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EVOLUTION OF PRICES:

FIXED TELEPHONE SERVICE

BETWEEN 1998-2003

CONTENTS:

1. INTRODUCTION 3

2. METHODOLOGY 5

3. RESULTS OF PRICE EVOLUTION BETWEEN 1998 AND 2003 8

4. RESULTS OF PRICE EVOLUTION BETWEEN 1998 AND 2002 11

- INCLUDING EP BENEFICIARY CUSTOMERS - 11

5. DETAILED RESULTS FOR THE PERIOD 1998-2003 13

1. Introduction

The aim of this work is to study the evolution of prices for fixed telephone service (FTS) practised by Portugal's historic operator (PT Comunicações, S.A., hereinafter also designated as PTC) between 1998 and 2003, based on each provision's weight in the FTS basket and taking into account the usage profiles and average annual prices of the following components:

- Installation of an analogue line;
- Monthly rental of an analogue line;
- Local communications;
- Regional communications;
- Long distance communications (national);
- International communications (to fixed networks).

Fixed-mobile traffic and internet-related traffic are not included in the scope of this study, nor are calls terminating in the networks of other operators in Portugal.

The average annual prices for the various FTS components were duly weighted per the time period in which each price table was in effect. The prices considered when drawing up the study were those practiced by the historic Portuguese operator for calls in its own network and for international calls to fixed networks according to the standard price table, i.e., the price table automatically applied to consumers who do not express preference for any other applicable price table option.

Note that the "Economic Package" (EP), a price plan consisting of an automatic discount in the monthly rental and in traffic to residential customers whose consumption was less than 9.78 euros, was replaced by an optional plan – the Low Consumption Plan (LCP) – on 21 May 2003, after a three-month transition period in which both coexisted.

The LCP is an optional price plan designed for customers who consume less, with the following characteristics:

- 15% discount on the value of the monthly rental;
- 20% discount on the first 5 euros consumption of telephone communications in the country;
- Augment of 100% on the next 5 euros consumption of telephone communications in the country;
- Normal price for consumption that exceeds 10 euros of telephone communications in the country.

The intercalary consistency of this price study with that of the study published for the 1998-2001 period (see http://www.anacom.pt/template15.jsp?categoryId=39789) would at first sight imply consideration of the LCP's effects in this work. But ANACOM does not have data on the proportion of FTS subscribers who have opted for this service. On the other hand and although, as stated above, this price plan is meant to reduce the effects on small consumers of the removal of automatic EP discounts, the fact is that the LCP is an optional tariff plan, like many others provided by PT, and its impact on consumer invoices is not possible to include in price evolution studies. For this reason, the decision was made to only include in this study the price evolution of the *standard* price table between 1998 and 2003 (estimate).

Nevertheless, and to enable comparison with the published study for the 1998-2001 period, chapter 4 also presents the evolution of prices between 1998 and 2002, including the effect of EP beneficiary customers during that period.

The following conclusions regarding the *standard* price table stand out, in accumulated terms (1998/2003), in the study:

- There were real decreases in the **price of local and regional calls**, of 4.8% and 36.2% respectively;

- There were real decreases in the **price of long-distance and international calls**, of 64.7% and 48.1% respectively;

- The **installation price** of a new telephone line has been unchanged since February 1998, resulting in a real reduction of 15.1%;

- The **monthly rental price** presented a real increase of 4.2%;

- There was a real reduction of 15.7% in the **price of the basket** for fixed telephone service.

2. Methodology

The methodology used to draw up this study consisted of determining the average prices per call, assuming as a hypothesis that average call length is distributed as a negative exponential function.

Thus, to determine average prices per call, the traffic profiles were considered, along with the average length of each call type and the FTS basket weights for the different study periods and the distinct user types (EP beneficiaries and non-beneficiaries, until the end of 2002).

The EP emerged in 1998 with the goal of protecting low consumption residential subscribers from abrupt variations in FTS bills resulting from the process of tariff readjustment and the specific usage profile for such types of users. At the date of its expiry, this package consisted of an automatic mechanism via which PTC granted discounts of between 0.5% and 15.1% on monthly rental and of between 5% and 29.8% on local and regional traffic, to all residential customers with consumption of less than 9.78 euros.

The first category of the economic package (PE1) encompassed the invoicing interval [0;7.66EUR], the second category (PE2) was between]7.66; 8.22EUR], the third (PE3) between]8.22;8.67EUR], the fourth (PE4) was subsumed to the interval]8.67;9.13EUR] and the fifth category (PE5) had the limits of]9.13;9.78EUR].

As stated above, the EP was replaced by the LCP optional price plan on 21 May 2003, after a three-month co-existence period. In absolute terms, the latter is more favourable than the *standard* price table for customers with a total volume of communications in the country of up to 8 euros per month.

Given that the EP had been replaced by an optional price plan (the LCP), both stopped being represented in the calculation methodology on the evolution of FTS prices as per the Universal Telecommunications Service Price Convention (see http://www.anacom.pt/template12.jsp?categoryId=56834).

However, in order to compare with the study published for the 1998-2001 period, chapter 4 also presents the evolution of prices between 1998 and 2002, including the effect of EP beneficiary customers during that period.

The traffic profiles, average call length and basket weights are different for the 1998-2002 period and 1998-2003 period, in line with the narrowing envisaged in the calculation methodologies for price variations contained in the 1998-2000 Convention[1] (whose price-setting rules were in force until the end of 2002) and in the Universal Service Price Convention in force in 2003.

Regarding international calls, note that:

[1] See http://www.anacom.pt/template12.jsp?categoryId=56931.

- in both periods the traffic profiles applicable to the 1998-2002 period were used, given the available information;
- they were considered in the variation of prices between 1998 and 2003, even though not in the scope of the Convention for 2003.

The prices considered to determine results are average annual prices that incorporate all the price tables in force during the respective year, weighted for the period of time in force.

The scope of this study does not extend to international calls to mobile networks. However, it was noted that during 2002 and for some destinations the prices for such communications increased due to changes in the routing costs for this type of traffic. But in 2003 to date this communications type has not been subject to significant alterations.

The average price of communications was determined to correspond to the average prices (without VAT) for each type of call, as per the respective weight in the basket. To determine the average prices for the year 1998, given the change of the price structure and concepts[2], the traffic transfer matrix applicable for such purpose was used.

Regarding determination of evolution of the basket price, the fixed components of the telephone invoice (installation and monthly rental for analogue lines) were weighted, along with the prices for the various types of traffic (local, regional, long distance and international calls to fixed networks).

Regarding evolution for the 1998-2003 period, it is recognised that the prices available at 15 September 2003 will be in force until the end of 2003, a situation that will be reviewed vis-à-vis an eventual modification of the *standard* price table.

[2] Until February 1998 there were four tariff levels for regional calls and two tariff levels for long distance calls.

3. Results of price evolution between 1998 and 2003

Following is a brief synthesis of results of this study.

Table 1: Summary of Nominal Evolution of FTS Prices

	1998	1999	2000	2001	2002	2003
Installation	100,0	99,0	99,0	99,0	99,0	99,0
Monthly Rental	100,0	103,7	111,0	117,1	117,7	121,6
Local	100,0	106,5	109,2	109,2	109,2	111,1
Regional	100,0	102,4	100,6	83,8	82,0	74,4
Long Distance	100,0	90,3	56,3	48,3	47,4	41,2
International	100,0	80,2	67,7	60,7	60,6	60,6
Traffic	**100,0**	**96,7**	**87,3**	**80,8**	**80,3**	**78,2**
Total	**100,0**	**100,5**	**99,4**	**98,5**	**98,5**	**98,4**

1998 (Base year)=100

Table 1 indicates that the nominal value of the installation price remained practically unchanged throughout the study period, as its price was only reduced in February 1998.

The prices of international calls to fixed networks have also been constant since July 2001, countering the accentuated drop they had experienced until that date.

The nominal price of the FTS basket has been practically constant since 2000; this is explained by the differentiated evolution of the price table's various components.

Study of these results also shows that with respect to the study published for the 1998-2001 period, and although individually considered provisions maintained their respective courses, the overall FTS basket has had less accentuated reductions. This result is due to the increased weight of the fixed provisions in the basket, particularly the weight of monthly rental (whose price has been increasing) in detriment to the weight of communications. Reduction of the weight for communications specifically and simultaneously derives from the lower consumption of telephone calls and the lower price of medium and long distance calls.

Table 2: Rate of annual average nominal variation of prices from the *standard* price table

	1998-2001 (1)	1998-2003
Installation	-0,3%	-0,2%
Monthly Rental	5,4%	4,0%
Local	3,1%	2,1%
Regional	-5,6%	-5,7%
Long Distance	-21,5%	-16,2%
International	-15,8%	-9,5%
Traffic	**-7,0%**	**-4,8%**
Total	**-3,4%**	**-0,3%**

(1) With the profiles and weights applicable to the 98/01 period.

Table 2 shows that the local call price and the monthly rental price have in nominal terms evidenced a rising tendency (although less accentuated for local calls), with annual average nominal increases of 2.1% and 4.0% respectively.

The average annual price of regional and long distance calls dropped with regard to the base year, by 5.7% and 16.2% respectively (5.6% and 21.5% in the 1998-2001 period).

Note also that there was an average annual nominal drop of 9.5% (15.8% until 2001) in the international traffic price.

The annual average decrease in nominal FTS prices was at 3.0%.

The evolution of FTS prices shown in tables 1 and 2 may be associated to some of the following aspects:

- From 1999 on, the mobile operators had alternative means to transport international traffic originating in their networks, increasing the competitiveness of international calls made from those networks, with consequences for the prices practised by Portugal's historic operator for international calls originating in the fixed network;

- Indirect access to switched, national and international services of operators and providers that are interconnected were liberalised from 1 January 2000, by means of their call-to-call selection, with the pre-selection function provided from July of that year;

- The beginning of 2001 witnessed the opening of indirect access for local and regional communications;

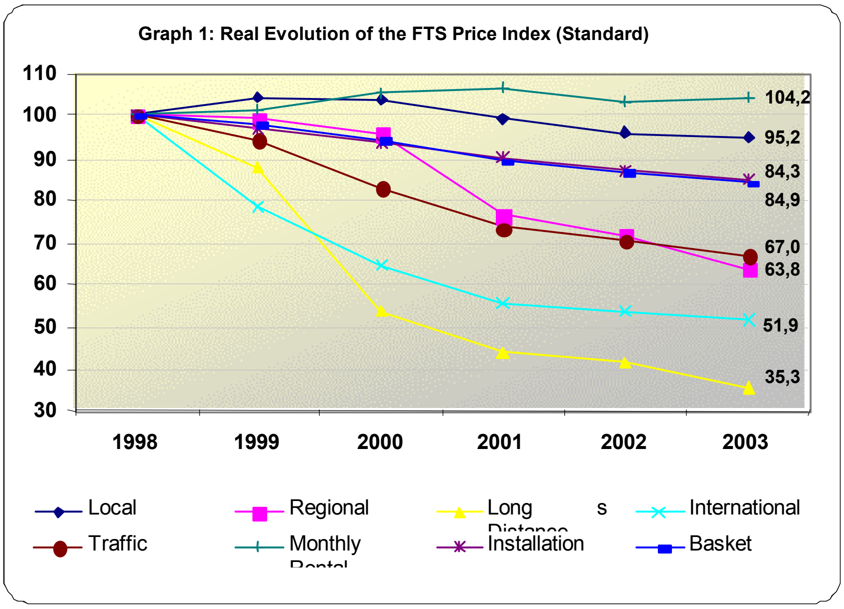
- At the end of the 1st quarter of 2003 the alternative operators had attained a market share of 10.2% of traffic, with their strategy essentially based on service provision in the indirect access mode.

Table 3: Accumulated real variation of *standard* prices

	1998-2001 (1)	1998-2003
Installation	-9,9%	-15,1%
Monthly Rental	6,5%	4,2%
Local	-0,4%	-4,8%
Regional	-23,4%	-36,2%
Long Distance	-55,9%	-64,7%
International	-45,8%	-48,1%
Traffic	**-26,8%**	**-33,0%**
Total	**-17,9%**	**-15,7%**

(1) With the profiles and weights applicable to the 98/01 period.

In real terms, most prices of the various FTS invoice components dropped notably; this is even more evident in international traffic and long distance traffic. Monthly rental is the only provision in which a real increase of prices (+4.2%) is identified.



4. Results of price evolution between 1998 and 2002 - Including EP beneficiary customers -

This chapter briefly summarises the results of FTS price evolution, including EP customers, between January 1998 and 31 December 2002.

Table 4: Summary of the Nominal Evolution of FTS prices, including the EP

	1999			2000		
	Standard	EP	Global	*Standard*	EP	Global
Installation	99,0	99,0	99,0	99,0	99,0	99,0
Monthly Rental	103,7	97,6	101,5	111,0	101,5	107,5
Local	106,5	99,1	105,6	109,4	102,4	108,5
Regional	102,5	95,7	102,1	100,8	97,7	100,6
Long Distance	90,3	89,7	90,3	56,3	56,4	56,3
International	80,2	80,2	80,2	67,7	67,7	67,7
Traffic	**97,1**	**95,0**	**96,9**	**87,8**	**90,0**	**88,0**
Total	**99,4**	**97,1**	**98,9**	**95,0**	**98,8**	**95,8**

1998 (Base year) =100

	2001			2002		
	Standard	EP	Global	*Standard*	EP	Global
Installation	99,0	99,0	99,0	99,0	99,0	99,0
Monthly Rental	117,1	107,0	113,4	117,7	107,6	114,0

Local	109,3	102,4	108,5	109,3	102,4	108,5
Regional	83,9	94,9	84,6	82,1	94,6	82,8
Long Distance	48,2	46,8	48,1	47,3	45,8	47,2
International	60,7	60,7	60,7	60,6	60,6	60,6
Traffic	**80,7**	**87,2**	**81,3**	**80,1**	**86,9**	**80,6**
Total	**91,3**	**102,0**	**93,5**	**90,9**	**102,3**	**93,2**

1998 (Base year) =100

Table 4 shows that customers benefiting from the economy package supported a nominal increase of 2.3% in FTS prices between 1998 and 2002, while customers of the *standard* price table benefited from a nominal accumulated reduction in the same period of 9.1%. As stated above, this result is due to the high weight that the tariff components whose prices increased in nominal terms have in the invoices of EP beneficiaries.

Table 5: Average annual nominal variation rate of FTS prices (1998-2002) - Including EP customers -

	Standard	EP	Global
Installation	-0,2%	-0,2%	-0,2%
Monthly Rental	4,0%	1,7%	3,2%
Local	2,3%	0,6%	2,1%
Regional	-4,3%	-1,3%	-4,1%
Long Distance	-16,7%	-17,3%	-16,7%
International	-11,7%	-11,7%	-11,7%
Traffic	-5,2%	-3,4%	-5,1%
Total	-2,3%	0,5%	-1,7%

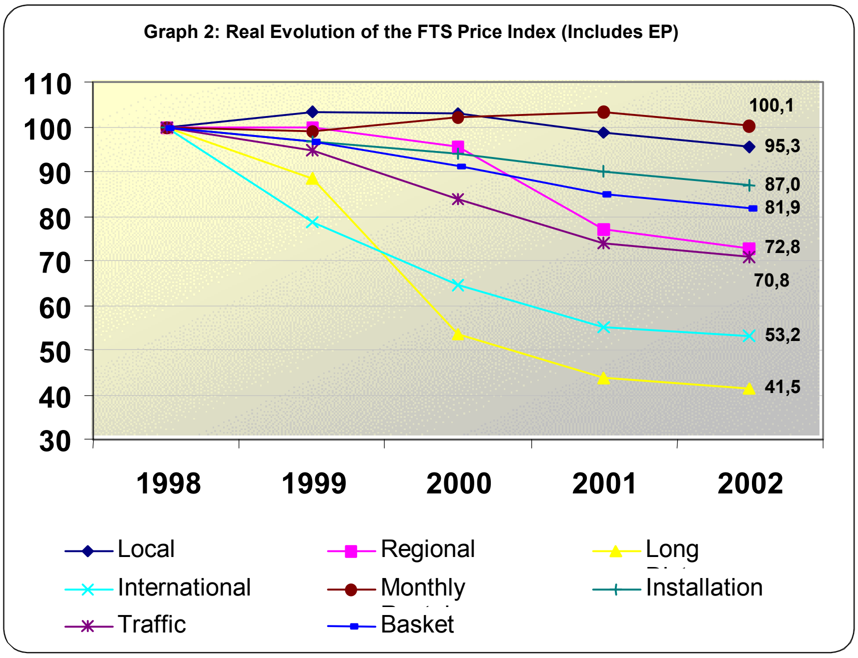
Table 5 effectively shows that the prices for local calls and monthly rental increased in average annual nominal terms by 2.1% and 3.2% respectively. For the set of EP beneficiary and non-beneficiary customers in the years from 1998 to 2002, FTS prices dropped by an average of 1.7% a year, in nominal terms.

Table 6: Accumulated real variation of FTS prices (1998-2002) - Including EP customers -

	Standard	EP	Global
Installation	-13,0%	-13,0%	-13,0%

Monthly Rental	3,4%	-5,5%	0,1%
Local	-4,0%	-10,0%	-4,7%
Regional	-27,9%	-16,9%	-27,2%
Long Distance	-58,4%	-59,8%	-58,5%
International	-46,8%	-46,8%	-46,8%
Traffic	-29,7%	-23,7%	-29,2%
Total	-20,2%	-10,1%	-18,1%

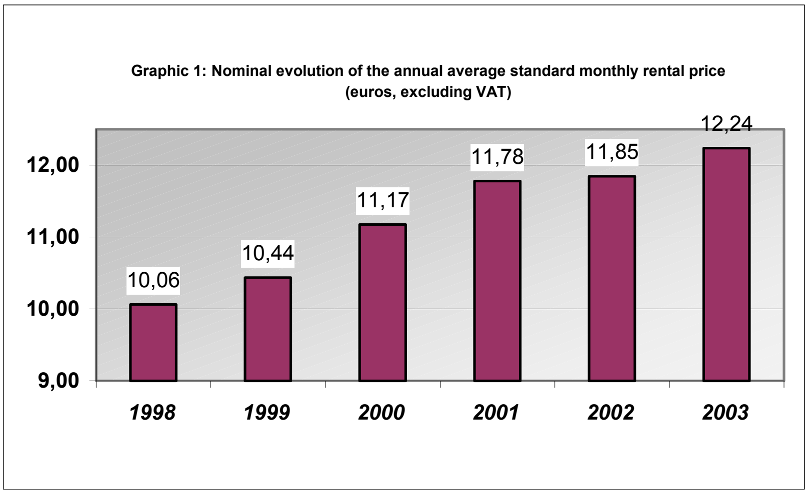
In real terms, only the monthly rental price increased. The FTS invoice for the set of FTS customers (EP beneficiaries and non-beneficiaries) benefited from an accumulated real drop of 18.1%.



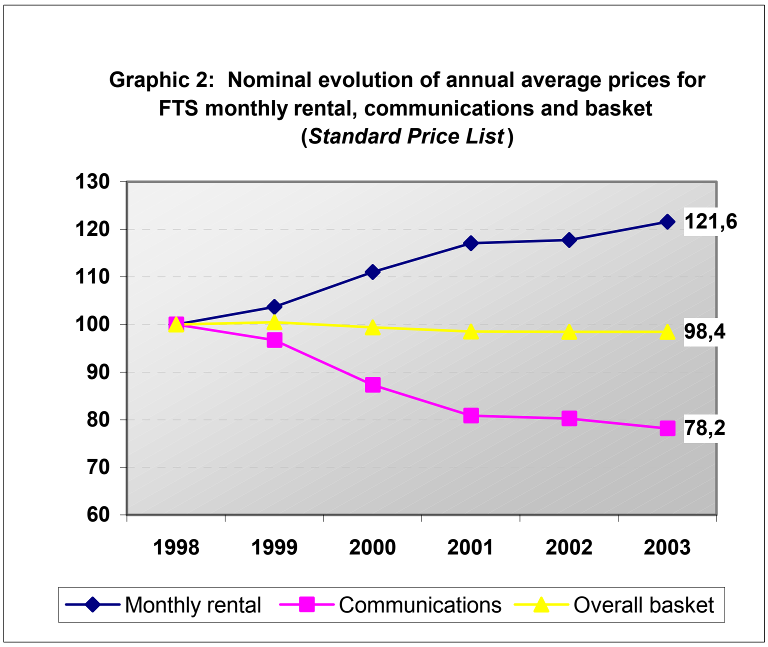
5. Detailed Results for the Period 1998-2003

Four graphs in the annex demonstrate results of the study of *standard* price evolution between 1998 and 2003. The graphs are arranged as follows:

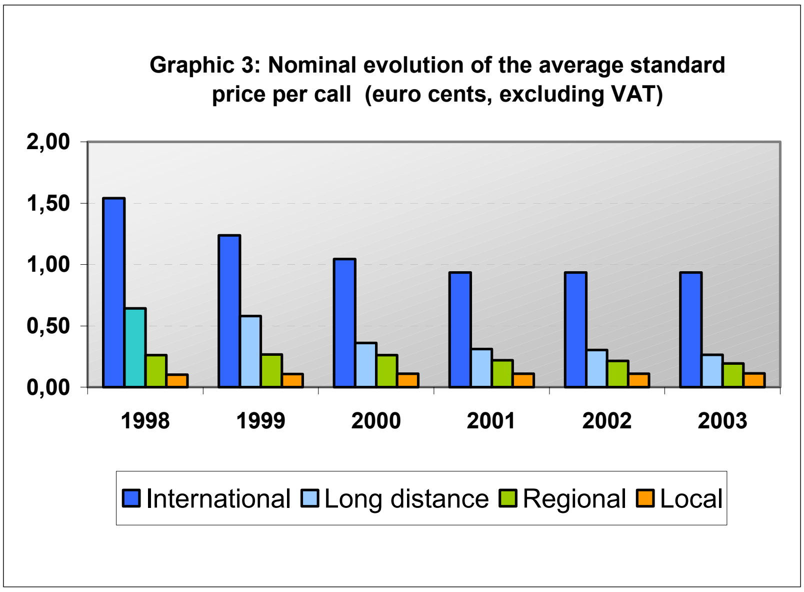
Graphic 1: Nominal evolution of the average annual price of monthly rental



Graphic 2: Nominal evolution of the annual average prices for FTS monthly rental, communications and basket



Graphic 3: Nominal evolution of the average price per call



Graphic 4: Real evolution of FTS prices by expense category