude that the opportunity cost of completely adjusting or changing the systems and procedures internally used and/or by third parties shall beat a high level under these circumstances.
- 8.32. It should be also noted that, as in the case of the ORALL, the potential imposition of EoO on services related to wholesale central access provided at a fixed location (for major consumer products) is simplified. In hat concerns ADSL PT Network offer, (i) appropriate SLAs that MEO shall comply with, (ii) compensation in case of non-compliance and (iii) performance indicators to be published quarterly are already implemented. Furthermore, the conditions of the service provision and the wholesale and internal indicators collected and provided have been adjusted over time, in order to identify any potential situations of discrimination and the comparability of service quality indicators (either of third parties or internal).
- 8.33. So, it is concluded that to adopt an equivalence standard based on EoI in the wholesale central access provided at a fixed location (for major consumer products) shall not be proportional. Consequently, in the provision of the services concerned an equivalence standard based on EoO shall be adopted.
- 8.34. In most situations concerning wholesale central access service provided at a fixed location (for major consumer products), to use additional resources to improve EoO is not considered proportional, namely, in what concerns the comparability of service provision indicators (either internal of third parties). That is, the benefits associated with the potential improvement of the comparability of current supply indicators do not justify the costs associated with the respective implementation.

- 8.35. Consequently, to maintain the obligation of non-discrimination implies that MEO shall provide other companies (that offer broadband access services) with the same conditions it offers to its own group for similar services. Namely, it implies the same service quality and performance levels, such as, service provision times and failure repair times. Such levels shall be similar for all companies, competitors and any other similar activities of the dominant company, based on the (quality of) the service performed not only in the wholesale market in question but also in the associated retail market.
- 8.36. In relation to implementation of the obligation of non-discrimination, MEO shall ensure the wholesale conditions required in terms of technical replicability. Under these circumstance, it is particularly important that the beneficiaries of ADSL PT Network offer continue to have access to the relevant information on the offer in a suitable manner and duly in advance.
- 8.37. In this regard, MEO shall always notify the concerned companies (beneficiaries) about the offer of wholesale central access provision at a fixed location (for major consumer products) at least:
- 1 month in advance, in case the conditions of the wholesale offer with reduced impact have changed on its own initiative, thereby enabling the beneficiary operators to adjust their services and offers (e.g. aspects relating to procedures associated with service quality). ANACOM shall also be notified within the same period;
  - 2 months prior to the date when the amendments to the wholesale offer that have been introduced on MEO initiative enter into force, having a significant impact on the PSOs retail offers, namely, the introduction of new access categories, amendments to the debit of the current access categories, amendments to the offer prices, amendments to the containment rate or to any other technical characteristics and any relevant amendments that have a direct impact on potential customers at the retail level and/or involve the transfer of customers or the discontinuation of offers. ANACOM shall also be notified within the same period;
  - a reasonable time period, in case MEO shall carry out pilot tests, giving them the opportunity to participate in them.

- 8.38. It is also important to clarify that, if the amendment to the wholesale offers results from ANACOM decisions, it shall come into force on the date stipulated in the decision of ANACOM or, alternatively, on the date of change of the wholesale offer, in case the decision is does not refer the date of entry into force.
- 8.39. In this market, where the infrastructure of other operators is scarce and there is no alternative wholesale offer, to ensure that any broadband offer launched by MEO in the retail is preceded by the publication of the corresponding amendment to the wholesale offer is required, justified and proportional, in order to enable the alternative operators to replicate the retail offer.
- 8.40. Consistently with the above referred, the stipulation of 2 months shall be maintained as the minimum period between the publication of the (amendments(s) to) the wholesale offer and the marketing of the offers made by MEO in the retail, excepting the cases where there are amendments to the wholesale offer with no relevant impact (on the operation and) on the retail offers of the alternative operators, where the minimum period of 1 month is maintained, as above-referred to.

### *Transparency*

- 8.41. ANACOM has repeatedly expressed that the obligation of transparency is a natural complement to the obligation of non-discrimination that enables to detect any potential discriminatory behaviour and ensures the effectiveness of the referred obligation of non-discrimination.
- 8.42. The obligation of transparency shall, therefore, be maintained. Furthermore, in this market this obligation is considered to be associated to the maintenance of an appropriate reference offer with an easy accessibility and containing all the information required in order that the alternative operators that use or intend to use such wholesale services may do so in a predictable and efficient manner.
- 8.43. ANACOM considers that the information currently collected within the scope of ADSL PT Network wholesale offer generally maintains relevance and adequacy and shall always be published with the same bundling level<sup>325</sup>. Notwithstanding, if the number of complaints relating to the quality of the service provided in relation to any category of

---

<sup>325</sup> In the previous market review, some simplifications were introduced, resulting in a significant reduction of the information sent, but ANACOM has maintained its ability to carry out all reviews deemed required to adequately monitoring this market.

access reaches a significant number, or if to intervene in order to prevent any discrimination in the provision of wholesale services in the various access categories is deemed appropriate, in the future, ANACOM may define the collection/provision of more unbundled information.

- 8.44. In the past and based on Articles 67 and 68 of the Electronic Communications Law, ANACOM has already imposed on MEO the appropriate publication of the ADSL PT Network reference offer (including, namely, technical specifications, network characteristics, terms and conditions of offer and use, including prices).
- 8.45. In the referred imposition, ANACOM took and takes into account that the obligation to publish a reference offer has two main objectives: (i) to help transparency in monitoring potential anti-competitive behaviours, and (ii) to introduce the terms and conditions for the other companies to acquire wholesale access services, thereby preventing any potential conflicts and, as far as possible, increasing the confidence of the operators in question, as it helps them to be fully aware of all main conditions associated with the provision of the service and ensures that they are provided on a non-discriminatory basis.
- 8.46. By promoting the application of this kind of obligation, it is further ensured:
- The timely provision of relevant information to stakeholders, fostering a greater predictability, security and environment-related certainty in which the accessing companies carry out their activities and facilitating a conscious market entry, ultimately benefiting competition and the end-user.
  - The reduction of information asymmetry between the regulated company and the regulator, as well as a better monitoring of the compliance with the obligation of non-discrimination.
- 8.47. Consequently, ANACOM considers that MEO shall continue to publish and keep on its Internet site and updated reference offer for wholesale central access provided at a fixed location (for major consumer products) (currently ADSL PT Network).
- 8.48. In order to ensure an appropriate implementation of a non-discrimination standard based on EoO and an essential transparency, the reference offer shall also always integrate SLA and compensation in case of failure to comply with the agreed levels. The amendments introduced in the different versions of the referred offer shall be clearly marked.

8.49. Following the imposition of access and non-discrimination obligations, ANACOM concludes that the imposition of the obligation of transparency is a proportional and required measure to monitor the principle of non-discrimination, duly justified and with (very) low costs (since it is already implemented), as only the publication of the respective information is required to ensure that there are no adverse conditions to competition and the referred obligation shall, therefore, be maintained<sup>326</sup>.

#### *Price control and cost accounting*

8.50. According to Article 74 of the Electronic Communications Law, ANACOM may impose price control and cost accounting obligations<sup>327</sup> whenever an absence of effective competition results in maintaining the prices at an excessively high level or in applying of a margin squeeze that shall adversely affect the end-users<sup>328</sup>.

8.51. According to the review carried out in this document, which confirms the conclusions of previous reviews, the market of wholesale central access provided at a fixed location (for major consumer products) in Areas NC is still characterised by the absence of an effective competition, evidencing high barriers to the entry and expansion and few probabilities in terms of any future competition. Even the operator with SMP has increased its market share (both at the wholesale and at the retail level). Consequently, we are in a market where (i) there is no effective competition, (ii) there are significant barriers to entry and expansion, (iii) the development of short- and medium-term competition is not predictable and (iv) the operator with SMP may act independently of the other market players.

8.52. Under these circumstances, SMP has few incentives to reduce costs and operate (more) efficiently, since such high costs may be transferred to wholesale customers by practicing excessive prices - by setting the wholesale offer price at a significantly higher level in relation to the costs incurred in the service provision - and, ultimately, to consumers that have no other choice.

---

<sup>326</sup> It is also concluded that, as in the case of the market of wholesale local access provided at a fixed location, its withdrawal would compromise the effectiveness of the non-discrimination obligation, causing relevant losses to the associated markets.

<sup>327</sup> Including the obligation of cost-orientation of prices and the obligation to adopt cost accounting systems for the purpose of providing specific types of access or interconnection.

<sup>328</sup> In accordance with the same Law, ANACOM shall ensure that cost accounting mechanisms or pricing methods promote efficiency and a sustainable competition, maximise the benefits to the consumer and, in what concerns this issue, may also take into account the prices charged in comparable competitive markets.

- 8.53. To maintain the obligation of price control and cost accounting shall enable ANACOM to monitor if the stipulated wholesale prices (and the structure and composition of the wholesale tariff) are part of the costs incurred by the operator with SMP, also taking into account that an appropriate price regulation may enable competing companies to access the provision of retail broadband services at prices that would be practiced if the market was competitive, while enabling MEO to obtain a reasonable return rate on the investments made<sup>329</sup>.
- 8.54. On the other hand, the intention is to ensure predictability and consistency in the markets (in the market itself and in the upstream and downstream markets), fundamentally in terms of consistency between the various wholesale prices - in this market, for example, between service categories or between different modalities of ADSL PT Network wholesale offer. Without the referred consistency some operators would probably be adversely affected comparing with others, depending on the type of services they contract, with no real justification for this situation and preventing the operators that provide retail services from implementing real competitive services, negatively affecting the interests of the end-users, namely, the broadband access services end-users.
- 8.55. In this regard, to maintain the obligation of price control and cost accounting shall prevent that higher (excessive) prices of wholesale central access provided at a fixed location (for major consumer goods) are established in Areas NC, promoting competition and, simultaneously, providing incentives for an adequate and efficient investment in infrastructure, both to the operator with SMP and to the operators with granted wholesale access.

---

<sup>329</sup> Article 74 of the Electronic Communications Law stipulates that ANACOM shall "*Ensure that cost amortisation mechanisms or mandatory pricing methods promote efficiency and sustainable competition and maximize benefits for the consumers, and may also take into account the prices charged in comparable competitive markets*".

- 8.56. More specifically, in order to prevent that the operator with SMP carries out practices that result in a squeeze of the margins of the alternative operators<sup>330</sup>, ANACOM has regulated the price of the ADSL PT Network offer, based on the "retail-minus" rule, whose method was updated and clarified through the decisions adopted on October 3, 2007 and on June 26, 2008<sup>331</sup>.
- 8.57. The adoption of such a measure initially led to a decrease in the prices of each offer (retail and wholesale), with clear advantages for competition and end-users, but mainly in Areas C <sup>332</sup>, as evidenced in this market review.
- 8.58. Consequently, the key issue remains in the application of a "retail-minus" rule in Areas NC, that is, whether it has a efficiency similar in terms of retail (and wholesale) price reductions, given the fact that MEO faces there a low competition of the operators based on OLL and cable operators and, consequently, it also faces a reduced retail competition in these areas.
- 8.59. That means that, in Areas NC, the competitive pressure is much lower (and practically nil in part of the national territory, where MEO is the only entity with its own network infrastructure), and there are no incentives for retail price reductions similar to those actually in force in Areas C. This shall presumably imply that the wholesale prices in non-competitive areas shall be maintained. Furthermore, MEO may even decide to increase retail prices in Areas NC and, consequently, increase the wholesale price ensuring that it is compatible with the retail-minus rule.
- 8.60. The threat faced (by MEO) due to the entry of new wholesale operators through the investment in OLL or in their own network is not credible in most of Areas NC, as due to population density and families income, the referred operators would not have any profitability in terms of the required investments. This may even raise issues of social cohesion, with a situation where citizens (and companies) in Areas C have access to more, better and cheaper services comparing with their neighbours in Areas NC, where supply and competition are scarce.

---

<sup>330</sup> Margin squeeze (namely, caused by excessive wholesale prices) ultimately leads to a situation where alternative operators have to leave the retail market, increasing the transfer of a SMP situation from the wholesale market to the retail market. This leads to a situation where end-users ultimately are at a disadvantage in the long-term.

<sup>331</sup> See <http://www.anacom.pt/render.jsp?contentId=600485>.

<sup>332</sup> At the time, such price decreases occurred due to the pressure on MEO, that, in a first stage, was caused by the retail broadband access offers based on OLL - and, to a lesser (geographic) extent by the retail broadband access offers by cable operators – and, in a second stage, after the implementation of ZON *spin-off*, due to the pressure of broadband offers launched by the referred company.

- 8.61. Furthermore, and as it has already been referred, the broadband retail market access is currently characterised by the supply and demand of service packages (that are widespread and exist even in certain areas of Areas NC), including broadband internet access<sup>333</sup>. Consequently, the complexity of operationalising the 'retail-minus' rule shall probably have an excessive increase, in view of the potential income for operators and consumers.
- 8.62. On the other hand, most of the accesses of alternative operators based on ADSL PT Network offer are marketed to business customers and not to residential customers and, therefore, the method established for the "retail-minus" rule is no longer suitable.
- 8.63. In view of the above-referred, considering that the requirement to maintain the price control obligation of the wholesale offer and to maintain a 'retail-minus' rule in this market in Areas CN does not *per se* ensure an appropriate level of retail (and wholesale) prices. Taking into account the need to promote retail competition and defend the interest of the citizens, ANACOM intends to extend to MEO wholesale offer the obligation of cost-orientation of prices, – currently the prices of Naked ADSL offer are already subject to cost-orientation of prices<sup>334</sup> – i.e., at all levels and components of the ADSL PT Network offer and withdrawing the "retail-minus" rule. Nevertheless MEO has to prove that it is not squeezing margins in the referred Areas NC. In view of the fact that the xDSL support infrastructure has been implemented practically since the beginning of 2000 and has been in a mature development phase for several years at a relevant level, bringing economic income, it is expected that, in the long-term (and as long as there is no significant reduction in the quantities), wholesale and retail prices may now be reduced also in the Areas CN.

---

<sup>333</sup> Or even bundled to other products/services not related to electronic communications market.

<sup>334</sup> It should be noted that in what concerns the Naked DSL offer, given the importance that ANACOM considered it could have in terms of development of attractive offers for end-users located in more remote or less developed areas, or where prospectively there are less possibilities of developing competition at higher levels of the value chain, the stipulation of wholesale prices is already based on the principle of cost-orientation of prices.

- 8.64. Notwithstanding, the price of access to ADSL PT Network offer shall always be consistent with the price of unbundled access, having in view non-discrimination and cost-orientation of prices. It is also important to maintain an internal consistence in the ADSL PT Network wholesale offer, and it shall also exist a reasonable margin between the costs incurred by operators in the various options of the referred offer (i.e., the offer ATM bundling, Ethernet or IP bundling and the Naked DSL offer) and a duly justified price difference among the various categories of local access.
- 8.65. For that purpose, MEO shall, within a maximum period of 2 months after notification of the final decision on the present market review, carry out a full revision, i.e. covering all components of the tariff of its ADSL PT Network wholesale offer, taking into account the principle of cost-orientation of prices and, within the same period, it shall inform ANACOM on the grounds for the new tariff.
- 8.66. Nevertheless, in this review, and as mentioned above, if MEO withdraws the retail-minus rule, it shall prove that it is not squeezing margins.
- 8.67. It is further clarified that the moment when the withdrawal of the retail-minus rule takes effect corresponds to the moment when prices of ADSL PT Network offer revised in accordance with the principle of cost-orientation of prices enter into force.
- 8.68. Notwithstanding, ANACOM shall also closely follow the issue of the margin between the prices of the ADSL PT Network service and the prices of OLL (as well as broadband access retail prices), and it may intervene, where justified.
- 8.69. In short, a potential withdrawal of the obligation to price control and cost accounting could lead to significant losses in the market of wholesale central access provided at a fixed location (for major consumer goods) in Areas NC and in downstream retail markets, namely, in broadband retail (Internet) access market. The identified losses would have a significant and comprehensive influence, affecting alternative operators and end-users and leading to inadequate incentives for investment and efficiency.

- 8.70. To maintain the obligation of price control and cost accounting is considered as objectively justifiable, as it enables that prices are stipulated based on costs, avoiding excessive prices and margin squeeze and also enabling the development of competition, while promoting, *ceteris paribus*, that the prices are charged on comparable competitive markets, thus contributing to the protection of the consumer interests.
- 8.71. This obligation is a response proportional to the dimension of (the absence of) competition in the relevant market, and it enables MEO competing companies to acquire products of wholesale central access provided at a fixed location (for major consumer products) at prices enabling them to develop retail services, thus benefiting consumers, while allowing MEO to have a return rate close to the rate that would be in force in an efficient competitive market.
- 8.72. As in the case of Market 3a, in this case it should also be clarified that the imposing of the obligation of cost-orientation of prices implies that the products or services, which MEO uses internally also have internal transfer cost-orientation of prices.

#### *Accounting separation*

- 8.73. ANACOM still considers that maintaining an obligation of accounting separation is an objectively justifiable measure, in view of the need to ensure non-discrimination (enabling the review of wholesale prices and internal transfer prices) and to prevent cross-subsidisation<sup>335</sup>. Consequently, it is essential to ensure the compliance with, and the effectiveness of, the obligation of non-discrimination and also of the obligation of price control and cost accounting.
- 8.74. This is a proportional measure, in the extent that only the provision of detailed information is required, in order to meet the objectives of checking other obligations.

---

<sup>335</sup> The non-existence of the obligation of accounting separation is namely considered as a means to reach to a situation where it would be difficult for the referred Authority to monitor the compliance with the obligations related to the prices and costs of a company with SMP and, consequently, it would also be difficult to identify any situations of cross-subsidisation.

- 8.75. It should be noted that the format and accounting method adopted shall always comply with the requirements duly communicated to MEO by ANACOM, and ANACOM shall periodically revise the referred requirements, in order to improve the cost-accounting method and the information provided.
- 8.76. It is concluded that the obligation of accounting separation shall be maintained in order to ensure that there is an effective monitoring of the obligation of non-discrimination. In this regard, the obligation of accounting separation is still deemed proportional, appropriate and justified obligation.

### *Financial report*

- 8.77. In order to check the compliance with the obligations hereinabove stipulated, namely the obligations of transparency, non-discrimination, accounting separation and costing, and in accordance with Article 71 (3) of the Electronic Communications Law, the company with SMP shall provide its accounting records to ANACOM, including any data on revenues from third parties.
- 8.78. Thus, if there was no financial report obligation, the effectiveness of the aforementioned obligations would be jeopardised, leading to significant losses for market of wholesale central access provided at a fixed location (for major consumer products) and related markets .
- 8.79. In line with the review carried out in 2009, the accounting records required for an appropriate compliance with the financial report obligation are considered as constituting the analytical accounting method that shall be submitted under the terms duly stipulated.
- 8.80. It is concluded that to maintain the obligation of financial report is required, proportional and appropriate.

### **Conclusion**

- 8.81. The following wholesale market was identified as relevant for the purposes of *ex anteregulation* and in accordance with the principles of competition law:
- Market of wholesale central access provided at a fixed location (for major consumer products) in Areas NC.

8.82. After reviewing the above-referred market and taking into utmost account the respective Guidelines, ANACOM concludes that MEO has SMP in the identified relevant market and, therefore, obligations provided for in Table 16 shall be imposed (all obligations are based on Article 66 of the Electronic Communications Law, given that there is no effective competition in this market).:

**Table 16. (Non-exhaustive) summary of the obligations to be imposed on MEO**

Obligations	Market of wholesale central access provided at a fixed location (for major consumer products) in Areas NC
Access and use of specific network resources	<ul style="list-style-type: none"> <li>• Access to wholesale offer at different points and technologies<sup>336</sup>.</li> <li>• To negotiate in good faith with the companies requesting access.</li> <li>• The access already granted to certain resources shall not be withdrawn.</li> </ul>
Non-discrimination in the provision of access and interconnection and in the respective provision of information	<ul style="list-style-type: none"> <li>• To implement EoO in the provision of wholesale broadband access services.</li> <li>• To ensure technical replicability in the wholesale central access services provided at a fixed location (for major consumer products).</li> <li>• 2 months notice to change wholesale offers on its own initiative - in the case of non-significant changes with no direct impact on retail offers, this period shall be of 1 month. In case the amendment of the wholesale reference offers results from ANACOM decisions, the amendment shall come into force on the date established in the decision of the referred Authority or, alternatively, on the date of amendment of the wholesale offer, if the decision does not refer the date the decision shall enter into force.</li> <li>• To launch retail offers subject to the existence of equivalent wholesale offers.</li> </ul>
Transparency in the publication of information, including reference offers	<ul style="list-style-type: none"> <li>• To publish the broadband access reference offer (currently the ADSL PT Network offer), with a clear identification of changes between versions, including SLAs and compensation for non-compliance.</li> <li>• To provide information on maximum and medium times of service provision and failure repair, as well as the respective availability degree (unbundled in accordance with deployment mode and operator).</li> <li>• To unbundle the information to be provided in accordance with the different methods of wholesale offer<sup>337</sup>.</li> </ul>
Accounting separation for specific activities related to access and/or interconnection	<ul style="list-style-type: none"> <li>• Cost-accounting and accounting separation method.</li> </ul>
Price control and cost accounting	<ul style="list-style-type: none"> <li>• To ensure consistent prices (both in wholesale offer and in other upstream wholesale offers, namely, OLL) that encourage competition and efficient investment.</li> </ul>

<sup>336</sup> Including Naked and accesses based on ATM, Ethernet, IP or other technologies, bundled at a national and regional level (with sufficient geographic unbundling).

<sup>337</sup> Namely, IP, ATM, Ethernet, Naked DSL.

	<ul style="list-style-type: none"> <li>To control wholesale prices based on the principle of cost-orientation of prices<sup>338</sup> (the products or services that MEO uses internally should also consider cost-orientation of internal transfer prices).</li> </ul>
Financial report	<ul style="list-style-type: none"> <li>To provide accounting records (ACS), including data on revenues from third parties.</li> </ul>

---

<sup>338</sup> For that purpose, MEO shall, within a maximum period of 2 months after notification of the final decision on the present market review, carry out a full revision of the tariff of its ADSL PT Network wholesale offer, taking into account the principle of cost-orientation of prices and, within the same period, it shall inform ANACOM on the grounds for the new tariff. MEO shall also prove that it is not squeezing the margins in Areas NC.

## **9. CONCLUSION**

- 9.1. In the present market review, ANACOM identified the following markets as relevant for the purposes of *ex ante* regulation:
- The wholesale local access market provided at a fixed location;
  - The market of wholesale central access provided at a fixed location (for major consumer products) in Areas NC.
- 9.2. After reviewing the above-referred market and taking into utmost account the respective Guidelines, ANACOM concluded that MEO has SMP in both markets and, therefore, it has imposed obligations of access to the network and use of specific network resources, of non-discrimination, transparency, accounting separation, price control and cost accounting and financial report.
- 9.3. As already concluded in the previous review, ANACOM concluded that the market of wholesale central access provided at a fixed location (for major consumer products) in Areas C is not subject to *ex anteregulation*.

## Appendix I. Obligations imposed in the prior review

Table 17. Obligations imposed in the prior review on the companies identified with SMP in Market 4

Obligations	Wholesale market access (physical) to network infrastructure at a fixed location
Access and use of specific network resources	<ul style="list-style-type: none"> <li>▪ Access to local loops and sub-loops and associated resources (including co-deployment in MDFs and street cabinets, signal transport and access to ducts)</li> <li>▪ Potential imposition of access to dark fibre, whenever the access to ducts is not possible</li> <li>▪ To negotiate in good faith with companies requesting access</li> <li>▪ Not to withdraw any access already granted to certain resources</li> <li>▪ Potential imposition of fibre access obligations, following the evolution to next generation access networks, by means of a specific decision</li> </ul>
Transparency in the publication of information, including reference proposals	<ul style="list-style-type: none"> <li>▪ To publish ORALL and ORAC</li> <li>▪ To clearly identify the amendments made to the offer</li> <li>▪ 30-day notice for introduction of the amendments made to the offer</li> <li>▪ Provision and publication of indicators and levels of performance in the service quality of the wholesale offers</li> <li>▪ To provide OSPs<sup>339</sup> with detailed and timely information on developments occurred in the access network</li> </ul>
Non-discrimination in the provision of access and interconnection and in the respective provision of information	<ul style="list-style-type: none"> <li>▪ Not to unduly discriminate the provision of access to local loops and sub-loops and associated resources<sup>340</sup></li> </ul>
Accounting separation for specific activities related to access and/or interconnection	<ul style="list-style-type: none"> <li>▪ Cost-accounting and accounting separation method</li> </ul>
Price control and cost accounting	<ul style="list-style-type: none"> <li>▪ To stipulate cost-orientation of prices</li> <li>▪ To maintain the method adopted to estimate costs</li> <li>▪ Potential evolution to models of long-term prospective incremental costs</li> </ul>
Financial report	<ul style="list-style-type: none"> <li>▪ To provide of accounting records (ACS) including data on revenues from third parties</li> </ul>

<sup>339</sup> Operators and service providers, alternative operators to the incumbent operator.

<sup>340</sup> With the potential imposition of conditions of equivalent access, to be followed by MEO and by the beneficiaries of the offers (namely ORAC and ORALL) in accessing them.

**Table 18. Obligations imposed in the prior review of companies identified with SMP in Market 5NC**

Obligations	Market of wholesale broadband access in Areas NC
Access and use of specific network resources	<ul style="list-style-type: none"> <li>▪ Access to the PSTN at different points</li> <li>▪ To negotiate in good faith with companies requesting access</li> <li>▪ Not to withdraw any access already granted to certain resources</li> <li>▪ To provide access to wholesale offer of exclusive line for broadband services (Naked DSL)</li> <li>▪ Potential imposition of fibre access obligations, following the evolution to next generation access networks, by means of a specific decision.</li> </ul>
Transparency in the publication of information, including reference proposals	<ul style="list-style-type: none"> <li>▪ To publish the broadband access reference offer (ADSL PT Network), with clear identification of the changes between versions, including SLAs and compensation for non-compliance</li> <li>▪ To provide information on maximum and medium times of service provision and failure repair, as well as the respective availability degree (unbundled in accordance with deployment mode and operator).</li> <li>▪ To unbundled the information to be provided in accordance with the different methods of ADSL PT Network - IP, ATM, Naked DSL offer</li> </ul>
Non-discrimination in the provision of access and interconnection and in the respective provision of information	<ul style="list-style-type: none"> <li>▪ Not to unduly discriminate the provision of network access<sup>341</sup></li> <li>▪ 30-day notice to change wholesale offers - in case of significant amendments to wholesale offers, this time limit shall be extended to 2 months</li> <li>▪ Launch of retail offers subject to the existence of equivalent wholesale offers in ADSL PT Network</li> </ul>
Accounting separation for specific activities related to access and/or interconnection	<ul style="list-style-type: none"> <li>▪ Cost-accounting and accounting separation method</li> </ul>
Price control and cost accounting	<ul style="list-style-type: none"> <li>▪ Price control (retail-minus)</li> <li>▪ If required and appropriate, to ensure that prices are consistent and that they encourage competition and efficient investment;</li> <li>▪ To control prices of Naked DSL wholesale offer based on the principle of cost-orientation of prices<sup>342</sup></li> </ul>
Financial report	<ul style="list-style-type: none"> <li>▪ To provide of accounting records (ACS) including data on revenues from third parties</li> </ul>

<sup>341</sup> Including the price geographic differentiation.

<sup>342</sup> With possibility of extension to standard offers.

## **Appendix II. Description of the statistical elements used in the review**

A.II.1. In the present review the following data were used:

- Information on the coverage of high-speed networks in GIS format (per cell, in the case of cable networks and per PDO, in the case of fibre networks) and in excel format (per parish) requested to MEO, NOS (including NOS Madeira and NOS Azores), Apax (Cabovisão) and Vodafone, at the end of 2015.
- Information on the coverage of exchange areas of MEO central copper network, in GIS format.
- Information on parishes (in GIS format and in excel format) provided by the Directorate General for Territory - Carta Administrativa Oficial de Portugal (CAOP) (Official Administrative Charter of Portugal) 2014 and on the relationship between CAOP 2012 and CAOP 2014<sup>343</sup>.
- Information on the number of accesses to broadband internet access service provided at a fixed location at the end of 2015 in excel format, with the information unbundled by a seven-digit postal code (CP7) and, in case there is no seven digits information, four digits information (CP4).
- Information provided by CTT on the relationship between CP7 and the current parishes, in excel format.
- INE (National Statistics Institute) information on the final data of the 2011 census at the statistical subsection level (BGRI), in GIS format and in excel format<sup>344</sup>.
- Information provided by INE (National Statistics Institute) on statistical data at the parishes level, in excel format.
- Statistical information periodically collected by the Directorate for Information and Consumer Affairs of ANACOM.
- Information on ADSL PT Network and on ORALL periodically provided by MEO.

---

<sup>343</sup> See

[http://www.dgterritorio.pt/cartografia\\_e\\_geodesia/cartografia/carta\\_administrativa\\_oficial\\_de\\_portugal\\_caop/caop\\_em\\_vigor/](http://www.dgterritorio.pt/cartografia_e_geodesia/cartografia/carta_administrativa_oficial_de_portugal_caop/caop_em_vigor/).

<sup>344</sup> See <http://mapas.ine.pt/download/index2011.phtml>.

- A.II.2. The NRA coverage at the parishes level was carried out by each operator, taking into account the information provided by each operator on the number of households covered, unbundled per each parish and number of classic family households per each parish of INE.
- A.II.3. At the end of 2015, the number of accesses to broadband Internet access service provided at a fixed location was estimated by associating each postal code with the parish to which it belongs. In cases where a postal code is associated with more than one parish, the broadband accesses associated with CP7 were distributed to the parishes concerned, depending on the number of households covered by the operator in the parishes. In cases where there was no correspondence between CP7 and the parish, CP4 was used and the broadband accesses associated with CP4 were distributed to all parishes covered by this code, in accordance with the number of households covered by the CP4 operator in these parishes (the information received related to CP4 was distributed in the same way). The rare cases where there was no CP4 were not used.
- A.II.4. In order to estimate the market shares in 2010 and 2013 in each exchange area, the information on ADSL PT Network and OLL and on MEO ADSL retail service (without television) was used and is unbundled in accordance with PA/AC. The remaining information required for the review of this market - broadband accesses based on fibre optic, broadband accesses based on cable networks and access to ADSL service with television provided by MEO - is not provided with unbundling at the exchange level, but only at the municipality level. Consequently certain premises were accepted in view of the distribution of accesses by MEO exchange areas:
- In the specific case of MEO broadband accesses based on fibre optic, it was necessary to "adjust" the information related to high-speed accesses of the referred operator, since they include accesses marketed without broadband service (e.g., accesses with FTS and subscription television service). Therefore, it was necessary to estimate the proportion of high-speed broadband accesses, and this proportion was applied to the number of high-speed accesses for each municipality.
  - In the case of broadband accesses based on fibre optic and broadband accesses based on cable networks, the first thing done was the estimation of the coverage of each operator in the various municipalities (percentage of routed/cabled

households in each municipality<sup>345</sup>). Secondly, the exchange areas of each municipality were listed in descending order in terms of local loops in use. After this list, identification was carried out on the exchange areas whose sum of percentages of loops in use complies with the minimum value of the percentage of households based on fibre deployed in the municipality concerned. This means that it is assumed that the routed/cabled households are those where the exchange areas with greater density of accesses in the municipality are located.

- In the last stage, fibre/cable accesses of an operator in a given municipality are distributed in the exchange areas identified in accordance with the criterion above-described, in proportion to the number of loops in use in the universe of the identified exchange areas.
- In case of accesses of MEO ADSL service with television, the information provided concerning the end of 2013 is only related to the total of accesses. Consequently, the information unbundled in accordance with each exchange area, related to the 3rd quarter of 2012, was accepted, assuming that the distribution by the exchange areas remained proportionally identical in 2013.

---

<sup>345</sup> These results are obtained by dividing the number of cabled households in the municipality (source: operators) by the number of classic family households in the municipality (source: INE).

### Appendix III. Parishes belonging to Areas C

DICOFRE	PARISH	MUNICIPALITY
010109	FERMENTELOS	ÁGUEDA
010121	UNIÃO DAS FREGUESIAS DE ÁGUEDA E BORRALHA	ÁGUEDA
100104	BÁRRIO	ALCOBAÇA
100109	MAIORGA	ALCOBAÇA
100121	UNIÃO DAS FREGUESIAS DE ALCOBAÇA E VESTIARIA	ALCOBAÇA
150202	SAMOUÇO	ALCOCHETE
150201	ALCOCHETE	ALCOCHETE
110120	UNIÃO DAS FREGUESIAS DE CARREGADO E CADAF AIS	ALENQUER
110119	UNIÃO DAS FREGUESIAS DE ALENQUER (SANTO ESTÊVÃO E TRIANA)	ALENQUER
150315	UNIÃO DAS FREGUESIAS DE LARANJEIRO E FEIJÓ	ALMADA
150313	UNIÃO DAS FREGUESIAS DE CAPARICA E TRAFARIA	ALMADA
150303	COSTA DA CAPARICA	ALMADA
150312	UNIÃO DAS FREGUESIAS DE ALMADA, COVA DA PIEDADE, PRAGAL E CACILHAS	ALMADA
150314	UNIÃO DAS FREGUESIAS DE CHARNECA DE CAPARICA E SOBREDA	ALMADA
140301	ALMEIRIM	ALMEIRIM
140401	ALPIARÇA	ALPIARÇA
111517	VENTEIRA	AMADORA
111513	ÁGUAS LIVRES	AMADORA
111516	MINA DE ÁGUA	AMADORA
111515	FALAGUEIRA-VENDA NOVA	AMADORA
111514	ENCOSTA DO SOL	AMADORA
111512	ALFRAGIDE	AMADORA
130142	UNIÃO DAS FREGUESIAS DE AMARANTE (SÃO GONÇALO), MADALENA, CEPELOS E GATÃO	AMARANTE
030127	UNIÃO DAS FREGUESIAS DE FERREIROS, PROZELO E BESTEIROS	AMARES
430110	POSTO SANTO	ANGRA DO HEROÍSMO
430104	ANGRA (SÃO PEDRO)	ANGRA DO HEROÍSMO
010418	TROPEÇO	AROUCA
010416	SANTA EULÁLIA	AROUCA
070206	VIMIEIRO	ARRAIÓLOS
110202	ARRUDA DOS VINHOS	ARRUDA DOS VINHOS
010502	CACIA	AVEIRO
010515	EIXO E EIROL	AVEIRO
010505	ESGUEIRA	AVEIRO
010501	ARADAS	AVEIRO
010517	UNIÃO DAS FREGUESIAS DE GLÓRIA E VERA CRUZ	AVEIRO
010508	OLIVEIRINHA	AVEIRO
010513	SANTA JOANA	AVEIRO

010510	SÃO BERNARDO	AVEIRO
110304	AZAMBUJA	AZAMBUJA
030293	UNIÃO DAS FREGUESIAS DE BARCELOS, VILA BOA E VILA FRESCAINHA (SÃO MARTINHO E SÃO PEDRO)	BARCELOS
030245	MANHENTE	BARCELOS
030277	TAMEL (SÃO VERÍSSIMO)	BARCELOS
150409	UNIÃO DAS FREGUESIAS DE ALTO DO SEIXALINHO, SANTO ANDRÉ E VERDERENA	BARREIRO
150407	SANTO ANTÓNIO DA CHARNECA	BARREIRO
150410	UNIÃO DAS FREGUESIAS DE BARREIRO E LAVRADIO	BARREIRO
150411	UNIÃO DAS FREGUESIAS DE PALHAIS E COINA	BARREIRO
020521	UNIÃO DAS FREGUESIAS DE BEJA (SANTIAGO MAIOR E SÃO JOÃO BAPTISTA)	BEJA
020520	UNIÃO DAS FREGUESIAS DE BEJA (SALVADOR E SANTA MARIA DA FEIRA)	BEJA
140501	BENAVENTE	BENAVENTE
140502	SAMORA CORREIA	BENAVENTE
100505	PÓ	BOMBARRAL
100506	UNIÃO DAS FREGUESIAS DO BOMBARRAL E VALE COVO	BOMBARRAL
030373	UNIÃO DAS FREGUESIAS DE LOMAR E ARCOS	BRAGA
030371	UNIÃO DAS FREGUESIAS DE FERREIROS E GONDIZALVES	BRAGA
030375	UNIÃO DAS FREGUESIAS DE MERELIM (SÃO PEDRO) E FROSSOS	BRAGA
030365	UNIÃO DAS FREGUESIAS DE BRAGA (SÃO JOSÉ DE SÃO LÁZARO E SÃO JOÃO DO SOUTO)	BRAGA
030351	BRAGA (SÃO VÍTOR)	BRAGA
030364	UNIÃO DAS FREGUESIAS DE BRAGA (MAXIMINOS, SÉ E CIVIDADE)	BRAGA
030379	UNIÃO DAS FREGUESIAS DE REAL, DUME E SEMELHE	BRAGA
030377	UNIÃO DAS FREGUESIAS DE NOGUEIRA, FRAIÃO E LAMAÇÃES	BRAGA
030367	UNIÃO DAS FREGUESIAS DE CELEIRÓS, AVELEDA E VIMIEIRO	BRAGA
030349	BRAGA (SÃO VICENTE)	BRAGA
030331	PALMEIRA	BRAGA
030319	GUALTAR	BRAGA
030378	UNIÃO DAS FREGUESIAS DE NOGUEIRÓ E TENÕES	BRAGA
030374	UNIÃO DAS FREGUESIAS DE MERELIM (SÃO PAIO), PANOIAS E PARADA DE TIBÃES	BRAGA
030354	SEQUEIRA	BRAGA
030325	MIRE DE TIBÃES	BRAGA
040257	UNIÃO DAS FREGUESIAS DE SÉ, SANTA MARIA E MEIXEDO	BRAGANÇA
110411	UNIÃO DAS FREGUESIAS DO CADAVAL E PÊRO MONIZ	CADAVAL
100618	UNIÃO DAS FREGUESIAS DE CALDAS DA RAINHA - SANTO ONOFRE E SERRA DO BOURO	CALDAS DA RAINHA
100617	UNIÃO DAS FREGUESIAS DE CALDAS DA RAINHA - NOSSA SENHORA DO PÓPULO, COTO E SÃO GREGÓRIO	CALDAS DA RAINHA
310201	CÂMARA DE LOBOS	CÂMARA DE LOBOS
160217	VILA PRAIA DE ÂNCORA	CAMINHA
060201	ANÇÃ	CANTANHEDE
060220	UNIÃO DAS FREGUESIAS DE CANTANHEDE E POCARIÇA	CANTANHEDE
040306	FONTE LONGA	CARRAZEDA DE ANSIÃES

180208	UNIÃO DAS FREGUESIAS DE CURRELOS, PAPÍZIOS E SOBRAL	CARREGAL DO SAL
110508	UNIÃO DAS FREGUESIAS DE CASCAIS E ESTORIL	CASCAIS
110507	UNIÃO DAS FREGUESIAS DE CARCAVELOS E PAREDE	CASCAIS
110501	ALCABIDECHE	CASCAIS
110506	SÃO DOMINGOS DE RANA	CASCAIS
050205	CASTELO BRANCO	CASTELO BRANCO
060335	UNIÃO DAS FREGUESIAS DE EIRAS E SÃO PAULO DE FRADES	COIMBRA
060324	SÃO SILVESTRE	COIMBRA
060334	UNIÃO DAS FREGUESIAS DE COIMBRA (SÉ NOVA, SANTA CRUZ, ALMEDINA E SÃO BARTOLOMEU)	COIMBRA
060318	SANTO ANTÓNIO DOS OLIVAIS	COIMBRA
060336	UNIÃO DAS FREGUESIAS DE SANTA CLARA E CASTELO VIEGAS	COIMBRA
050333	UNIÃO DAS FREGUESIAS DE CANTAR-GALO E VILA DO CARVALHO	COVILHÃ
050305	BOIDOBRA	COVILHÃ
050337	UNIÃO DAS FREGUESIAS DE TEIXOSO E SARZEDO	COVILHÃ
050335	UNIÃO DAS FREGUESIAS DE COVILHÃ E CANHOSO	COVILHÃ
050324	TORTOSENDO	COVILHÃ
120715	UNIÃO DAS FREGUESIAS DE TERRUGEM E VILA BOIM	ELVAS
141001	SÃO JOÃO BAPTISTA	ENTRONCAMENTO
141002	NOSSA SENHORA DE FÁTIMA	ENTRONCAMENTO
010705	SILVALDE	ESPINHO
010704	PARAMOS	ESPINHO
010702	ESPINHO	ESPINHO
010706	UNIÃO DAS FREGUESIAS DE ANTA E GUETIM	ESPINHO
030617	UNIÃO DAS FREGUESIAS DE BELINHO E MAR	ESPOSENDE
030616	UNIÃO DAS FREGUESIAS DE APÚLIA E FÃO	ESPOSENDE
030618	UNIÃO DAS FREGUESIAS DE ESPOSENDE, MARINHAS E GANDRA	ESPOSENDE
010809	UNIÃO DAS FREGUESIAS DE CANELAS E FERMELÃ	ESTARREJA
010805	PARDILHÓ	ESTARREJA
010806	SALREU	ESTARREJA
010808	UNIÃO DAS FREGUESIAS DE BEDUÍDO E VEIROS	ESTARREJA
070515	CANAVIAIS	ÉVORA
070522	UNIÃO DAS FREGUESIAS DE BACELO E SENHORA DA SAÚDE	ÉVORA
070524	UNIÃO DAS FREGUESIAS DE MALAGUEIRA E HORTA DAS FIGUEIRAS	ÉVORA
030709	FAFE	FAFE
080508	UNIÃO DAS FREGUESIAS DE FARO (SÉ E SÃO PEDRO)	FARO
080506	MONTENEGRO	FARO
130335	UNIÃO DAS FREGUESIAS DE MARGARIDE (SANTA EULÁLIA), VÁRZEA, LAGARES, VARZIELA E MOURE	FELGUEIRAS
060520	BUARCOS	FIGUEIRA DA FOZ
060512	TAVAREDE	FIGUEIRA DA FOZ
060514	SÃO PEDRO	FIGUEIRA DA FOZ
310305	SANTO ANTÓNIO	FUNCHAL

310308	FUNCHAL (SÃO PEDRO)	FUNCHAL
310301	IMACULADO CORAÇÃO DE MARIA	FUNCHAL
310307	SÃO MARTINHO	FUNCHAL
310303	FUNCHAL (SANTA LUZIA)	FUNCHAL
310306	SÃO GONÇALO	FUNCHAL
310310	FUNCHAL (SÉ)	FUNCHAL
310304	FUNCHAL (SANTA MARIA MAIOR)	FUNCHAL
310309	SÃO ROQUE	FUNCHAL
050434	UNIÃO DAS FREGUESIAS DE FUNDÃO, VALVERDE, DONAS, ALDEIA DE JOANES E ALDEIA NOVA DO CABO	FUNDÃO
141202	GOLEGÃ	GOLEGÃ
130413	UNIÃO DAS FREGUESIAS DE FÂNZERES E SÃO PEDRO DA COVA	GONDOMAR
130408	RIO TINTO	GONDOMAR
130412	BAGUIM DO MONTE (RIO TINTO)	GONDOMAR
130415	UNIÃO DAS FREGUESIAS DE GONDOMAR (SÃO COSME), VALBOM E JOVIM	GONDOMAR
090625	UNIÃO DAS FREGUESIAS DE GOUVEIA (SÃO PEDRO E SÃO JULIÃO)	GOUVEIA
090758	GUARDA	GUARDA
030804	AZURÉM	GUIMARÃES
030821	GONDAR	GUIMARÃES
030813	CREIXOMIL	GUIMARÃES
030823	GUARDIZELA	GUIMARÃES
030832	NESPEREIRA	GUIMARÃES
030815	FERMENTÕES	GUIMARÃES
030884	UNIÃO DAS FREGUESIAS DE OLIVEIRA, SÃO PAIO E SÃO SEBASTIÃO	GUIMARÃES
030854	SELHO (SÃO JORGE)	GUIMARÃES
030831	MOREIRA DE CÓNEGOS	GUIMARÃES
030871	URGEZES	GUIMARÃES
030807	BRITO	GUIMARÃES
030812	COSTA	GUIMARÃES
030808	CALDELAS	GUIMARÃES
030881	UNIÃO DAS FREGUESIAS DE CANDOSO SÃO TIAGO E MASCOTELOS	GUIMARÃES
030830	MESÃO FRIO	GUIMARÃES
030850	SELHO (SÃO CRISTÓVÃO)	GUIMARÃES
030801	ALDÃO	GUIMARÃES
030838	PONTE	GUIMARÃES
030868	SILVARES	GUIMARÃES
030891	UNIÃO DAS FREGUESIAS DE TABUADELO E SÃO FAUSTINO	GUIMARÃES
030885	UNIÃO DAS FREGUESIAS DE PRAZINS SANTO TIRSO E CORVITE	GUIMARÃES
030866	SERZEDELO	GUIMARÃES
030887	UNIÃO DAS FREGUESIAS DE SANDE VILA NOVA E SANDE SÃO CLEMENTE	GUIMARÃES
030840	RONFE	GUIMARÃES
030837	POLVOREIRA	GUIMARÃES

030835	PENCELO	GUIMARÃES
030882	UNIÃO DAS FREGUESIAS DE CONDE E GANDARELA	GUIMARÃES
470106	HORTA (ANGÚSTIAS)	HORTA
470108	HORTA (MATRIZ)	HORTA
470107	HORTA (CONCEIÇÃO)	HORTA
011006	GAFANHA DA NAZARÉ	ÍLHAVO
011008	ÍLHAVO (SÃO SALVADOR)	ÍLHAVO
420101	ÁGUA DE PAU	LAGOA
420103	LAGOA (NOSSA SENHORA DO ROSÁRIO)	LAGOA
420102	CABOUÇO	LAGOA
080607	UNIÃO DAS FREGUESIAS DE ESTÔMBAR E PARCHAL	LAGOA
080708	UNIÃO DAS FREGUESIAS DE LAGOS (SÃO SEBASTIÃO E SANTA MARIA)	LAGOS
080704	ODIÁXERE	LAGOS
100934	UNIÃO DAS FREGUESIAS DE MARRAZES E BAROSA	LEIRIA
100933	UNIÃO DAS FREGUESIAS DE LEIRIA, POUSOS, BARREIRA E CORTES	LEIRIA
110621	MARVILA	LISBOA
110601	AJUDA	LISBOA
110633	OLIVAIS	LISBOA
110607	BEATO	LISBOA
110664	SANTA CLARA	LISBOA
110602	ALCÂNTARA	LISBOA
110662	PARQUE DAS NAÇÕES	LISBOA
110610	CAMPOLIDE	LISBOA
110663	PENHA DE FRANÇA	LISBOA
110611	CARNIDE	LISBOA
110654	ALVALADE	LISBOA
110608	BENFICA	LISBOA
110667	SÃO VICENTE	LISBOA
110659	CAMPO DE OURIQUE	LISBOA
110618	LUMIAR	LISBOA
110656	ARROIOS	LISBOA
110658	BELÉM	LISBOA
110660	ESTRELA	LISBOA
110639	SÃO DOMINGOS DE BENFICA	LISBOA
110655	AREEIRO	LISBOA
110657	AVENIDAS NOVAS	LISBOA
110666	SANTO ANTÓNIO	LISBOA
110731	UNIÃO DAS FREGUESIAS DE CAMARATE, UNHOS E APELAÇÃO	LOURES
110730	UNIÃO DAS FREGUESIAS DE SANTO ANTÓNIO DOS CAVALEIROS E FRIELAS	LOURES
110726	UNIÃO DAS FREGUESIAS DE MOSCAVIDE E PORTELA	LOURES
110728	UNIÃO DAS FREGUESIAS DE SANTA IRIA DE AZOIA, SÃO JOÃO DA TALHA E BOBADELA	LOURES

110727	UNIÃO DAS FREGUESIAS DE SACAVÉM E PRIOR VELHO	LOURES
110707	LOURES	LOURES
130531	UNIÃO DAS FREGUESIAS DE NESPEREIRA E CASAIS	LOUSADA
130529	UNIÃO DAS FREGUESIAS DE FIGUEIRAS E COVAS	LOUSADA
130528	UNIÃO DAS FREGUESIAS DE CRISTELOS, BOIM E ORDEM	LOUSADA
310402	CANIÇAL	MACHICO
310403	MACHICO	MACHICO
110921	UNIÃO DAS FREGUESIAS DE MALVEIRA E SÃO MIGUEL DE ALCAINÇA	MAFRA
110906	ERICEIRA	MAFRA
130620	NOGUEIRA E SILVA ESCURA	MAIA
130619	CIDADE DA MAIA	MAIA
130617	PEDROUÇOS	MAIA
130601	ÁGUAS SANTAS	MAIA
130608	MILHEIRÓS	MAIA
130609	MOREIRA	MAIA
130618	CASTÊLO DA MAIA	MAIA
130616	VILA NOVA DA TELHA	MAIA
130613	SÃO PEDRO FINS	MAIA
180619	UNIÃO DAS FREGUESIAS DE MANGUALDE, MESQUITELA E CUNHA ALTA	MANGUALDE
090802	MANTEIGAS (SANTA MARIA)	MANTEIGAS
090803	MANTEIGAS (SÃO PEDRO)	MANTEIGAS
101001	MARINHA GRANDE	MARINHA GRANDE
130812	UNIÃO DAS FREGUESIAS DE MATOSINHOS E LEÇA DA PALMEIRA	MATOSINHOS
130814	UNIÃO DAS FREGUESIAS DE SÃO MAMEDE DE INFESTA E SENHORA DA HORA	MATOSINHOS
130811	UNIÃO DAS FREGUESIAS DE CUSTÓIAS, LEÇA DO BALIO E GUIFÕES	MATOSINHOS
130813	UNIÃO DAS FREGUESIAS DE PERAFITA, LAVRA E SANTA CRUZ DO BISPO	MATOSINHOS
040721	MIRANDELA	MIRANDELA
040821	URRÓS	MOGADOURO
150601	ALHOS VEDROS	MOITA
150607	UNIÃO DAS FREGUESIAS DE BAIXA DA BANHEIRA E VALE DA AMOREIRA	MOITA
150603	MOITA	MOITA
150608	UNIÃO DAS FREGUESIAS DE GAIO-ROSÁRIO E SARILHOS PEQUENOS	MOITA
121101	ASSUMAR	MONFORTE
061008	PEREIRA	MONTEMOR-O-VELHO
150710	UNIÃO DAS FREGUESIAS DE MONTIJO E AFONSOEIRO	MONTIJO
101102	NAZARÉ	NAZARÉ
101103	VALADO DOS FRADES	NAZARÉ
180901	CANAS DE SENHORIM	NELAS
180903	NELAS	NELAS
101209	USSEIRA	ÓBIDOS
101203	OLHO MARINHO	ÓBIDOS

111603	ODIVELAS	ODIVELAS
111609	UNIÃO DAS FREGUESIAS DE PÓVOA DE SANTO ADRIÃO E OLIVAL BASTO	ODIVELAS
111608	UNIÃO DAS FREGUESIAS DE PONTINHA E FAMÕES	ODIVELAS
111610	UNIÃO DAS FREGUESIAS DE RAMADA E CANEÇAS	ODIVELAS
111014	UNIÃO DAS FREGUESIAS DE OEIRAS E SÃO JULIÃO DA BARRA, PAÇO DE ARCOS E CAXIAS	OEIRAS
111013	UNIÃO DAS FREGUESIAS DE CARNAXIDE E QUEIJAS	OEIRAS
111012	UNIÃO DAS FREGUESIAS DE ALGÉS, LINDA-A-VELHA E CRUZ QUEBRADA-DAFUNDO	OEIRAS
111002	BARCARENA	OEIRAS
111009	PORTO SALVO	OEIRAS
081003	OLHÃO	OLHÃO
081005	QUELFES	OLHÃO
011319	VILA DE CUCUJÃES	OLIVEIRA DE AZEMÉIS
011303	FAJÕES	OLIVEIRA DE AZEMÉIS
011321	UNIÃO DAS FREGUESIAS DE OLIVEIRA DE AZEMÉIS, SANTIAGO DA RIBA-UL, UL, MACINHATA DA SEIXA E MADAIL	OLIVEIRA DE AZEMÉIS
011320	UNIÃO DAS FREGUESIAS DE NOGUEIRA DO CRAVO E PINDELO	OLIVEIRA DE AZEMÉIS
011305	MACIEIRA DE SARNES	OLIVEIRA DE AZEMÉIS
011302	CESAR	OLIVEIRA DE AZEMÉIS
011318	SÃO ROQUE	OLIVEIRA DE AZEMÉIS
011301	CARREGOSA	OLIVEIRA DE AZEMÉIS
061106	LAGARES	OLIVEIRA DO HOSPITAL
142115	NOSSA SENHORA DA PIEDADE	OURÉM
142106	FÁTIMA	OURÉM
011504	MACEDA	OVAR
011502	CORTEGAÇA	OVAR
011503	ESMORIZ	OVAR
011509	UNIÃO DAS FREGUESIAS DE OVAR, SÃO JOÃO, ARADA E SÃO VICENTE DE PEREIRA JUSÁ	OVAR
130918	PAÇOS DE FERREIRA	PAÇOS DE FERREIRA
130908	FREAMUNDE	PAÇOS DE FERREIRA
130910	MEIXOMIL	PAÇOS DE FERREIRA
130905	FERREIRA	PAÇOS DE FERREIRA
130904	EIRIZ	PAÇOS DE FERREIRA
130902	CARVALHOSA	PAÇOS DE FERREIRA
130917	FRAZÃO ARREIGADA	PAÇOS DE FERREIRA
130916	SEROA	PAÇOS DE FERREIRA
130913	PENAMAIOR	PAÇOS DE FERREIRA
130919	SANFINS LAMOSO CODESSOS	PAÇOS DE FERREIRA
130906	FIGUEIRÓ	PAÇOS DE FERREIRA
130914	RAIMONDA	PAÇOS DE FERREIRA
150803	PINHAL NOVO	PALMELA
131004	BEIRE	PAREDES

131025	PAREDES	PAREDES
131008	CETE	PAREDES
131018	REBORDOSA	PAREDES
131013	LORDELO	PAREDES
131010	DUAS IGREJAS	PAREDES
131003	BALTAR	PAREDES
131017	PARADA DE TODEIA	PAREDES
131021	SOBROSA	PAREDES
131024	VILELA	PAREDES
131115	IRIVO	PENAFIEL
131128	RANS	PENAFIEL
131139	PENAFIEL	PENAFIEL
131113	GALEGOS	PENAFIEL
131141	GUILHUFE E URRÔ	PENAFIEL
101407	PENICHE	PENICHE
101406	FERREL	PENICHE
101509	POMBAL	POMBAL
420307	FAJÃ DE CIMA	PONTA DELGADA
420317	ROSTO DO CÃO (LIVRAMENTO)	PONTA DELGADA
420308	FENAIS DA LUZ	PONTA DELGADA
420304	CAPELAS	PONTA DELGADA
420318	ROSTO DO CÃO (SÃO ROQUE)	PONTA DELGADA
420315	RELVA	PONTA DELGADA
420301	ARRIFES	PONTA DELGADA
420320	SANTO ANTÓNIO	PONTA DELGADA
420305	COVOADA	PONTA DELGADA
420306	FAJÃ DE BAIXO	PONTA DELGADA
121411	UNIÃO DAS FREGUESIAS DA SÉ E SÃO LOURENÇO	PORTALEGRE
081103	PORTIMÃO	PORTIMÃO
131210	PARANHOS	PORTO
131211	RAMALDE	PORTO
131202	BONFIM	PORTO
131216	UNIÃO DAS FREGUESIAS DE ALDOAR, FOZ DO DOURO E NEVOGILDE	PORTO
131218	UNIÃO DAS FREGUESIAS DE LORDELO DO OURO E MASSARELOS	PORTO
131217	UNIÃO DAS FREGUESIAS DE CEDOFEITA, SANTO ILDEFONSO, SÉ, MIRAGAIA, SÃO NICOLAU E VITÓRIA	PORTO
131203	CAMPANHÃ	PORTO
101608	MIRA DE AIRE	PORTO DE MÓS
030919	PÓVOA DE LANHOSO (NOSSA SENHORA DO AMPARO)	PÓVOA DE LANHOSO
131315	UNIÃO DAS FREGUESIAS DA PÓVOA DE VARZIM, BEIRIZ E ARGIVAI	PÓVOA DE VARZIM
131313	UNIÃO DAS FREGUESIAS DE AVER-O-MAR, AMORIM E TERROSO	PÓVOA DE VARZIM
071104	REGUENGOS DE MONSARAZ	REGUENGOS DE MONSARAZ

420506	PICO DA PEDRA	RIBEIRA GRANDE
420509	RIBEIRA GRANDE (CONCEIÇÃO)	RIBEIRA GRANDE
420511	RIBEIRA SECA	RIBEIRA GRANDE
420512	RIBEIRINHA	RIBEIRA GRANDE
420508	RABO DE PEIXE	RIBEIRA GRANDE
171001	CELEIRÓS	SABROSA
181411	UNIÃO DAS FREGUESIAS DE SANTA COMBA DÃO E COUTO DO MOSTEIRO	SANTA COMBA DÃO
310804	GAULA	SANTA CRUZ
310805	SANTA CRUZ	SANTA CRUZ
310803	CANIÇO	SANTA CRUZ
310802	CAMACHA	SANTA CRUZ
010924	SANGUEDO	SANTA MARIA DA FEIRA
010919	PAÇOS DE BRANDÃO	SANTA MARIA DA FEIRA
010908	FORNOS	SANTA MARIA DA FEIRA
010907	FIÃES	SANTA MARIA DA FEIRA
010925	SANTA MARIA DE LAMAS	SANTA MARIA DA FEIRA
010913	LOUROSA	SANTA MARIA DA FEIRA
010921	RIO MEÃO	SANTA MARIA DA FEIRA
010926	SÃO JOÃO DE VER	SANTA MARIA DA FEIRA
010901	ARGONCILHE	SANTA MARIA DA FEIRA
010935	UNIÃO DAS FREGUESIAS DE SANTA MARIA DA FEIRA, TRAVANCA, SANFINS E ESPARGO	SANTA MARIA DA FEIRA
010916	MOZELOS	SANTA MARIA DA FEIRA
010914	MILHEIRÓS DE POIARES	SANTA MARIA DA FEIRA
010902	ARRIFANA	SANTA MARIA DA FEIRA
010918	SÃO PAIO DE OLEIROS	SANTA MARIA DA FEIRA
010922	ROMARIZ	SANTA MARIA DA FEIRA
010936	UNIÃO DAS FREGUESIAS DE SÃO MIGUEL DO SOUTO E MOSTEIRÔ	SANTA MARIA DA FEIRA
010917	NOGUEIRA DA REGEDOURA	SANTA MARIA DA FEIRA
010934	UNIÃO DAS FREGUESIAS DE LOBÃO, GIÃO, LOUREDO E GUISANDE	SANTA MARIA DA FEIRA
141633	UNIÃO DAS FREGUESIAS DE SANTARÉM (MARVILA), SANTA IRIA DA RIBEIRA DE SANTARÉM, SANTARÉM (SÃO SALVADOR) E SANTARÉM (SÃO NICOLAU)	SANTARÉM
150907	SANTO ANDRÉ	SANTIAGO DO CACÉM
150912	UNIÃO DAS FREGUESIAS DE SANTIAGO DO CACÉM, SANTA CRUZ E SÃO BARTOLOMEU DA SERRA	SANTIAGO DO CACÉM
131405	AVES	SANTO TIRSO
131437	UNIÃO DAS FREGUESIAS DE SANTO TIRSO, COUTO (SANTA CRISTINA E SÃO MIGUEL) E BURGÃES	SANTO TIRSO
131434	UNIÃO DAS FREGUESIAS DE CAMPO (SÃO MARTINHO), SÃO SALVADOR DO CAMPO E NEGRELOS (SÃO MAMEDE)	SANTO TIRSO
131432	VILARINHO	SANTO TIRSO
011601	SÃO JOÃO DA MADEIRA	SÃO JOÃO DA MADEIRA
091216	SANTIAGO	SEIA
091208	PARANHOS	SEIA
151002	AMORA	SEIXAL

151007	UNIÃO DAS FREGUESIAS DO SEIXAL, ARRENTELA E ALDEIA DE PAIO PIRES	SEIXAL
151005	CORROIOS	SEIXAL
151006	FERNÃO FERRO	SEIXAL
151103	QUINTA DO CONDE	SESIMBRA
151102	SESIMBRA (SANTIAGO)	SESIMBRA
151101	SESIMBRA (CASTELO)	SESIMBRA
151208	SADO	SETÚBAL
151205	SETÚBAL (SÃO SEBASTIÃO)	SETÚBAL
151210	UNIÃO DAS FREGUESIAS DE SETÚBAL (SÃO JULIÃO, NOSSA SENHORA DA ANUNCIADA E SANTA MARIA DA GRAÇA)	SETÚBAL
151209	UNIÃO DAS FREGUESIAS DE AZEITÃO (SÃO LOURENÇO E SÃO SIMÃO)	SETÚBAL
081307	SILVES	SILVES
151301	SINES	SINES
111124	UNIÃO DAS FREGUESIAS DO CACÉM E SÃO MARCOS	SINTRA
111115	CASAL DE CAMBRA	SINTRA
111125	UNIÃO DAS FREGUESIAS DE MASSAMÁ E MONTE ABRAÃO	SINTRA
111108	RIO DE MOURO	SINTRA
111126	UNIÃO DAS FREGUESIAS DE QUELUZ E BELAS	SINTRA
111102	ALGUEIRÃO-MEM MARTINS	SINTRA
111122	UNIÃO DAS FREGUESIAS DE AGUALVA E MIRA-SINTRA	SINTRA
111128	UNIÃO DAS FREGUESIAS DE SINTRA (SANTA MARIA E SÃO MIGUEL, SÃO MARTINHO E SÃO PEDRO DE PENAFERRIM)	SINTRA
141821	UNIÃO DAS FREGUESIAS DE TOMAR (SÃO JOÃO BAPTISTA) E SANTA MARIA DOS OLIVAIS	TOMAR
182132	UNIÃO DAS FREGUESIAS DE TONDELA E NANDUFE	TONDELA
141921	UNIÃO DAS FREGUESIAS DE TORRES NOVAS (SÃO PEDRO), LAPAS E RIBEIRA BRANCA	TORRES NOVAS
141920	UNIÃO DAS FREGUESIAS DE TORRES NOVAS (SANTA MARIA, SALVADOR E SANTIAGO)	TORRES NOVAS
141910	RIACHOS	TORRES NOVAS
111326	UNIÃO DAS FREGUESIAS DE TORRES VEDRAS (SÃO PEDRO, SANTIAGO, SANTA MARIA DO CASTELO E SÃO MIGUEL) E MATAÇÕES	TORRES VEDRAS
131811	UNIÃO DAS FREGUESIAS DE CORONADO (SÃO ROMÃO E SÃO MAMEDE)	TROFA
131810	UNIÃO DAS FREGUESIAS DE BOUGADO (SÃO MARTINHO E SANTIAGO)	TROFA
011910	UNIÃO DAS FREGUESIAS DE VILA CHÃ, CODAL E VILA COVA DE PERRINHO	VALE DE CAMBRA
131506	UNIÃO DAS FREGUESIAS DE CAMPO E SOBRADO	VALONGO
131505	VALONGO	VALONGO
131503	ERMESINDE	VALONGO
131501	ALFENA	VALONGO
160905	AREOSA	VIANA DO CASTELO
160948	UNIÃO DAS FREGUESIAS DE VIANA DO CASTELO (SANTA MARIA MAIOR E MONSERRATE) E MEADELA	VIANA DO CASTELO
131613	LABRUGE	VILA DO CONDE
131627	VILA CHÃ	VILA DO CONDE
131628	VILA DO CONDE	VILA DO CONDE
131630	VILAR DE PINHEIRO	VILA DO CONDE

131616	MINDELO	VILA DO CONDE
131604	AZURARA	VILA DO CONDE
131603	AVELEDA	VILA DO CONDE
131602	ÁRVORE	VILA DO CONDE
131607	FAJIZES	VILA DO CONDE
041013	SEIXO DE MANHOSES	VILA FLOR
111414	UNIÃO DAS FREGUESIAS DE CASTANHEIRA DO RIBATEJO E CACHOEIRAS	VILA FRANCA DE XIRA
111412	UNIÃO DAS FREGUESIAS DE ALHANDRA, SÃO JOÃO DOS MONTES E CALHANDRIZ	VILA FRANCA DE XIRA
111415	UNIÃO DAS FREGUESIAS DE PÓVOA DE SANTA IRIA E FORTE DA CASA	VILA FRANCA DE XIRA
111409	VILA FRANCA DE XIRA	VILA FRANCA DE XIRA
111408	VIALONGA	VILA FRANCA DE XIRA
111413	UNIÃO DAS FREGUESIAS DE ALVERCA DO RIBATEJO E SOBRALINHO	VILA FRANCA DE XIRA
420601	ÁGUA DE ALTO	VILA FRANCA DO CAMPO
420603	RIBEIRA DAS TÁINHAS	VILA FRANCA DO CAMPO
420605	VILA FRANCA DO CAMPO (SÃO PEDRO)	VILA FRANCA DO CAMPO
420604	VILA FRANCA DO CAMPO (SÃO MIGUEL)	VILA FRANCA DO CAMPO
420602	PONTA GARÇA	VILA FRANCA DO CAMPO
031235	RIBEIRÃO	VILA NOVA DE FAMALICÃO
031213	DELÃES	VILA NOVA DE FAMALICÃO
031224	LOUSADO	VILA NOVA DE FAMALICÃO
031260	UNIÃO DAS FREGUESIAS DE VILA NOVA DE FAMALICÃO E CALENDÁRIO	VILA NOVA DE FAMALICÃO
031250	UNIÃO DAS FREGUESIAS DE ANTAS E ABADE DE VERMOIM	VILA NOVA DE FAMALICÃO
031204	BAIRRO	VILA NOVA DE FAMALICÃO
031234	RIBA DE AVE	VILA NOVA DE FAMALICÃO
031219	JOANE	VILA NOVA DE FAMALICÃO
031242	OLIVEIRA (SÃO MATEUS)	VILA NOVA DE FAMALICÃO
031216	GAVIÃO	VILA NOVA DE FAMALICÃO
031206	BRUFE	VILA NOVA DE FAMALICÃO
031254	UNIÃO DAS FREGUESIAS DE ESMERIZ E CABEÇUDOS	VILA NOVA DE FAMALICÃO
031249	VILARINHO DAS CAMBAS	VILA NOVA DE FAMALICÃO
031225	MOGEGE	VILA NOVA DE FAMALICÃO
031257	UNIÃO DAS FREGUESIAS DE RUIVÃES E NOVAIS	VILA NOVA DE FAMALICÃO
031210	CASTELÕES	VILA NOVA DE FAMALICÃO
131723	VILAR DE ANDORINHO	VILA NOVA DE GAIA
131731	UNIÃO DAS FREGUESIAS DE SERZEDO E PEROSINHO	VILA NOVA DE GAIA
131730	UNIÃO DAS FREGUESIAS DE SANTA MARINHA E SÃO PEDRO DA AFURADA	VILA NOVA DE GAIA
131704	CANIDELO	VILA NOVA DE GAIA
131727	UNIÃO DAS FREGUESIAS DE MAFAMUDE E VILAR DO PARAÍSO	VILA NOVA DE GAIA
131712	OLIVEIRA DO DOURO	VILA NOVA DE GAIA
131717	SÃO FÉLIX DA MARINHA	VILA NOVA DE GAIA
131703	CANELAS	VILA NOVA DE GAIA

131701	ARCOZELO	VILA NOVA DE GAIA
131709	MADALENA	VILA NOVA DE GAIA
131728	UNIÃO DAS FREGUESIAS DE PEDROSO E SEIZEZELO	VILA NOVA DE GAIA
131726	UNIÃO DAS FREGUESIAS DE GULPILHARES E VALADARES	VILA NOVA DE GAIA
131702	AVINTES	VILA NOVA DE GAIA
131725	UNIÃO DAS FREGUESIAS DE GRIJÓ E SERMONDE	VILA NOVA DE GAIA
171438	UNIÃO DAS FREGUESIAS DE VILA REAL (NOSSA SENHORA DA CONCEIÇÃO, SÃO PEDRO E SÃO DINIS)	VILA REAL
171415	MATEUS	VILA REAL
031370	VILA VERDE E BARBUDO	VILA VERDE
031364	UNIÃO DAS FREGUESIAS DE MARRANCOS E ARCOZELO	VILA VERDE
182306	CAMPO	UISEU
182301	ABRAVESES	UISEU
182321	RANHADOS	UISEU
182318	MUNDÃO	UISEU
182315	FRAGOSELA	UISEU
182327	SÃO JOÃO DE LOUROSA	UISEU
182319	ORGENS	UISEU
182323	RIO DE LOBA	UISEU
182341	UNIÃO DAS FREGUESIAS DE VISEU	UISEU
182304	BODIOSA	UISEU
182339	UNIÃO DAS FREGUESIAS DE REPESES E SÃO SALVADOR	UISEU
031408	UNIÃO DAS FREGUESIAS DE CALDAS DE VIZELA (SÃO MIGUEL E SÃO JOÃO)	VIZELA
031401	SANTA EULÁLIA	VIZELA
031406	VIZELA (SANTO ADRIÃO)	VIZELA