

## **II.2 Fixed Telephone Service (FTS)**

This chapter shows the state of the FTS at the end of 2005, and its evolution during that year.

### **II.2.1 Main items of the evolution in 2005**

- In 2005, and for the first time since the beginning of liberalization, the amount of FTS's direct access customers did not decrease. In fact, at the end of the year, there were 3.13 million registered direct access customers, a small year to date increase. This is due to the growth in the number of RUO-based offers and to new offers using the GSM network as the access network.
- In spite of a stabilized number of customers, the trend of decreasing traffic with origin in the fixed network remains. In fact, a sharp fall in traffic has been occurring since 2001. Voice traffic decreased between 2000 and 2005 at an average yearly rate of 5 per cent in amount of minutes, which slightly slowed last year (-4.2 per cent). Internet dial-up access traffic sharply decreased over the last two years (a 41 per cent drop in amount of minutes), which is explained by the strong growth of the broadband access to the Internet.
- In 2005, fixed telephone service prices are near, or even below, the average European level. There was a significant drop in prices for practically all types of calls, as a result of ICP-ANACOM's regulatory action.
- One of the most recent trends is the development of VoIP services. There are currently 16 authorized providers for this kind of service. ICP-ANACOM launched in November 2005 a public consultation on VoIP services which contributed to define the framework for VoIP service provision.

### **II.2.2 FTS's offer**

STF is the offer to the general public of voice direct routing, in real time, between fixed locations, giving any user with equipment that is connected to a terminal network point the chance to communicate with another terminal point.

The service is provided by the entities with a general authorization for the provision of the service and by the universal service provider.

Following is a more detailed description of the provided services and of their evolution during 2005, the entities providing these services in Portugal and the market entries and exits, the mergers and acquisitions in the FTS markets during that same year.

### **II.2.2.1 FTS**

Traditionally, telephone services were provided together (bundled) with the access to the public telephone network at a fixed location. This was changed with the implementation of the so-called “indirect access”.

As from 1 January 2000, the users of publicly available telephone services at a fixed location began to benefit from the indirect access service in the call-by-call selection mode. This function gives FTS users the chance to make telephone calls using the services of other FTS providers and not their access provider. In order to do that, they only have to dial each provider’s 10xy codes. On a first stage, only inter-urban and international calls were eligible for the provision of this indirect access service.

On 1 July 2000 a new indirect access mode was launched – provider pre-selection. This function re-routes calls made by users to the provider that they prefer without the need to dial the selection codes. Pre-selection firstly used an autodialer connected to the customer’s telephone. On 1 October 2000, pre-selection became mature in Lisbon and Porto, with no further need for autodialers and pre-selection programmed at the operators’ switchboards. On that same date, calls originated in the fixed network and destined to a mobile network (fixed-to-mobile calls) became eligible for indirect access, both in the call-by-call selection and in the pre-selection modes. On 15 November 2000, pre-selection became available in its final mode (without autodialers) to customers in the rest of the country.

As from 1 January 2001, local and regional calls also became eligible for indirect

access.

### **II.2.2.1.1 Accesses to the public telephone network at a fixed location**

Access to the public telephone network at a fixed location can be provided using various physical media:

- Copper wire pairs – this media is mostly used by the incumbent operator PTC and is currently the one ensuring a greater geographical and population coverage. With the enforcement of RUO, alternative operators were given the chance to start offering access to the public telephone network at a fixed location using the incumbent's unbundled local loops;
- Coaxial cable – cable made up of a central copper wire which is enclosed by a belt of intertwined copper wires and separated from it by an insulating material. This type of cable is used for carrying electrical signals at higher frequencies than those carried by a simple pair of metallic wires. It is one of the main items of the hybrid cable television distribution networks. Currently, there is one fixed telephone service provider offering fixed access using coaxial cable (Cabovisão)<sup>4</sup>;
- FWA – Fixed Wireless Access – access technology through which operators provide to their customers a direct connection to their telecommunications network using a fixed radio link between the latter's premises and the operator's local switchboard. There are four active providers [Jazztel Portugal – Serviços de Telecomunicações, S.A. (Jazztel), Novis, Vodafone and Onitecom] with FWA licenses<sup>5</sup>. Radio links are used complementarily with their non-radio access networks, usually for access to non-residential customers;
- Powerline Communications (PLC) – access technology using energy cables to convey broadband voice and data. This technology makes it possible to use a local voice and data local network in a house, from any electrical socket, to

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<sup>4</sup> There are other cable TV distribution network operators advertising telephone services. However, these companies are only authorized to provide voice over the Internet services. According to the available data, these services do not substitute the FTS.

<sup>5</sup> These rights of use are being reconfigured.

provide high-speed Internet access, telephone and fax. There is currently one fixed telephone service provider offering fixed access using PLC (Onitelecom).

- Fibre optics – physical transmission means (usually a cable with several pairs of fibreglass) that convey data as light pulses. It's a broadband medium that, if in connection with the adequate equipment, can carry large amounts of data at long distance and with small distortion. Both new providers (Onitelecom, Novis, Colt, Jazztel, Refer, Cabovisão) and PTC have been rolling-out fibre optics in their access networks, mostly for use by the non-residential market. Among the new providers, Cabovisão has a nation-wide fibre optics ring of 1,811 km, with a 2.5 Gbit/s throughput and Colt is rolling-out all its network using fibre optics;
- Radio-relay – transmission system through radio waves using dish antennas. The use of radio-relay links is negligible due to the large investment needed to maintain them.

The following types of access are provided over these physical media:

- Analogue accesses – access with a single 64kbit/s channel, in principle to carry voice and data up to 56 kbit/s;
- Basic rate digital accesses (ISDN basic access) – accesses with two 64 kbit/s voice- and data-carrying channels and a 16 kbit/s signalling channel;
- Primary rate digital accesses (ISDN primary access) – accesses with 30 64 kbit/s voice- and data-carrying channels, one 64 kbit/s signalling channel and one synchronism channel, with a global 2 Mbit/s throughput;

#### **II.2.2.1.2 New access services**

Since the end of 2004 and with a great development in 2005, one of the FTS providers began to offer access to the public telephone network at a fixed location using the GSM network. Terminals have nonetheless a reduced geographical mobility.

Indeed, ICP-ANACOM decided on 25 February 2005 that the mobility of a terminal of

this kind of service should be the only one needed for access at a fixed location<sup>6</sup>. The service provider had to inform final users on the service and namely that the access to the service is only provided at the address that was declared by the end user and that there are limitations regarding caller localization in calls for the single European emergency number (112).

### **II.2.2.1.3 Telephone services to the general public at a fixed location**

FTS gives users the ability to make and receive national and international voice calls and is generally provided bundled with several applications, facilities and optional services.

Due to the growing network convergence, integrated solutions made available by the providers may include other types of services at one single fixed access, namely voice, data and video, with the appropriate equipment. These solutions are usually adjusted to their targeted segments (residential, professionals, corporate, etc.).

The following table sums up the main (traditional voice, facilities, bundling, etc.) services that FTS providers can provide.

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<sup>6</sup> Access to the service must be assured using a terminal connected to a single pre-determined BTS (Base Transmission Station) when calls are being made, received and on. In exceptional cases, which must be technically justified and acknowledged as such by ICP-ANACOM, the connection of the terminal to two or, tops, three pre-determined BTSs is admissible.

**Table 1 – Products and services provided by FTS providers**

<b>Products/services</b>	<b>Brief description</b>
Analogue telephone line (only for direct access <sup>7</sup> )	The traditional telephone service, for making and receiving calls at fixed locations. With the use of a modem it gives access to further services, namely data and fax communications.
Service facilities (only for direct access)	Facilities which modify or increase the basic features of the basic telephone service (e.g. call waiting, call re-routing, SMS and MMS, etc.).
Tariff services	Detailed invoicing
Digital telephone line — ISDN (Integrated Services Digital Network) services (only for direct access)	Also provided using a public telephone network integrating voice and data services into one single access. Currently available ISDN connections are as follows: - basic ISDN access: access to the ISDN with two 64 kbps voice and/or data channels and one 16 kbps signalling channel, which can be used for data in package mode; - primary ISDN access: access to the ISDN with 30 64 kbps voice and/or data channels, one 64 kbps signalling channel and one 64 kbps synchronism channel, with a global throughput of 2Mbps. Other supplementary services can be provided over ISDN lines, such as caller line ID or its suppression, call re-routing, etc.
Operator services	Information and telephone directory services, assisted communications services, collect call services, SMS and MMS, etc.
Access to public services	Access to emergency and other services.
Call-by-call selection and pre-selection	Function making it possible to select a FTS provider that is not the one holding the local loop. This choice is made by dialling a short code (the 10xy provider's prefix) when making the call – call-by-call selection – or with a contract in pre-selection.
Operator portability (only for direct access)	Function giving the subscriber to a given service provider the possibility to keep their telephone number when changing operator of the same service.
Public payphones for access to the fixed telephone service	Terminal equipment for access to the FTS (telephone booths) at public locations, including the conditioned access ones, available to the general public as a paid service.

Source: ICP-ANACOM

## Voice over the Internet Protocol (VoIP) services

One of the trends that will affect the development of the provision of this service is the development of VoIP services.

ICP-ANACOM launched in November 2005 a public consultation to VoIP service providers. The results of this public consultation contributed to frame the provision of VoIP services. VoIP will expectedly give users direct, important benefits, for it can promote the coming into the market of new, innovative products at better prices.

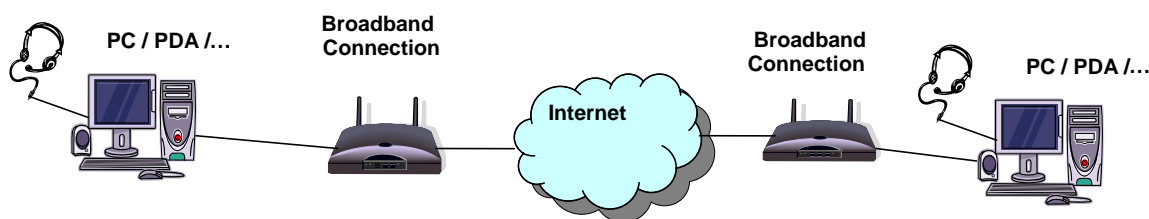
<sup>7</sup> Depending on owning or not the local access, the FTS provider can or cannot provide the FTS in the form of direct or indirect access, respectively.

In connection with this consultation, four possible configurations of VoIP services were identified, as is briefly described below:

- Voice over the public Internet – the current most common VoIP use is the routing of IP packages over the public Internet. It is usually provided cost-free to the user and based on software for PC-to-PC connections. Its examples are SAPO *Messenger*<sup>8</sup> and the basic version of *Skype*<sup>9</sup>, or Instant Messaging (IM) services<sup>10</sup>.

The following graph shows a scheme of the typical VoIP connection over the public Internet (PC-to-PC).

**Graph 7 – Typical VoIP connection on the public Internet (PC-to-PC)**



Because it is currently not viable to discriminate between VoIP from the remaining IP traffic (e-mail, www, etc.) on IP networks, the quality of this type of voice offer is similar to that of the remaining Internet-based applications, generally the “best effort” kind<sup>11</sup>). Thus, the same “quality” – the technical parameters that can be tolerated in other IP applications – may not be suited for voice applications. On the other hand, interoperability with other telephone services or similar applications may not be assured<sup>12</sup>.

<sup>8</sup> See <http://messenger.sapo.pt/>.

<sup>9</sup> See <http://www.skype.com/products/>.

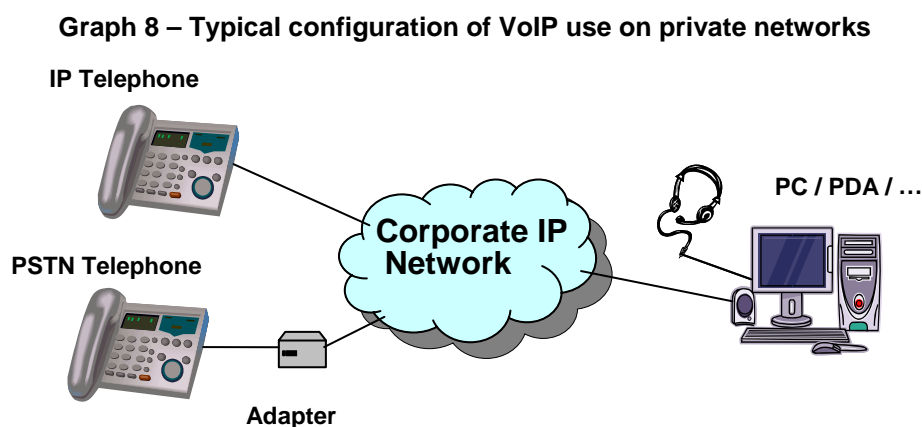
<sup>10</sup> Services for real time communication in which a group of users in a contact list can send and receive texts messages (e.g. *MSN Messenger*).

<sup>11</sup> Way of sending data in an electronic communications network in which minimum performance levels are not assured. Network routing devices are limited to constantly seeking the route with the smallest delay possible for each data block that needs routing.

<sup>12</sup> E.g., communication between *Skype* and *MSN Messenger* is not currently possible.

- VoIP in private networks – there are voice services based on private IP networks, *i.e.*, privately used VoIP within corporations and not commercial services – e.g. corporate networks with IP technology and voice-data integration.

The following graph is a schematic example of a typical configuration of VoIP use in private networks:

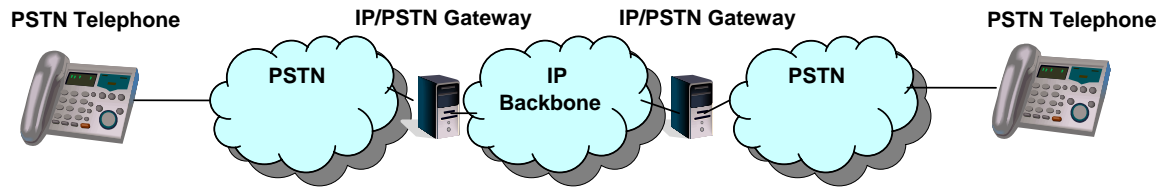


This use of VoIP, although covered by the general authorization regime of Law no. 5/2004 of 10 February, is not a publicly available service provision and, thus, there are no restrictions or obligations in connection with voice services in private networks. There are nonetheless legal differences in dealing with companies offering services that are not available to the general public.

- VoIP at the IP backbone – another example is the use of VoIP at the IP backbone to support voice communications of an international operator or of a public communications network operator only using VoIP technology within their own network (their IP backbone). Examples of this second case are the “traditional” telephone service providers over cable networks, namely with triple play services (voice, Internet access and television services), such as Cabovisão.

The following graph contains a schematic example of the configuration of a typical network using VoIP at its IP backbone.



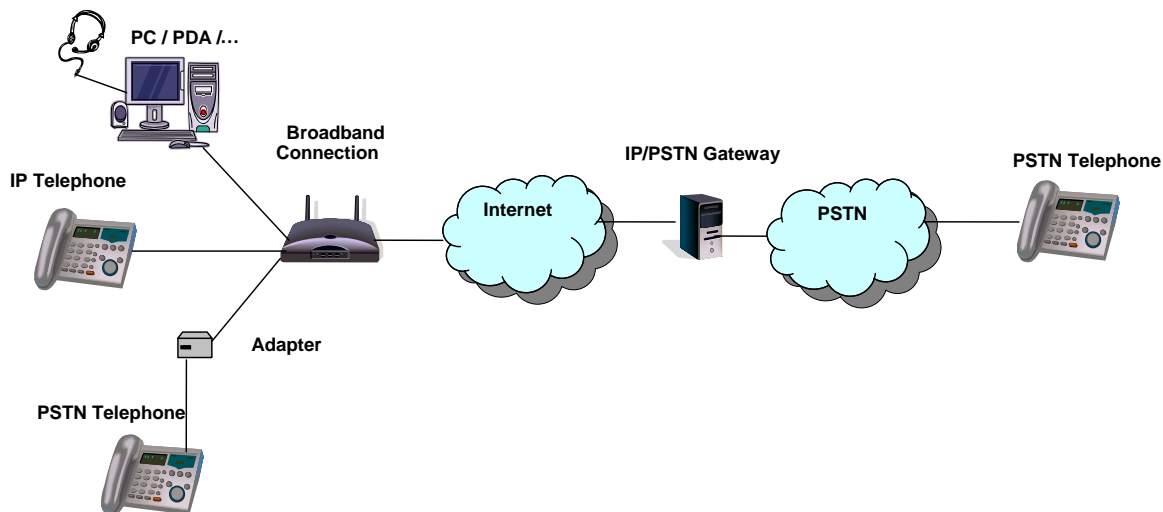
**Graph 9 –Typical network configuration of VoIP use on an IP backbone**

The current retail services based on this network configuration are already regulated as publicly available telephone services, thus being outside of this consultation's scope. It should be noted that it is not provided to the public as a VoIP service and/or does not affect the provision of the operator's retail voice services, namely the quality of the provided service.

- VoIP as a publicly available electronic communications service – VoIP services making it possible to make and receive calls to and from numbers of the national numbering plan (NNP<sup>13</sup>). In order to do that, they require a gateway to connect the IP network to the public switched telephone network (PSTN), as shown on the following graph:

<sup>13</sup> See <http://www.anacom.pt/template2.jsp?categoryId=36478> .

**Graph 10 – Typical network configuration of VoIP use as a publicly available electronic communications service**



This graph contains a schematic example of the configuration of a typical network using VoIP as a publicly available electronic communications service.

These publicly available VoIP services, regulated by Law 5/2004, can be:

- i) Provided by an access provider, namely a broadband one, at a single fixed location and under conditions that are perceived by the user as equivalent to those of the traditional fixed telephone service. Examples of this kind of service are Oni220, provided by Onitelecom<sup>14</sup>, or others based on wholesale offers;
- ii) Of a nomadic use, *i.e.*, for use on several locations and based on third-parties accesses, *i.e.* with no control over the access network (an example of this kind of service is *Skype-OUT/IN*). There are currently 16 authorized providers for this kind of service. However, by the end of 2005 none of the providers had a service with the features of the FTS, since currently they don't make it possible, among other functions, to receive calls from fixed or mobile numbers – because they haven't been granted any numbers – and to access emergency services.

<sup>14</sup> Vide [www.oni220.pt/oni220.htm](http://www.oni220.pt/oni220.htm).

## II.2.2.2 FTS providers

There were 22 legally authorized entities for the provision of FTS by the end of 2005.

Of these, 14 were active<sup>15</sup>. Regarding their mode of service provision, one of the said entities provided the service exclusively over direct access; three of them provided their services only over indirect access and ten entities used both types of access to provide the service.

The following table contains the list of entities that are legally authorized to provide FTS in 2005, including data on each of the providers' situation in the beginning and in the end of the year, and information on the market entries and exits during this time.

**Table 2 – FTS providers in 2005**

Name	Beginning	Entries	Exits	End
Adianis – Telecomunicações & Multimedia, S.A.	-	x		NA
AR Telecom – Acessos e Redes de Telecomunicações, S.A. <sup>16</sup>	A			A
Broadnet Portugal, S.A..	NA			NA
BT Portugal — Telecomunicações, Unipessoal, Lda.	NA			NA
Cabovisão — Televisão por Cabo, S.A.	A			A
Colt Telecom – Serviços de Telecomunicações, Unipessoal, Lda.	A			A
Equant Portugal, S.A.	A			A
G9 SA — Telecomunicações, S.A.	A			A
Media Capital — Telecomunicações, S.A. <sup>17</sup>	NA			NA
Netvoice — Comunicações e Sistemas, Lda.	A			A
Neuvox – Telecomunicações, Marketing e Informática, Lda.	NA			NA
Novis Telecom, S.A. <sup>18</sup>	A			A
Onitelecom — Infocomunicações, S.A.	A			A
Optimus Telecomunicações, S.A.	NA			NA
PT Comunicações, S.A.	A			A

<sup>15</sup> Of these 14 entities, only 12 have released statistical data during the period now being analyzed.

<sup>16</sup> In September 2005 Jazztel Portugal – Serviços de Telecomunicações, S.A. change its designation to AR Telecom – Acessos e Redes de Telecomunicações, S.A.

<sup>17</sup> Media Capital, SGPS is an indirect share holder of Media Capital – Telecomunicações, S.A. (which share capital is fully held by the *sub-holding* Meglo – Media Global, SGPS, S.A.). In November 2005, the Spanish holding Prisa purchased 33 per cent of Grupo Media Capital, SGPS, S.A. and became its major shareholder.

<sup>18</sup> Further to Sonaecom's capital increase by means of an issue of shares held by France Telecom, as from October 2005, France Telecom holding ceased to be a direct shareholder of Novis (in which it had a 43 per cent stake). Grupo Sonae increased its shareholding of this company in the same proportion.

PT Prime — Soluções Empresariais Telecomunicações e Sistemas, S.A.	A			A
Radiomóvel - Telecomunicações, S.A.	-	x		NA
Refer Telecom — Serviços de Telecomunicações, S.A.	A			A
Telemilénio — Telecomunicações, Sociedade Unipessoal, Lda (Tele2)	A			A
Telsocomm – Telecomunicações, Marketing e Informática, Lda.	NA			NA
TMN — Telecomunicações Móveis Nacionais, S.A.	A			A
Vocalis Telekom — Dienste GmbH	NA		x	-
Vodafone Portugal — Comunicações Pessoais, S.A.	A			A
Total Active	14	-	-	14
Total Not Active	7	2	-	8
Total	21	2	-	22

Source: ICP-ANACOM

Legend: A — Active

NA — Not Active

During the year of 2005, the amount of active providers on the markets remained unchanged. However, there were some entries and exits of corporate groups by acquisitions and sales of companies' capital. These processes did not significantly change the structure of the market.

**Table 3 – FTS providers**

	2000	2001	2002	2003	2004	2005
Authorized providers	24	24	27	26	21	22
Active providers	14	14	13	13	13	14
Providers with direct and indirect access traffic	6	8	7	8	8	10
Providers with direct access traffic only	2	2	3	2	2	1
Providers with indirect access traffic only	6	4	3	3	3	3

Source: ICP-ANACOM

Unit: 1 provider

Following is the list of public payphones service providers.

**Table 4 – Public payphones service providers in 2005**

Name	Beginning	Entries	Exits	End
A. Rashid – Comércio de Material Eléctrico, Unipessoal, Lda.	-	X		A
Adianis – Telecomunicações & Multimedia, S.A.	-	X		NA
Blue Card – Serviços de Telecomunicações e Informática, Lda.	-	X		NA
C. C. Comunicações a Crédito, Lda.	A			A
Eportel – Prestação de Serviços em Telecomunicações, Lda.	-	X		NA
G9 SA – Telecomunicações, S.A.	-	X		A
Manuel Soares & Pereira, Lda.	-	X		A
Mobile Zone – Telecomunicações, Comunicações Electrónicas, Unipessoal, Lda.	-	X		A
Moneycall – Serviços de Telecomunicações, Lda.	-	X		A
Netcall – Telecomunicações e Tecnologias de Informação, S.A. <sup>19</sup>	A			A
Phone One — Serviços de Telecomunicações, Lda.	A			A
PT Comunicações, S.A.	A			A
Stela Maria Bayombe Borges	NA		X	-
Teljap – Manutenção, Instalação e Comercialização de Telecomunicações, Lda.	-	X		NA
World Fun Telecom – Redes de Telefonia, S.A. <sup>20</sup>	A			A
Xalat – Comunicações Electrónicas, Unipessoal, Lda.	-	X		A
Total active	5	6	-	11
Total not active	1	4	1	4
Total	6	10	1	15

Source: ICP-ANACOM,

Legend: A — Active NA — Not Active

The significant increase in the amount of active providers of this service may be explained by several intertwined factors: on one hand, the liberalization of the telecommunications market made way for new public payphone offers. On the other hand, the growth of immigrant communities and the strong growth in the offer of virtual calling cards focused on specific destinations also increased the business opportunities in connection with this service. Lastly, the various monitoring actions that identified irregular situations in the operation of this kind of service and, consequently, the registration of these entities, are noteworthy.

<sup>19</sup> In August 2005 the company reported the termination of Netcall as a limited liability partnership (Netcall – Telecomunicações e Tecnologias de Informação, Lda.), which became a public limited company (Netcall – Telecomunicações e Tecnologias de Informação, S.A.).

<sup>20</sup> In January 2005, company Fun Comytel Portugal – Redes de Multimédia e Telefonia, S.A. reported its change of designation into World Fun Telecom – Redes de Telefonia, S.A.

## II.2.3 FTS usage profile

FTS users are mostly residential ones. Only about 13 per cent of FTS customers aren't residential. As shown on the table below, this ratio has significantly changed over the years now being analysed.

**Table 5 – Amount of residential and non residential customers**

	2001	2002	2003	2004	2005
Residential customers	87.0%	87.4%	87.3%	87.3%	87.4%
Non residential customers	13.0%	12.6%	12.7%	12.7%	12.6%

Source: ICP-ANACOM

### II.2.3.1 Features of FTS usage

Below are some of the main features of the use of FTS.

#### II.2.3.1.1 Accesses

The large majority of direct accesses to the FTS are made up of analogue accesses. However, since the beginning of the liberalization process, the ratio of equivalent digital accesses grew considerably, mostly in 2000 and in 2001. It should be noticed that the alternative operators are the main responsible entities for the increase of this kind of accesses.

**Table 6 – Distribution of accesses by type of access<sup>21</sup>**

	2000	2001	2002	2003	3T04	3T05
Analogue accesses	83.5%	80.3%	79.0%	78.7%	78.5%	77.2%
Equivalent digital accesses	15.3%	18.7%	20.0%	20.4%	20.4%	21.8%
Public payphones	1.1%	1.0%	1.0%	1.0%	1.1%	1.1%

Source: ICP-ANACOM

<sup>21</sup> Includes accesses installed at the request of customers and public payphones. Does not include own stock.

### II.2.3.1.2 Traffic

Switched traffic routed by the fixed network is mainly made up of fixed-to-fixed calls (64 per cent). Less important is Internet access traffic (18 per cent), fixed-to-mobile traffic (12 per cent) and the outgoing international traffic (6 per cent).

The importance of the Internet access traffic has been decreasing fast due to the migration to broadband accesses. This has contributed to increase the importance of the remaining traffic destinations.

**Table 7 – Distribution of traffic by destination (minutes)**

	2000	2001	2002	2003	2004	2005
National fixed-to-fixed traffic	54.6%	48.2%	47.2%	51.3%	58.6%	64.0%
National fixed-to-mobile traffic	8.0%	8.2%	9.0%	9.3%	10.5%	11.9%
International outgoing traffic	3.1%	3.1%	3.1%	3.5%	4.3%	5.8%
Internet access traffic	34.3%	40.5%	40.7%	36.0%	26.6%	18.3%

Source: ICP-ANACOM

The above-described distribution is significantly changed if the amount of calls is considered, which is explained by the long length of Internet access calls.

**Table 8 – Distribution of traffic by destination (calls)**

	2000	2001	2002	2003	2004	2005
National fixed-to-fixed traffic	71.7%	68.4%	67.7%	69.3%	71.7%	72.5%
National fixed-to-mobile traffic	18.0%	18.9%	19.4%	19.6%	20.3%	20.5%
International outgoing traffic	3.4%	3.3%	3.4%	3.3%	3.5%	4.1%
Internet access traffic	6.8%	9.3%	9.5%	7.9%	4.5%	2.9%

Source: ICP-ANACOM

### II.2.3.1.3 Traffic: average call length

Average voice call length reached about 161 seconds. Fixed-to-mobile calls' length stands out due to being shorter (111 seconds), maybe because of their price. On the contrary, the length of international calls is the highest one and has been increasing.

**Table 9 – Average call length**

	2000	2001	2002	2003	2004	2005
Total traffic (voice + Internet)	3.6	4.0	4.1	3.8	3.5	3.2
Voice traffic	2.6	2.6	2.7	2.6	2.7	2.7
National traffic (voice)	2.5	2.6	2.6	2.6	2.6	2.6
National fixed-to-fixed traffic	2.8	2.8	2.8	2.8	2.8	2.8
National fixed-to-mobile traffic	1.6	1.7	1.9	1.8	1.8	1.9
Outgoing international traffic	3.3	3.7	3.7	4.0	4.2	4.4
Internet access traffic	18.3	17.2	17.4	17.3	20.4	20.1

Source: ICP-ANACOM

Unit: Minutes

As mentioned above, the average length of Internet access calls is far above average, reaching about 20 minutes.

### II.2.3.2 Barriers to service subscription

According to the data of the Electronic Communications Consumer Survey – February 2006<sup>22</sup>, and as shown on the table below, the main reason for not subscribing to the FTS is the use of the mobile phone or of other alternative media to communicate. Over 66 per cent of the panel mentioned other media as the main reason for not using the service.

The monthly signature as part of the invoicing items and the lack of a need to communicate were also considered as decisive factors for not using the fixed telephone.

<sup>22</sup> The universe defined for this survey was individuals of both genders, aged 15 or older, and residing in mainland Portugal and in the autonomous regions of Madeira and Azores. The sample was sized for a maximum error of 2.5 per cent regarding the main results (with a degree of significance of 95 per cent). The sample was stratified by gender, age and region, based on the last General Population Census: 2001 Census. 2,020 interviews took place. Data gathering was made by means of personal, direct interviews. Field work took place between 17 January and 22 February and was made by Markttest.



**Table 10 – Motives for not using the fixed telephone**

Uses mobile phone	61.2%
Prefers not to pay the signature	16.5%
It's cheaper to make calls using other media	5.0%
Does not need to communicate	4.5%
Other motives	7.3%
DNN/DNA	1.3%

Source: Electronic Communications Consumer Survey – February 2006

## **II.2.4 FTS's evolution in 2005**

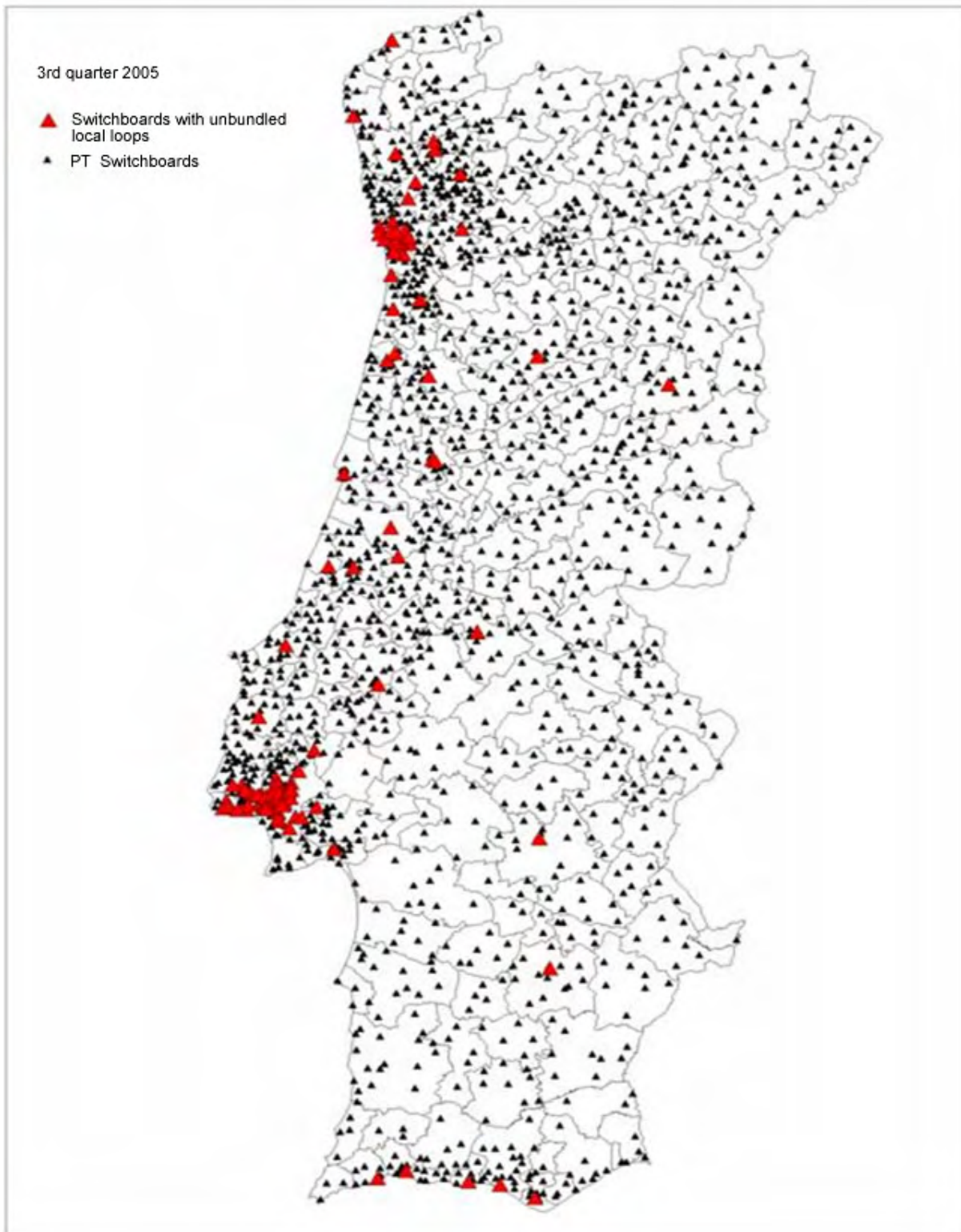
Below is a set of items on FTS's evolution in 2005: service availability, penetration, service's usage intensity, evolution of the access share, traffic and revenues, price evolution and quality perception.

### **II.2.4.1 Service availability and penetration**

As shown on the graph below, FTS is available on the whole of the continental territory. In the autonomous regions there is also a strong presence of the PSTN, with switchboards and telephone concentrators on all the islands of the territory.

The graph also shows the distribution of MDFs (Main Distribution Frames) with unbundled local loops, which are still concentrated on the main urban centres of the country. Local loop unbundling led to the coming into the market of bundled services (broadband Internet and voice services and, more recently, TV) by alternative providers.

**Graph 11 – Distribution of PT's switchboards and PT's switchboards with unbundled local loops**

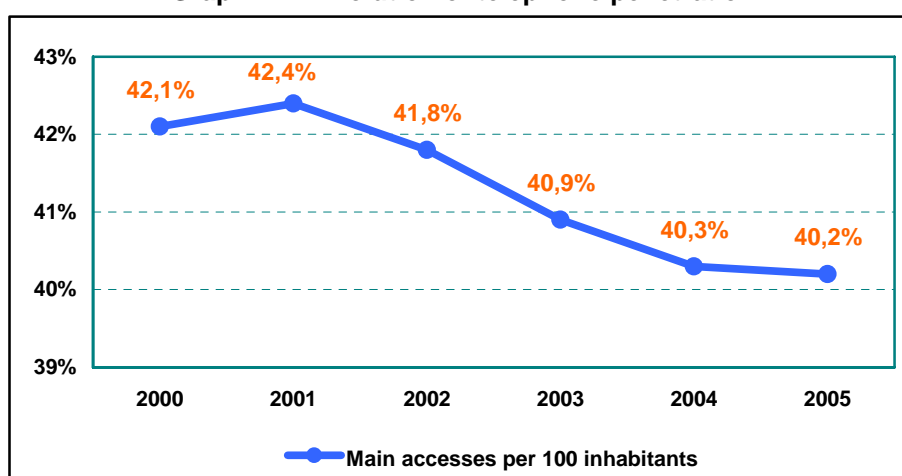


Source: ICP-ANACOM

In spite of generalized service availability, the penetration rate has been falling since

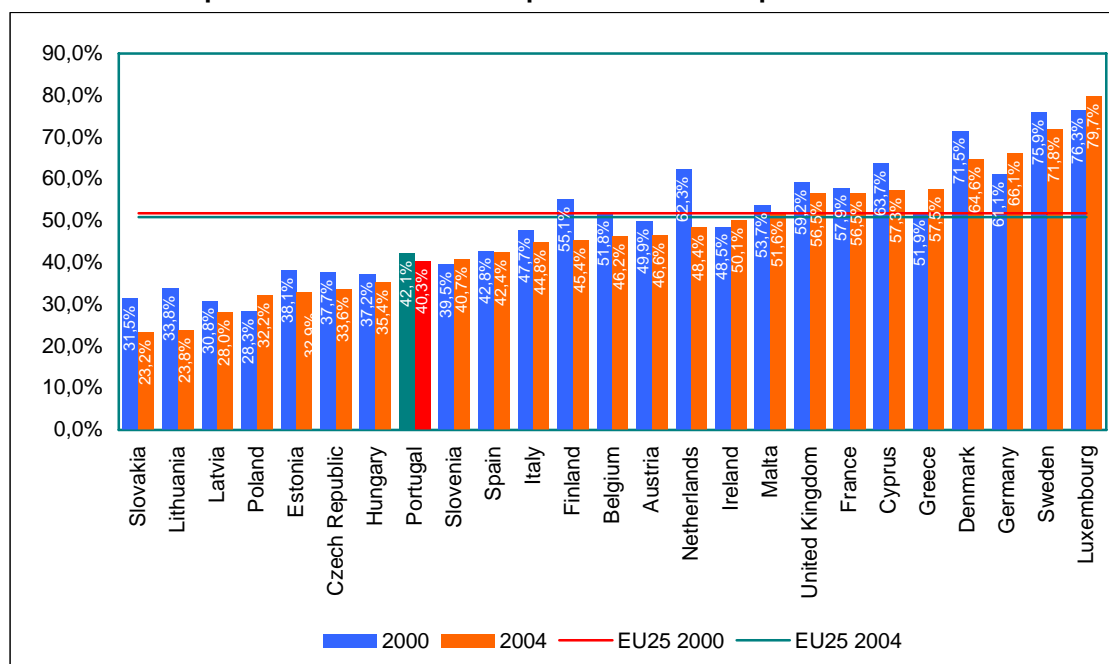
2002, which may be due to some of the factors mentioned in part 002, section 2.3. As from 2003, the rate at which the telephone penetration falls has decreased and in 2005 the fall in the penetration was due to the increase in the residing population versus the non reduction in the amount of accesses. Three important factors contributed to that: the growing use of ADSL as an Internet access technology, the significant growth of local loop unbundling and the coming into the market of new access services based on the GSM network.

Graph 12 – Evolution of telephone penetration



Source: ICP-ANACOM

Telephone penetration in Portugal is below the EU average. According to data from the International Telecommunications Union (ITU), fixed telephone penetration in the EU was 51 per cent in 2004. It should be noticed that, between 2000 and 2004, there was a 0.9 percent drop in EU's telephone penetration, about half of the drop in Portugal in that same period (1.8 per cent).

**Graph 13 – International comparison of access penetration rates**

Source: ITU, ICP-ANACOM, Eurostat

## II.2.4.2 Amount of service users

In 2005 the amount of indirect access customers with pre-selection increased, whereas the number of direct access and indirect access by call-by-call selection customers remained stable.

**Table 11 – Amount of FTS customers**

	2001	2002	2003	2004	2005
Direct access customers	3,250,922	3,217,041	3,143,491	3,133,473	3,133,623
Pre-selection	389,811	374,268	355,517	394,894	470,143
Call-by-call selection	56,840	36,926	51,539	101,678	101,602

Source: ICP-ANACOM

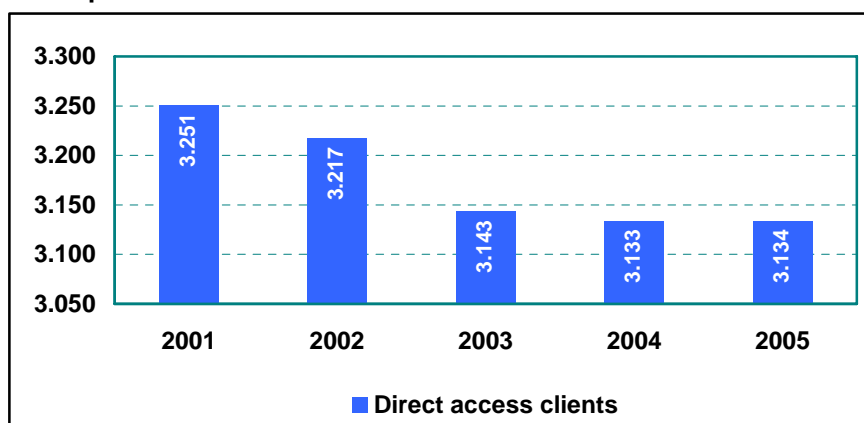
Unit: 1 Customer

The fact that the number of direct access customers remained stable in 2005 breaks a trend that was kept since 2001. However, vis-à-vis 2001, there is a drop of approximately 4 per cent.

The fact that this amount remains stable is mostly explained by the new services

marketed by the FTS providers. These new services took several shapes: new price plans, new tariff structures and bundled services. Highlight goes to the amount of the new customers that subscribed to the new access media based on the GSM network, the RUO-based services and the cable TV distribution network operators' services.

**Graph 14 – Evolution of the number of direct access customers**



Source: ICP-ANACOM

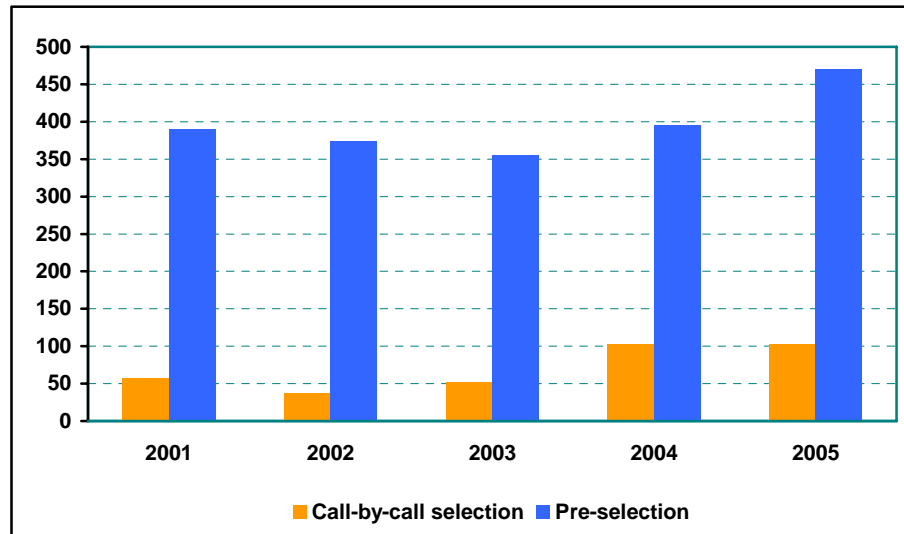
Unit: thousands of customers

On the other hand, the amount of indirect access customers decreased significantly between 2001 and 2003, after a significant increase in the first two years after liberalization – when this access means was the main way for new providers to enter these markets.

This evolution might be explained by the stake of new operators on other, more lucrative means to offer their service, e.g. bundled services based on direct access, namely based on RUO. It should also be mentioned that the indirect access, which came about by regulatory initiative, was never seen as way to promote competition in the long run.

By the end of 2003, a new provider entered these markets and made them grow. Since then, the number of customers significantly increased again. In 2005, the amount of indirect access customers by pre-selection grew above 19 per cent a year. After a strong growth in 2004, the amount of call-by-call selection customers stabilized in 2005 at 101,000.

**Graph 15 – Evolution of the number of indirect access customers**



Source: ICP-ANACOM

Unit: thousands of customers

### II.2.4.3 Service usage level

Below is the evolution of the service usage level, regarding accesses and traffic.

#### Accesses

By the end of 2005, there were about 4.2 million main installed accesses, a figure that is slightly below (0.1 per cent) that of a year before. For this relative stability contributed the increase in the number of digital accesses, of about 6 per cent, which softened the fall in the analogue accesses and in the amount of installed public payphones.

**Table 12 – Amount of installed equivalent accesses**

	2000	2001	2002	2003	2004	2005	Var. 2005/2004
Total main accesses*	4,321,090	4,384,554	4,350,528	4,281,119	4,238,270	4,234,075	-0.1%
Installed accesses at request of customers	4,226,778	4,292,397	4,266,451	4,197,138	4,146,698	4,127,441	-0.5%
Analogue accesses	3,571,101	3,482,428	3,403,584	3,334,468	3,290,781	3,219,657	-2.2%
Digital equivalent accesses	655,677	809,969	862,867	862,670	855,917	907,784	6.1%
Public payphones	47,742	45,486	43,805	41,525	47,442	45,366	-4.4%

Source: ICP-ANACOM

Unit: 1 access

\*Includes installed accesses at the request of customers, own stock and public payphones.

Since 2001, a light trend of decreasing amount of installed accesses at the request of customers (-2.4 per cent between the end of 2000 and 2005) settled in, which may be due to some of the factors mentioned in part 002 section 2.3.

The investment that alternative operators made on the local network was not enough to reverse the mentioned trend. New providers mainly decided to enter the market using the indirect access or the unbundled local loop regulated services. Cabovisão was the exception. It staked since relatively early on a triple play strategy based on its cable TV distribution network and became the second largest provider of the public telephone network at a fixed location access service.

During the year 2005, the combined effect of new voice and/or TV bundled services and a new access service based on the GSM network by one of the operators led to the significant slow-down of the decrease in the number of installed access at the request of customers.

## Traffic

Even though the number of customers of the service became stable, the traffic is still shrinking in 2005. This trend encompasses both the voice traffic and the Internet access traffic and is explained by the above mentioned decreasing number of FTS

customers and the strong growth in the broadband Internet access.

**Table 13 – Fixed network-originated traffic (minutes)**

	2000	2001	2002	2003	2004	2005
Total traffic (voice + Internet)	16,412	17,120	16,248	14,046	11,921	10,270
Voice traffic	10,779	10,178	9,639	8,995	8,752	8,385
National traffic (voice)	10,275	9,651	9,128	8,510	8,244	7,794
National fixed-to-fixed traffic	8,958	8,251	7,672	7,208	6,990	6,575
National fixed-to-mobile traffic	1,317	1,400	1,455	1,302	1,254	1,220
Outgoing international traffic	505	527	511	485	508	591
Internet access traffic	5,632	6,942	6,609	5,051	3,170	1,884

Source: ICP-ANACOM

Unit: million minutes

**Table 14 – Fixed network-originated traffic (calls)**

	2000	2001	2002	2003	2004	2005
Total traffic (voice + Internet)	4,509	4,319	4,016	3,703	3,444	3,228
Voice traffic	4,200	3,916	3,637	3,411	3,289	3,134
National traffic (voice)	4,045	3,772	3,498	3,290	3,168	3,000
National fixed-to-fixed traffic	3,232	2,954	2,719	2,565	2,468	2,340
National fixed-to-mobile traffic	813	818	780	725	700	660
Outgoing international traffic	155	144	138	121	121	134
Internet access traffic	309	403	380	292	155	94

Source: ICP-ANACOM

Unit: million calls

Voice traffic decreased every year since the year 2000. In the whole period, the amount of minutes decreased 22.2 per cent and the amount of calls decreased 25.4 per cent, average yearly growth rates of -4.9 per cent and -5.7 per cent, respectively. It should be noted that in 2005 this trend slightly slowed down: traffic shrunk 4.2 per cent and 4.7 per cent, respectively.

The analysis of the several items that make up the voice traffic shows that this global decrease is partly owed to the significant decrease in traffic to fixed geographical numbers. Cumulatively, since the beginning of liberalization, this type of traffic decreased 26.6 per cent, in minutes, and 27.6 per cent, in calls.

Regarding traffic to mobile numbers, there is a traffic decrease since 2002. Between 2002 and 2005, this type of traffic decreased 16 per cent. However, the decrease in traffic took place mainly in 2003.



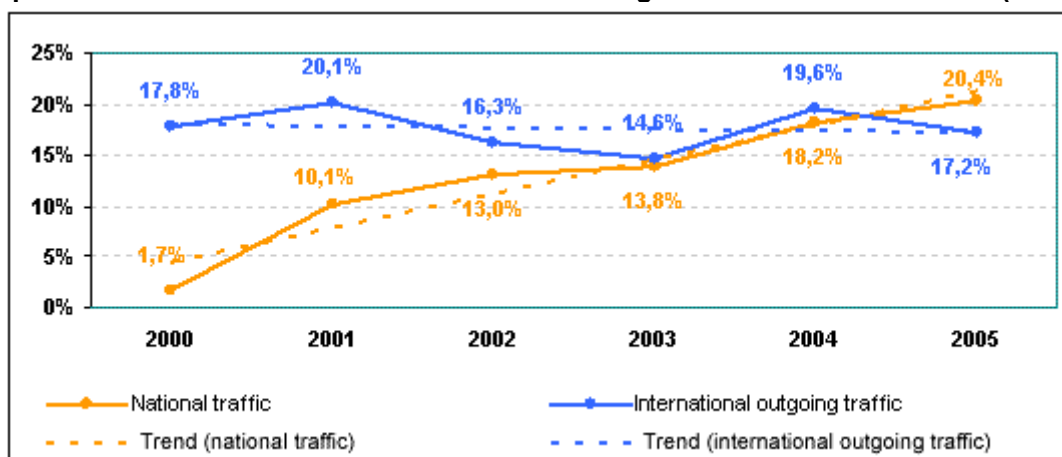
The amount of international calls with origin in the fixed network climbed for the first time since the beginning of liberalization, with 11 per cent more calls than in the previous year. This figure is nonetheless about 13.5 per cent below that of 2000, which reflects the significant increase in the average length of this type of calls (see Table 9). Regarding minutes, the volume of traffic in 2005 is 17 per cent above that of 2000. In 2005, international traffic grew 16.4 per cent, a figure that is largely above the average growth rate of the period of time now being analysed (3.2 per cent).

Regarding Internet access traffic, it shrunk 41 per cent in 2005, thus stressing the falling trend for this kind of traffic.

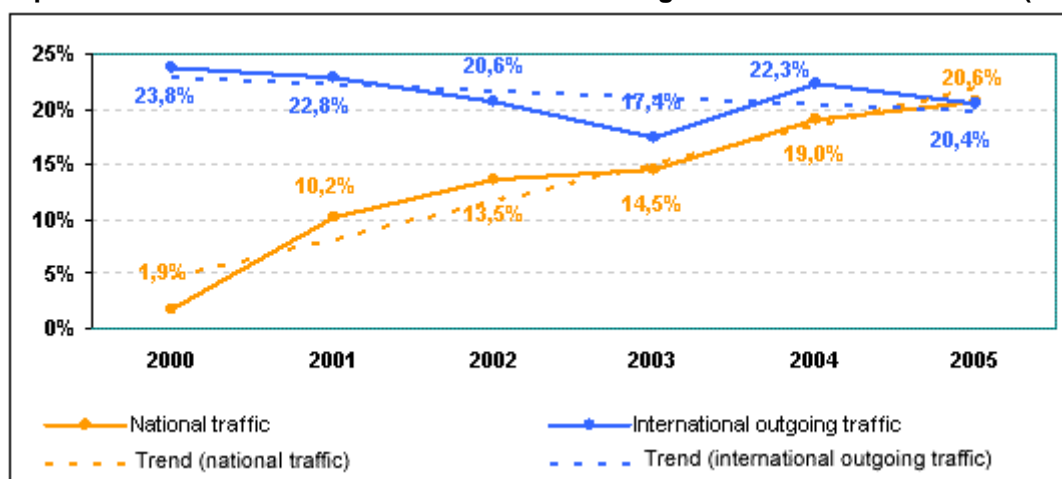
### **Indirect access traffic**

In spite of the shrinking traffic, traffic routed using the indirect access mode has grown considerably. In 2005, indirect access traffic stood for 20.1 of all voice calls and 20.6 of minutes.

As shown on the following graphs, the weight of indirect access traffic in national traffic grew significantly in the last five years, namely in 2004 and in 2005.

**Graph 16 – Evolution of the rate of traffic routed using the indirect access modes (minutes)**

Source: ICP-ANACOM

**Graph 17 – Evolution of the rate of traffic routed using the indirect access modes (calls)**

Source: ICP-ANACOM

Regarding international outgoing traffic, indirect access became an important alternative to the direct access in the period right after the liberalization of the service. However, between 2002 and 2003, international indirect access traffic shrunk due to the decreasing investment by alternative providers on this segment. In 2004, with the entry into the market of a new provider with quite aggressive services, there was again a growth in the use of this access medium. In 2005, this type of traffic stood for about 17.2 per cent of the total conversation minutes and 20.4 of the total amount of calls.

## Average traffic per customer

The following table shows that the average use per customer of indirect access decreased considerably since 2000, regarding both voice and Internet traffic. This process has been ongoing since 2002 and is largely boosted by shrinking dial-up and voice to fixed numbers traffics. It should also be highlighted that traffic to mobile numbers has stabilized in a certain way and that international traffic grew, mostly last year, which can be explained by the progressive reduction in prices for this type of calls.

**Table 15 – Monthly traffic per direct access customer (minutes)**

	2001	2002	2003	2004	2005
Total traffic (voice + Internet)	439	421	372	317	273
Voice traffic	261	250	238	233	223
National traffic (voice)	247	236	226	219	207
National fixed-to-fixed traffic	212	199	191	186	175
National fixed-to-mobile traffic	36	38	35	33	32
Outgoing international traffic	14	13	13	14	16
Internet access traffic	178	171	134	84	50

Source: ICP-ANACOM

Unit: minutes

## Relative weight of FTS and MTS

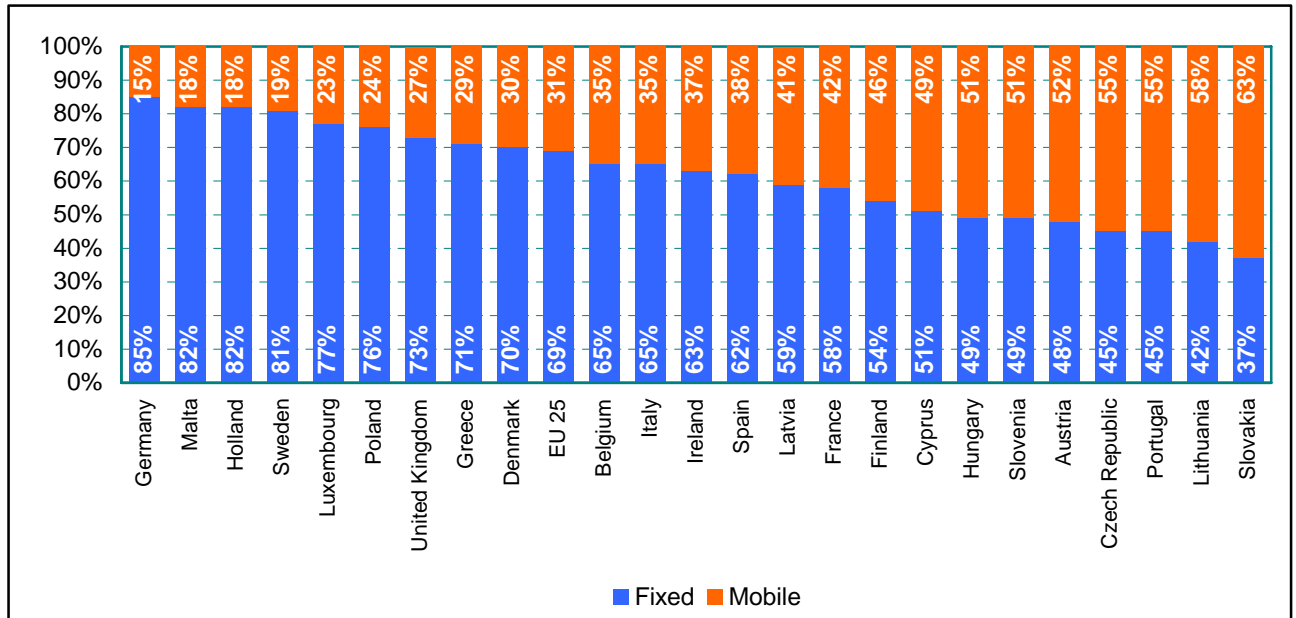
The relative weight of the FTS in the total traffic with origin in the fixed and mobile networks in Portugal is one of the lowest ones in the EU. This ratio was 45 per cent in 2004, in Portugal, vis-à-vis 69 per cent on average in EU25.

In 2005, traffic with origin in the mobile network was, for the first time, more than that with origin in the fixed network: of the total traffic, 53.4 per cent had its origin in the mobile network. If only voice traffic is taken into account, the proportion of traffic with origin in the fixed network decreased from 45 per cent in 2004 to 42 per cent in 2005.

As shown on the following graph, Portugal was, in 2004, the country in the EU with

the third smallest ratio of voice traffic with origin in the fixed network versus the total voice traffic. In seven of the countries of the EU25, traffic with origin in the mobile network has already passed 50 per cent.

**Graph 18 – Distribution of traffic by origin in the EU25 countries – 2004**



Source: European Commission, 11th Implementation Report

Note: Does not include dial-up Internet access traffic

## Revenues<sup>23</sup>

The strong fall in traffic and the price decrease led to a strong fall in FTS revenues, as shown on the table below. In 2005, total revenues dropped about 3 per cent, and traffic revenues decreased approximately 8.1 per cent. Installation and signature revenues grew about 3.2 per cent.

<sup>23</sup> Revenue figures of both FTS providers for 2005 are estimations.

**Table 16 – FTS revenues**

	2002	2003	2004	2005
Total revenues	1,664,799	1,559,486	1,494,923	1,450,167
Revenues from signatures and installation fees	630,134	649,657	680,740	702,579
Revenues from calls and SMS with origin in the fixed network <sup>24</sup>	1,034,665	909,829	814,183	747,588

Source: ICP-ANACOM

Unit: thousand euros

#### II.2.4.4 Service price level

Below is the evolution of the incumbent operator's prices. The box further shows an international FTS price comparison in 2005.

#### Incumbent operator's price index evolution

In 2005, the incumbent operator's prices continued to fall. Indeed, with the release of the new incumbent operator's tariffs in July 2005, there was a one-time decrease of 6 per cent in local calls, a 28 per cent decrease in the average price of regional calls and a 22 per cent decrease in the price of national calls. For the first time in the last few years, the incumbent operator's tariffs that came into force in July 2005 were compatible with stabilized monthly signature and installation prices.

Vis-à-vis the year when the sector was liberalized, the incumbent operator's price basket nominally decreased about 2.3 per cent and 2005, of all the years now being analyzed, was the year with the most significant decrease. Table 18 shows the average yearly nominal prices of the incumbent. It should be noted that a regional or national call cost in 2005 less than half its cost in 2000.

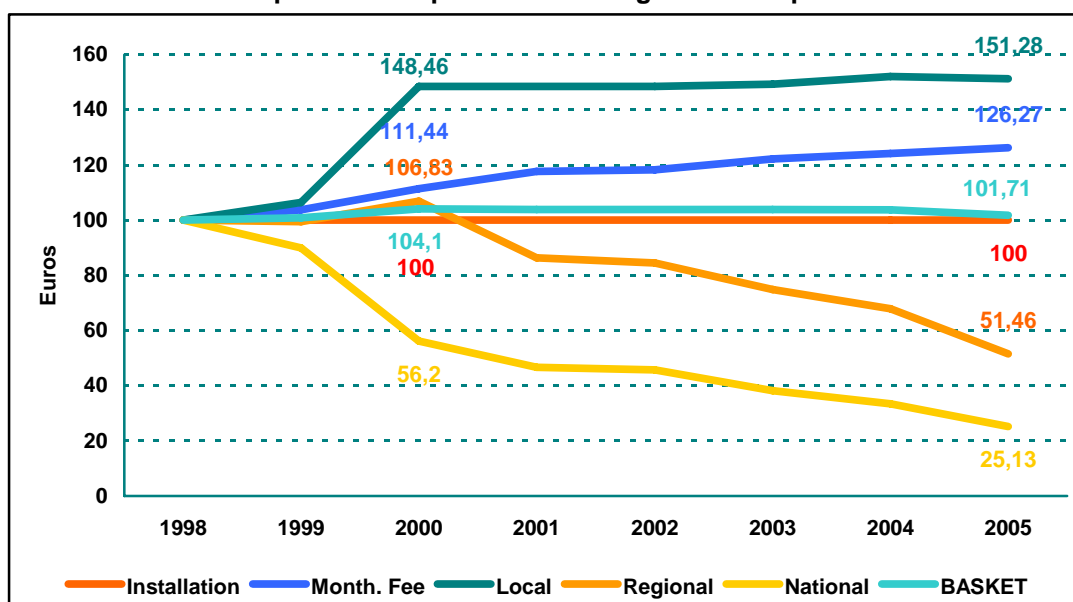
<sup>24</sup> Includes revenues from local, regional and national communications traffic, fixed-to-mobile calls (with origin in the fixed network), international outgoing traffic with origin in the fixed network and SMSs with origin in the fixed network.

**Table 17 – Incumbent operator's nominal price index**

	2000	2001	2002	2003	2004	2005	Var. 2004/ 2005	Var. 2000/ 2005
<b>Installation</b>	100.00	100.00	100.00	100.00	100.00	100.00	0.0%	0.0%
<b>Monthly fee</b>	111.44	117.60	118.19	122.13	124.18	126.27	1.7%	13.3%
<b>Local</b>	148.46	148.48	148.56	149.33	152.13	151.28	-0.6%	1.9%
<b>Regional</b>	106.83	86.38	84.49	74.88	67.89	51.46	-24.2%	-51.8%
<b>National</b>	56.20	46.65	45.77	38.23	33.43	25.13	-24.8%	-55.3%
<b>Basket</b>	104.10	103.86	103.87	103.81	103.74	101.71	-2.0%	-2.3%

Source: ICP-ANACOM

Note: 1998=100

**Graph 19 – FTS price rebalancing – nominal prices**

Source: ICP-ANACOM

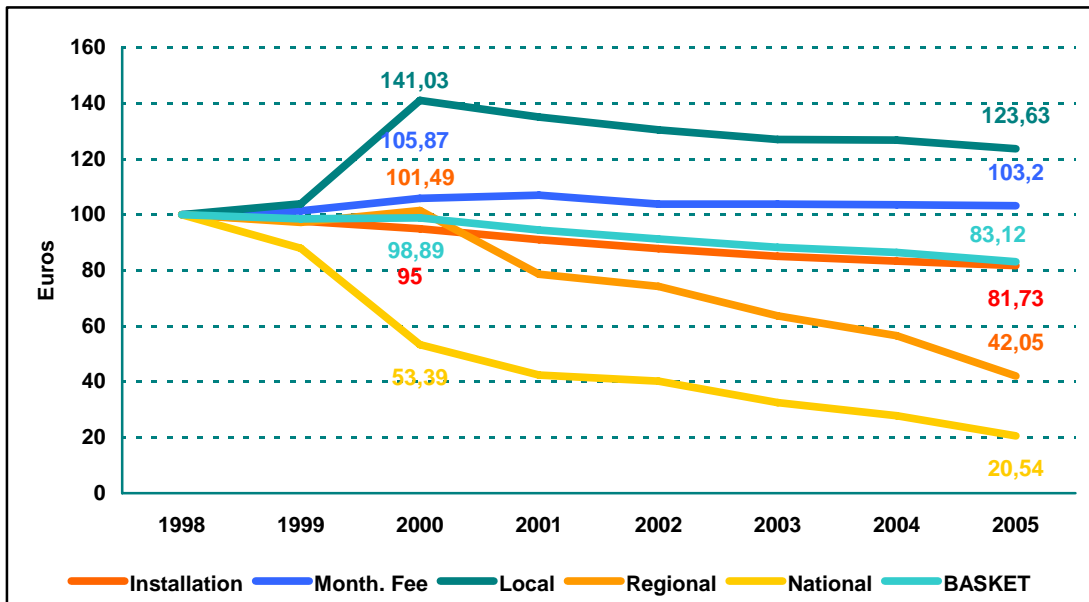
There was a generalized decrease of the real price of calls to the several destinations since 2000. Indeed, the incumbent operator's price basket had a real 16 per cent decrease from 2000 to 2005. The service's monthly fee kept up with the evolution of the CPI, with figures that are even below those of 2000.

**Table 18 – Incumbent operator’s real price index**

	2000	2001	2002	2003	2004	2005	Var. 2004/ 2005	Var. 2000/ 2005
<b>Installation</b>	95.00	90.99	87.83	85.03	83.36	81.73	-2.0%	-14.0%
<b>Monthly fee</b>	105.87	107.01	103.81	103.84	103.52	103.20	-0.3%	-2.5%
<b>Local</b>	141.03	135.11	130.48	126.97	126.82	123.63	-2.5%	-12.3%
<b>Regional</b>	101.49	78.60	74.21	63.67	56.59	42.05	-25.7%	-58.6%
<b>National</b>	53.39	42.45	40.20	32.50	27.87	20.54	-26.3%	-61.5%
<b>Basket</b>	98.89	94.51	91.23	88.27	86.47	83.12	-3.9%	-16.0%

Source: ICP-ANACOM  
Note: 1998=100

**Graph 20 – FTS price rebalancing – real prices**



Source: ICP-ANACOM

## PRICES OF THE TELEPHONE SERVICE AT A FIXED LOCATION IN THE EU

### 1. Objective

Below is an international price comparison of the telephone service at a fixed location in the EU. It considered the prices of an analogue line by each country's incumbent operator. The analysis of these results should take into account that there were different liberalization calendars in the surveyed countries. In Portugal, the liberalization of the telephone service at a fixed location began on 1 January 2000.

### 2. Methodology

The figures used in this comparison, from Tarifica of December 2005 – except for Portugal, for which the tariffs of PT Comunicações, S.A. (PTC) in force in December 2005 were used – regard: (i) installation; (ii) monthly subscription; (iii) local calls; (iv) national calls; and (v) international calls. The election of the services to consider required the definition of a set of hypothesis, as shown on Table 20. Regarding Denmark, United Kingdom and Sweden, the prices were converted into Euros using the reference daily exchange rates of the European Central Bank of 27 January 2005.

**Table 19 – Hypothesis regarding the offers of telephone service at a fixed location in the EU**

Germany	The " <i>T-Net standard</i> " tariffs were used
Austria	The " <i>Standard tariff</i> " tariffs were used The service's installation and subscription include terminal equipment and maintenance
Belgium	The " <i>Classic line</i> " tariffs were used
Denmark	The " <i>Fastnet</i> " tariffs were used It was considered that the normal time table for local and national calls is between 8:00 and 20:00, not between 8:00 and 19:30, as in force for this service
Spain	The " <i>Residential</i> " tariffs were used
Finland	It was considered that the subscription is the average subscription of the nine combinations of " <i>Zone</i> " and " <i>Area</i> " subscriptions of this service. The service's " <i>Trunk '101 long distance</i> " class was considered the "National" class
France	The " <i>Residential</i> " tariffs were used
Holland	The " <i>BelBasis</i> " tariffs were used
Italy	The " <i>Residential</i> " tariffs were used It was considered that the normal time table for local and national calls is between 8:00 and 19:00, not between 8:00 and 18:30, as in force for this service
Portugal	The " <i>Assinatura de base</i> " tariffs were used
United Kingdom	The " <i>Residential Option 1</i> " tariffs were used



Sweden	The “ <i>Telia Bas</i> ” tariffs were used
--------	--

Source: ICP-ANACOM

Regarding international calls, prices of calls to fixed networks were considered, based on the seven most representative destinations of Portugal’s international outgoing traffic (France, Spain, United Kingdom, Germany, Brazil, USA and Switzerland). According to the available data, these countries stand together for about 71 per cent of the international outgoing traffic of the telephone service at a fixed location in Portugal.

Regarding the size of the tariff zones, the comparison used the same step tariffs’ distances as in Portugal and picked for each country the step prices that are closest to the Portuguese ones. Thus, for the reckoning of the “Local” step tariffs in Spain and Holland, it used the average of the “Local” and “Regional” step prices, respectively weighted by the local call minutes share of the combined local and regional calls and by the regional call minutes share of the combined local and regional calls of the telephone service at a fixed location in Portugal. Regarding Belgium and Luxembourg, it used the “National” step tariffs to reckon the “Local” step prices.

The prices that are shown on this document do not include VAT and they were reckoned by applying the hourly consumption profiles of PTC to the tariffs of the remaining countries’ tariffs. The hourly periods practiced in Portugal were applied to all countries. Further to considering the prices for each of the considered services, a representative basket of the monthly use of the services by an average Portuguese consumer was set up. In order to do so, installation was excluded and the remaining services were weighted by the ratios of their amounts and the average monthly number of consumers.

Specifically, the reckoning of the prices of international calls was based on the average prices of calls to each of the considered destinations, in accordance with the above-mentioned method. In order to reach the prices that are compared on this document, those average prices were weighted by their traffic shares of the international outgoing traffic of the telephone service at a fixed location in Portugal for the seven destinations that were considered.

The EU15 averages are the simple arithmetic averages of the prices in the considered

countries, Portugal excluded.

### 3. Telephone service at a fixed location in the EU

Based on the above mentioned data and assumptions, the following prices were reckoned: (i) price of the installation of an analogue line; (ii) price of a monthly subscription of an analogue line; (iii) average price per minute of a local three-minute call using an analogue line; (iv) average price per minute of a national three-minute call using an analogue line; (v) average price per minute of an international three-minute call using an analogue line; and (vi) price of an average consumer's monthly basket in connection with an analogue line.

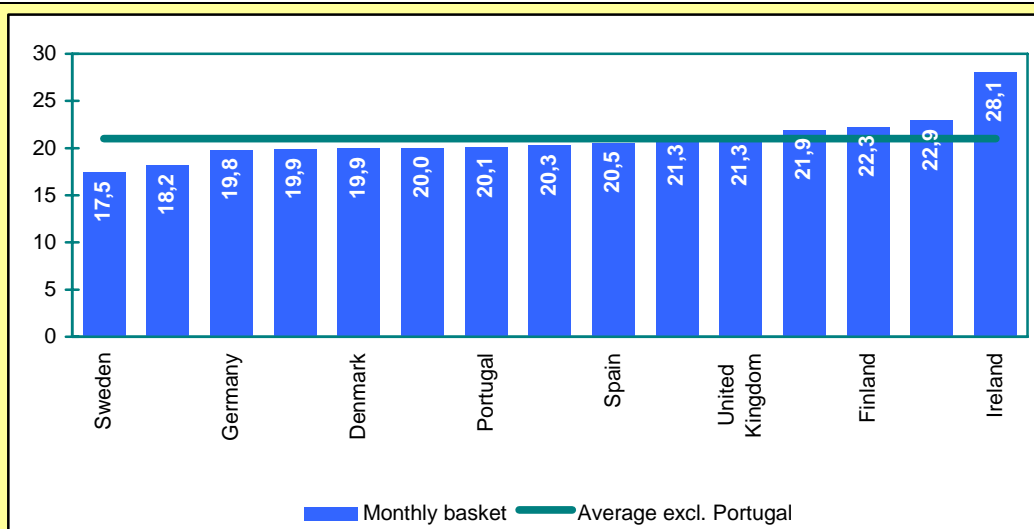
**Table 20 – Telephone service at a fixed location in Portugal**

	Price (€)	Average without Portugal	Portugal's position	Deviation to the average without Portugal
Installation	71.83	72.12	8	-0.4%
Monthly subscription	12.66	13.73	6	-7.8%
Average price per minute of a local three-minute call using an analogue line	0.0376	0.0352	10	6.7%
Average price per minute of a national three-minute call using an analogue line	0.0550	0.0617	7	-10.8%
Average price per minute of an international three-minute call using an analogue line	0.2589	0.2526	10	2.5%
Monthly basket	20.06	20.99	7	-4.4%

Source: ICP-ANACOM

In Portugal, the price of the average consumer's monthly basket in connection with an analogue line is about 4 per cent below the same basket's average prices in the EU15 countries, as shown on the next graph.

**Graph 21 – Price of the average consumer's monthly basket in connection with an analogue line**



Source: ICP-ANACOM

#### 4. Conclusions

The international comparison leads to the conclusions that Portugal, vis-à-vis the average of the EU15 excluding the country:

- (i) Has approximately the same price for the installation of an analogue telephone line;
- (ii) Has a monthly subscription that is about 8 per cent below;
- (iii) Has an average price per minute of a local three-minute call using an analogue line about 7 per cent above;
- (iv) Has an average price per minute of a national three-minute call using an analogue line about 11 per cent below;
- (v) Has an average price per minute of a international three-minute call using an analogue line about 2.5 per cent above; and
- (vi) Its price of an average consumer's monthly basket in connection with an analogue line is about 4.5 per cent below.

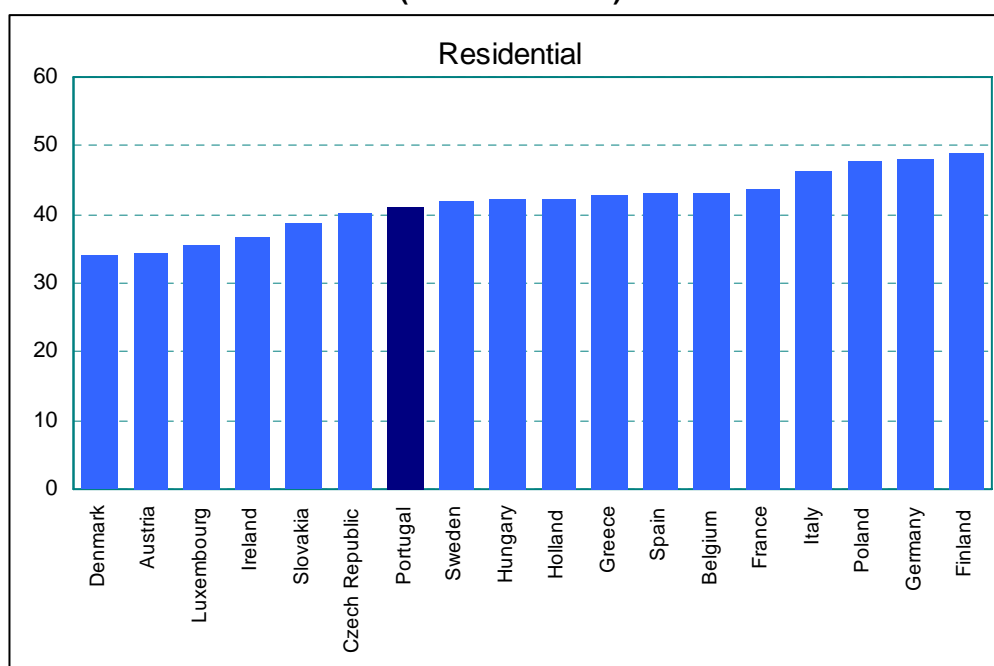
## Prices of fixed-to-mobile calls

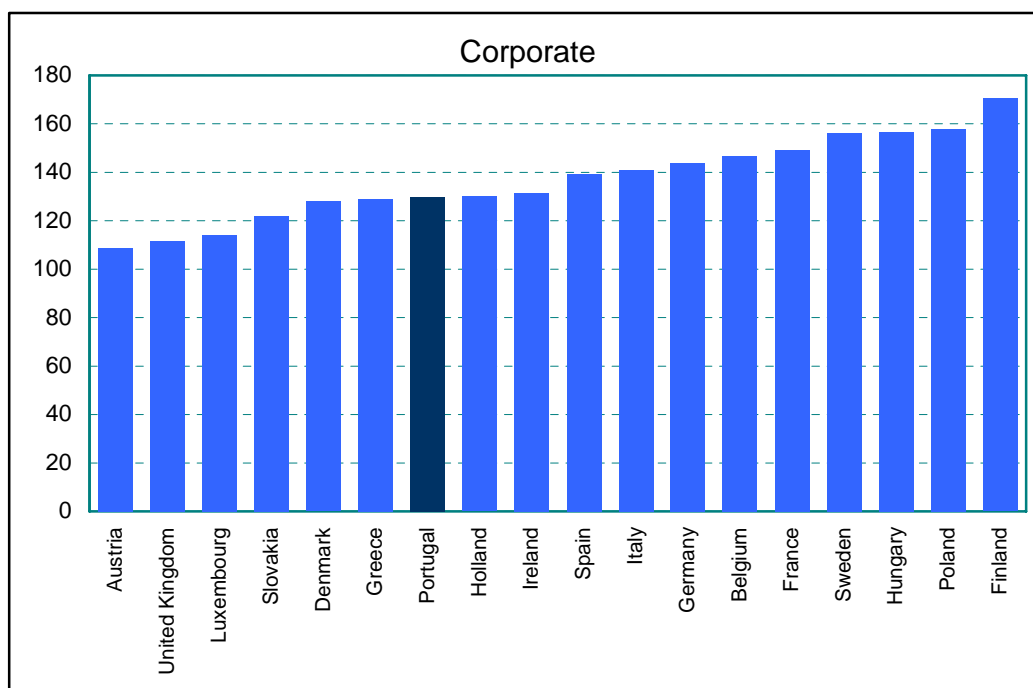
The decrease in mobile interconnection prices during 2005 led to a sharp convergence of the prices of fixed-to-mobile calls in Portugal with the average figure for the remaining European countries, becoming even lower than that in both market segments (residential and non-residential) in November 2005, which is the latest month of Teligen's available data.

In the residential segment, in November, Portugal's deviation from the average of the remaining countries in the comparison was -0.2 per cent. One year earlier, the deviation was of +23.9 per cent and in the same month but in 2000, the deviation was as high as +29.5 per cent.

In the non-residential segment, the deviation in November 2005 is more important, reaching -4.2 per cent. The deviation from the average of the remaining analyzed countries reached +16.4 per cent in November 2004 and +23.9 in the same month but in 2000.

**Graph 22 – Comparison of national (fixed-to-mobile) residential and corporate prices – EU (OECD countries)**





Source: Teligen

### II.2.4.5 Evaluation by consumers

In general, FTS has high levels of satisfaction. According to the last Electronic Communications Consumer Survey , over 90 per cent of its users were satisfied with the overall quality of this service<sup>25</sup>.

**Table 21 – Evaluation of the overall quality of the FTS**

Very good	12.6%
Good	79.3%
Bad	5.4%
Very bad	0.5%
Nr/Na	2.2%

Source: Electronic Communications Consumer Survey – February 2006

Regarding consumer satisfaction with the prices of the FTS, the appreciation is less positive, for as about 34 per cent of the inquired people said that they were not satisfied with the prices of their operator(s)<sup>26</sup>.

<sup>25</sup> Question made to the inquired people: "How do you rate the global quality of the fixed telephone service that is provided to you? (information, customer service, sound quality, lost calls, etc.)"

<sup>26</sup> Question made to the inquired people: "What is your degree of satisfaction regarding the price that you charged currently?"

**Table 22 – Degree of satisfaction towards the prices of the fixed network**

Very satisfied	5.8%
Satisfied	58.2%
Not satisfied	29.5%
Not satisfied at all	4.1%
Nr/Na	2.5%

Source: Electronic Communications Consumer Survey – February 2006

Especially the price of the fixed-mobile traffic is less satisfactory, with 55 per cent of the inquired people saying that they are not satisfied with the prices of their service provider<sup>27</sup>.

**Table 23 – Degree of satisfaction towards the prices of the fixed-to-mobile traffic**

Very satisfied	2.4%
Satisfied	32.4%
Not satisfied	38.6%
Not satisfied at all	16.0%
Nr/Na	10.5%

Source: Electronic Communications Consumer Survey – February 2006

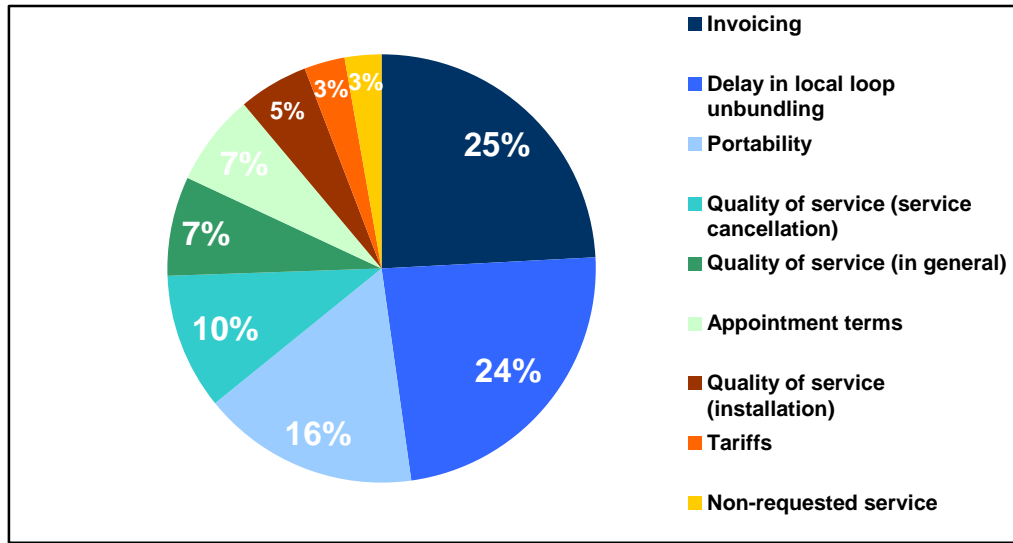
Another consumer satisfaction indicator is the number of complaints.

ICP-ANACOM's UM-TSM (Mission Unit for the Handling of Market Requests) received about 1,144 complaints regarding the FTS and its providers, during 2005.

As shown on the following graph, about half of those requests regard invoicing issues (25 per cent) and delays in local loop unbundling (24 per cent). Figures regarding portability issues (16 per cent) and service cancellation (10 per cent) also stand for a large amount of the overall number of complaints put forward.

**Graph 23 – Distribution of requests by area – 2005**

<sup>27</sup> Question made to the inquired people: "And regarding the price of calls from the fixed telephone to a mobile one, are you...?"



Source: ICP-ANACOM

## II.2.4.6 Development of competition

In 2005, the share of installed accesses at the request of customers of Grupo PT decreased 4 per cent, the largest drop since the beginning of liberalization. Since the end of 2000, Grupo PT lost 10.4 per cent of its overall access share.

**Table 24 – Grupo PT's access share**

	2000	2001	2002	2003	2004	2005
Overall main accesses	99.7%	98.2%	95.3%	94.4%	93.3%	89.3%
Installed accesses at the request of customers	99.7%	98.1%	95.2%	94.3%	93.2%	89.0%
Analogue accesses	99.9%	98.3%	95.4%	94.6%	93.9%	91.3%
Equivalent digital accesses	98.7%	97.1%	94.5%	93.2%	90.5%	81.1%

Source: ICP-ANACOM

As shown on the table below, the evolution of the direct access customers share followed the evolution of the share of accesses. Indirect access is almost fully operated by alternative providers.

**Table 25 – Grupo PT's customer shares**

	2001	2002	2003	2004	2005
Direct access customers	98.2%	95.1%	94.6%	93.8%	88.9%
Indirect access customers					
Pre-selection	0.1%	0.6%	0.6%	0.7%	0.9%
Call-by-call selection	0.0%	0.4%	0.7%	0.3%	0.4%

Source: ICP-ANACOM

Regarding traffic shares, there has been a progressive decrease in the incumbent operator's share of voice traffic, which is distributed evenly among the several traffic destinations.



**Table 26 – Grupo PT's traffic shares (minutes)**

	2000	2001	2002	2003	2004	2005
Total traffic (voice + Internet)	98.2%	93.4%	90.5%	88.5%	83.7%	78.2%
Voice traffic	97.3%	89.2%	84.3%	82.4%	78.1%	74.1%
National traffic (voice)	98.0%	89.7%	84.4%	82.4%	78.1%	74.2%
National fixed-to-fixed traffic	98.0%	89.8%	84.7%	82.6%	78.3%	74.4%
National fixed-to-mobile traffic	98.0%	89.1%	83.0%	81.4%	76.8%	72.9%
Outgoing international traffic	82.0%	79.8%	81.5%	82.1%	77.4%	73.0%
Internet access traffic	100.0%	99.6%	99.6%	99.5%	99.4%	96.3%

Source: ICP-ANACOM

**Table 27 – Grupo PT's traffic shares (calls)**

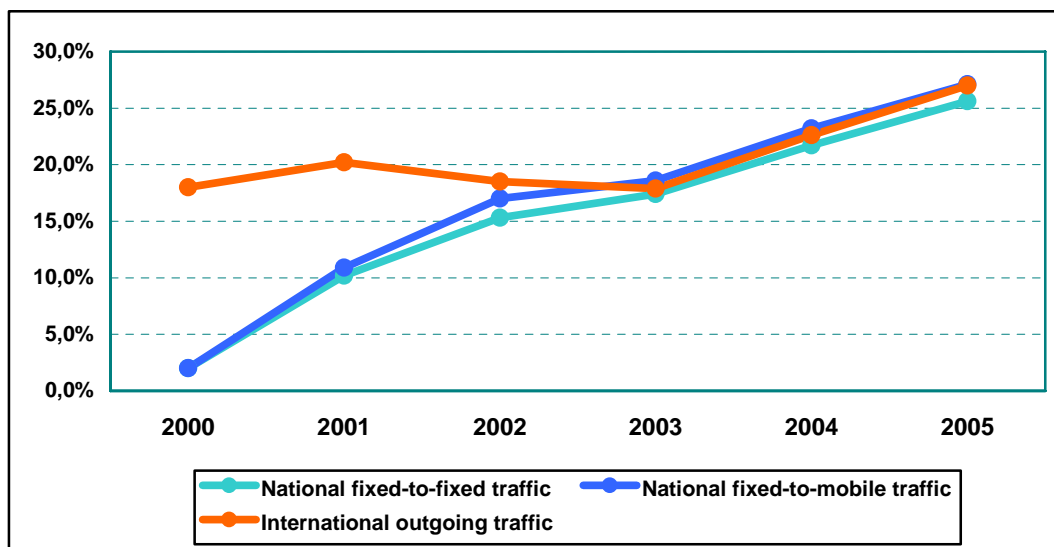
	2000	2001	2002	2003	2004	2005
Total traffic (voice + Internet)	97.3%	90.5%	85.0%	83.0%	78.2%	74.8%
Voice traffic	97.1%	89.6%	83.6%	81.7%	77.3%	74.2%
National traffic (voice)	97.9%	90.0%	83.8%	81.7%	77.3%	74.3%
National fixed-to-fixed traffic	97.9%	89.9%	83.7%	81.5%	77.2%	74.3%
National fixed-to-mobile traffic	98.0%	90.5%	84.2%	82.7%	78.0%	74.3%
Outgoing international traffic	76.1%	77.5%	78.0%	80.1%	75.4%	72.1%
Internet access traffic	99.9%	99.7%	99.0%	99.0%	97.7%	93.8%

Source: ICP-ANACOM

Regarding the national destinations of voice traffic (mobile and fixed geographical numbers), alternative operators were responsible, in 2005, for over a quarter of the traffic (measured in amount of both minutes and calls), a figure that is approximately 4 per cent above the figures of 2004. Growth in the last two years is explained by the coming into the market of a new indirect access provider that, with pretty aggressive offers, has gained an important share of this market.

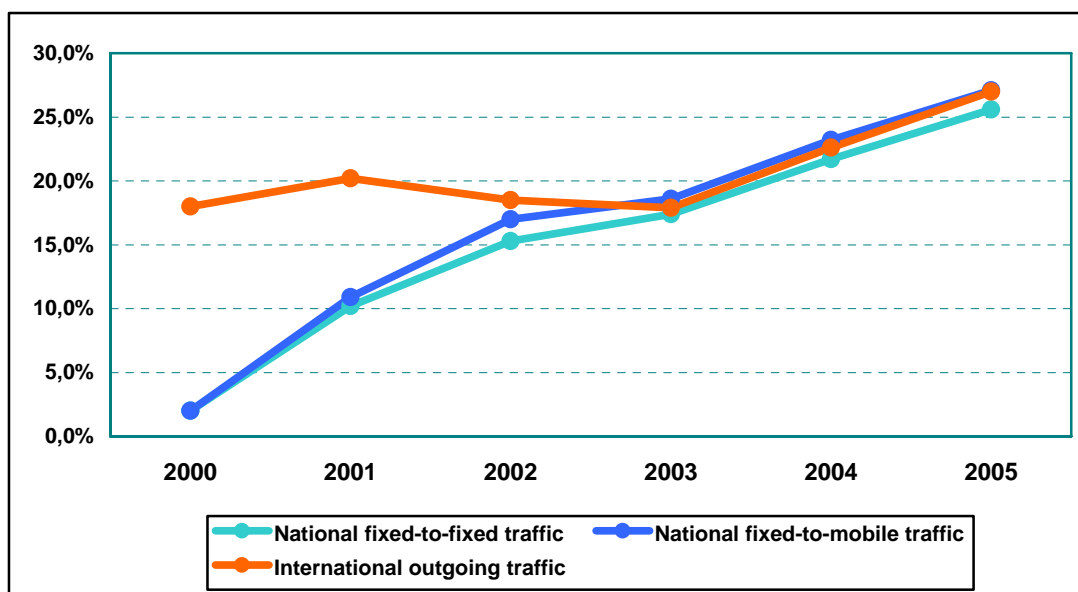
Regarding the outgoing international traffic, after a year of a strong implementation of the new providers, with 18 per cent shares of minutes and 23.9 per cent of calls, growth has been slower, even though a new boost was apparent in the last couple of years. In 2005, new providers gained shares of about 26 per cent of routed minutes and 27.8 per cent of made calls.

Graph 24 – Evolution of the alternative operators’ traffic shares (minutes)



Source: ICP-ANACOM

Graph 25 – Evolution of the alternative operators’ traffic shares (calls)



Source: ICP-ANACOM

In terms of revenues, Grupo PT’s share reached 86.5 per cent in 2005<sup>28</sup>, which is 2 per cent below that of the previous year. If we analyse the revenue items, this decrease is namely due to a progressive increase in the providers’ traffic revenue share, which was 76.3 per cent in 2005, whereas in 2002 it was only 85.6 per cent.

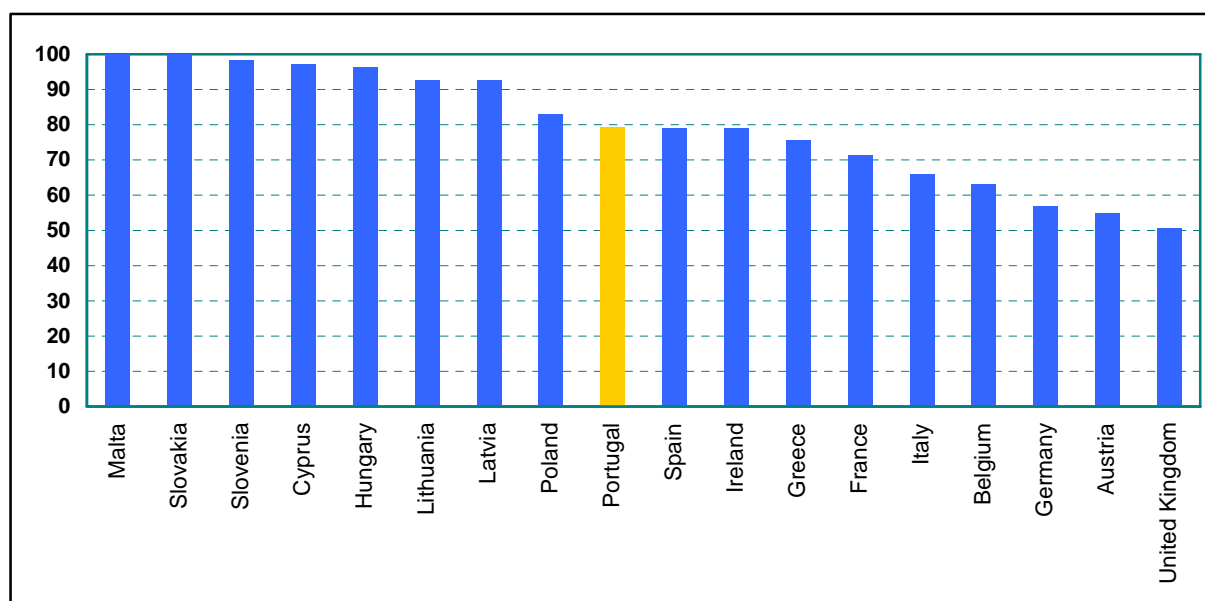
<sup>28</sup> Revenue figures of both FTS providers for 2005 are estimations.

**Table 28 – Grupo PT's FTS revenue share**

	2002	2003	2004	2005
Overall revenue	90.9%	90.2%	88.5%	86.5%
Revenue from subscriptions and installation fees	99.6%	99.7%	98.5%	97.4%
Revenue from calls and SMSs with origin in the fixed network <sup>29</sup>	85.6%	83.4%	80.2%	76.3%

Source: ICP-ANACOM

Based on 2004 results, and according to the European Commission's 11th Implementation Report, Portugal's position was in the EU's mean, regarding the incumbent operator's revenue share<sup>30</sup>. Portugal is at the same level of countries such as Ireland and Spain, but with figures that are well above those of countries such as the United Kingdom, Germany and Austria.

**Graph 26 – Comparison of revenues from traffic with origin in the fixed network in the EU**

Source: European Commission, 11th Implementation Report

Besides this evolution of market shares is also the growth in number portability.

<sup>29</sup> Includes revenues from local, regional and national communications traffic, fixed-to-mobile calls (with origin in the fixed network), international outgoing traffic with origin in the fixed network, traffic with origin in public payphones and SMSs with origin in the fixed network.

<sup>30</sup> Includes revenues from local, regional and national communications traffic, fixed-to-mobile calls (with origin in the fixed network), international outgoing traffic with origin in the fixed network and Internet access traffic. Does not include revenues from SMSs or from traffic with origin in public payphones. Data regarding Estonia, Sweden Czech Republic, Finland, Holland and Luxembourg are not available. Data regarding Portugal does not include revenues from the Internet access traffic.

During 2005, the amount of ported geographical numbers had a strong thrust, with a 67 per cent growth rate, well above that of the previous year (34 per cent). In fact, in absolute terms, 2005 was the year when portability most grew, reaching by the end of this year 265,000 ported numbers. To this has significantly contributed the expansion of services based on the unbundling of the local loop and one service based on the GSM network.

**Table 29 – Ported numbers**

	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Geographical numbers	2,332	63,427	118,017	158,623	265,077
Non-geographical numbers	6	145	214	277	351

Source: ICP-ANACOM