FIXED TELEPHONE SERVICE

First half of 2020

Version 1

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Executive summary

EXECUTIVE SUMMARY

91.2% of families have a fixed telephone service

In the first half of 2020 (1H2020), the penetration rates of the main telephone accesses reached 50 accesses per 100 inhabitants. The penetration rate for accesses installed at residential customer request stood at 91.2 per 100 private households.

Number of customers increased by 2.3%

In the first half of 2020, the number of direct access fixed telephone service customers was around 4.2 million, 94 thousand (+2.3%) more than in the first half of 2019. This growth is consistent with the estimated historical trend and is linked to the growing popularity of bundled offers that include fixed telephone.

Next generation networks responsible for the growth in the number of accesses

The stock of main telephone accesses reached almost 5.1 million accesses, 124 thousand more accesses year-on-year. The growth recorded (+2.5%) was mainly due to the increase in VoIP/VoB accesses (+330 thousand accesses), which includes accesses supported by fibre optic and cable TV networks.

In the first half of 2020, accesses supported on alternative networks to the traditional network (analogue and ISDN accesses) accounted for 78.4% of the main telephone accesses.

Traffic generated in the fixed network increased for the first time since 2012 due to the impact of COVID-19

The volume of minutes generated in the fixed network increased by 9.3% year-on-year (-16.1% in the first half of 2019). This is the first such increase since the first half of 2012.

This exceptional increase stemmed from a significant change in the normal service use patterns due to COVID-19. For example, in the week in which the state of emergency was declared (16 to 22 March), fixed voice traffic grew 61% compared to the week prior to the declaration of the pandemic (2 to 8 March).

By type of call, this growth was mainly due to the growth of national fixed-fixed (+9.3%), and fixed-mobile traffic (+18.2%). It should also be noted that the drop in international traffic (-6.4%) was the gentlest since the first half of 2015 and that the decrease in national traffic generated from public pay phones (-40.4%) was the greatest on record. VoIP nomadic traffic (+29.8%) saw the greatest increase since the first half of 2017.

For the aforementioned reason, the average duration of calls generated in the fixed network increased by around 41 seconds year-on-year (+20.2%). The average duration of fixed-fixed domestic calls increased by 58 seconds (+23.6%).

Shares per provider

At the end of the first half of 2020, MEO had a share of 42.1% of direct access customers, the NOS Group had 35.8%, Vodafone had 18.4% and the NOWO/Onitelecom Group had 3.4%. The shares of direct access customers of MEO, NOS and NOWO/Onitelecom declined by 0.2, 0.4 and 0.4 p.p., respectively, with Vodafone's share having increased by 0.9 p.p.[1]

The concentration level regarding traffic, measured by the Herfindahl-Hirschman index, although high, fell slightly year-on-year.

[1] The variations presented do not add up to zero due to rounding.

Report

1. Providers of FTS, Nomadic VoIP and Resale of Voice Telephone Traffic

In the first half of 2020 (1H2020), among the registered entities, 16 were operational for the fixed telephone service (FTS) [2] – see Table 1. Of these, eight provided the service exclusively through direct access, one provided the service exclusively through indirect access and the rest provided the service through both types of access – direct and indirect.

Table 1 – Evolution of the number of FTS providers

	1H2019	1H2020
Operational providers	16	16
Providers with direct and indirect access traffic	7	7
Providers only with direct access traffic	8	8
Providers only with indirect access traffic	1	1

Unit: 1 provider

Source: ANACOM

With regard to the voice telephone traffic resale providers, in the first half of 2020, among the entities legally authorised to provide this service, seven were operational (Table 2).

Table 2 – Evolution of the number of Voice Telephone Traffic resale providers

	1H2019	1H2020
Operational providers [2]	7	7

Unit: 1 provider

Source: ANACOM

Concerning the nomadic VoIP Service[3], in the first half of 2020, there were 17 providers in operation (Table 3).

[2] Entities that, according to the available statistical information, recorded traffic in the period under review.

[3] Nomadic VoIP: Services with typically nomadic use, i.e. able to be used in diverse locations. These services are provided using the "30" numbering range. It does not include "Voice through public Internet" type offers.

Table 3 – Evolution of the number of nomadic VoIP providers

	1H2019	1H2020
Operational providers [2]	17	17

Unit: 1 provider
Source: ANACOM

2. Penetration of the Telephone Service at a Fixed Location

In the first half of 2020, the penetration rate of the main telephone accesses was 50 accesses per 100 inhabitants. This is the highest penetration rate recorded since ANACOM started to compile this information (2001).

The penetration rate for accesses installed at residential customer request stood at 91.2 per 100 private households.

3. Number of accesses for the Telephone Service at a Fixed Location

Available information on the main accesses of this service is presented below, namely the number of accesses, their breakdown by support network and the shares of main providers.

3.1. Evolution of the number of accesses

The stock of main telephone accesses in the first half of 2020 reached 5.1 million accesses (Table 4). The number of accesses increased by 124 thousand (+2.5%) year-on-year. The decrease in analogue accesses (-173 thousand accesses), ISDN accesses (-27 thousand accesses) and fixed accesses supported by mobile networks (-6 thousand accesses) was more than offset by the increase in VoIP/VoB accesses (+330 thousand accesses), which include accesses supported by fibre optic (FTTH) and cable TV networks.

Note that the decrease in analogue accesses in this half-year was the lowest since the first half of 2016.

Table 4 – Number of FTS accesses

	1H2019	1H2020	Var. (%) 1H2019/1H2020
Analogue accesses	1,019	846	-17.0
(of which) public pay phones	18	17	-4.7
ISDN and Diginet accesses	293	266	-9.2
Basic	105	91	-12.9
Primary	181	168	-7.2
Fractional	2	2	0.7
Other digital accesses	5	4	-9.7
GSM/UMTS/LTE accesses	473	468	-1.2
VoIP/VoB accesses	3,239	3,569	10.2
Total main accesses	5,024	5,148	2.5

Unit: Thousands of equivalent accesses, %
Source: ANACOM

The number of public pay phones installed was around 16.9 thousand, corresponding to a reduction of 4.7% year-on-year.

Note that accesses supported on alternative networks to the traditional network (analogue and ISDN accesses) accounted for 78.4% of the main telephone accesses.

3.2. Shares per provider

In the first half of 2020, MEO accounted for 45.0% of all main accesses, 0.2 p.p. less year-on-year (Table 5). The NOS Group was the second largest provider, with a share of 33.5%, and with no change year-on-year. Vodafone was the third largest provider, with a share of 17.8%, 0.6 p.p. more than in the first half of 2019. In net terms, Vodafone was the provider that gained the most subscribers in this period.

Table 5 – Evolution of the shares of main FTS accesses

	1H2019	1H2020	Var. (p.p.) 1H2019/1H2020
MEO	**45.3**	**45.0**	-0.2
NOS Group	33.5	33.5	0.0
NOS Comunicações	31.6	31.6	0.0
NOS Madeira	1.3	1.3	0.0
NOS Açores	0.6	0.6	0.0
Vodafone	17.2	17.8	0.6
NOWO / Onitelecom Group	3.5	3.1	-0.3
NOWO	3.1	2.8	-0.3
Onitelecom	0.3	0.3	0.0
AR Telecom	0.2	0.2	0.0
Colt Telecom	0.1	0.1	0.0
Other providers	0.4	0.4	0.0

Unit: %, p.p.

Source: ANACOM

Note 1: Some operators are active in specific segments of the market. The relative position that operators occupy in this framework should not be interpreted as an indicator of the quality of the services provided or of the performance of these operators in the segments in which they operate.

Note 2: The variations presented do not correspond exactly to the figures contained in the table due to rounding.

The concentration level, measured by the Herfindahl-Hirschman index[4], although high, fell slightly in relation to the previous year in relation to main accesses.

4. Number of accesses by customer segment

Information on accesses installed at the request of customers for the telephone service at a fixed location, by customer segment, is presented below.

[4] The Herfindahl-Hirschman index (HHI) is often applied by the European Commission to assess market concentration levels. This index is calculated by adding the squares of the individual market shares of all market participants. Its theoretical values range from approximately zero (in a fragmented market) to 10,000 (in the case of an absolute monopoly). When the HHI is greater than 1,800, the market is considered to be extremely concentrated. Between 1,000 and 1,800, the market is considered to be moderately concentrated.

4.1. Number of accesses by customer segment

In the first half of 2020, the number of residential accesses increased 2.6%, while the number of non-residential accesses increased 2.0% year-on-year (Table 6). The number of non-residential accesses accounted for 25.2% of all accesses installed by customer request.

Table 6 – Number of FTS accesses by customer segment

	1H2019	1H2020	Var. (%) 1H2019/1H2020
Residential accesses	3,684	3,781	2.6
Non-residential accesses	1,246	1,271	2.0
Total accesses installed by customer request	4,930	5,052	2.5

Unit: Thousands of accesses, %

Source: ANACOM

Note: The total accesses installed by customer request does not include own stock or public pay phones.

4.2. Shares per provider

In the first half of 2020, MEO accounted for 41.2% of all residential accesses, 0.3 p.p. less year-on-year (Table 7). The NOS Group was the second largest provider, with a share of 36.9%, which likewise decreased 0.3% year-on-year. Vodafone was the third largest provider, with a share of 18.3%, 1.0 p.p. more than in the first half of 2019. In net terms, Vodafone was the provider that gained the most residential subscribers in this period.

Table 7 – Shares of residential FTS accesses

	1H2019	1H2020	Var. (p.p.) 1H2019/1H2020
MEO	**41.5**	**41.2**	-0.3
NOS Group	37.2	36.9	-0.3
NOS Comunicações	34.8	34.5	-0.3
NOS Madeira	1.6	1.6	0.0
NOS Açores	0.8	0.8	0.0
Vodafone	17.3	18.3	1.0
NOWO / Onitelecom Group	4.0	3.6	-0.4
NOWO	4.0	3.6	-0.4
Onitelecom	0.0	0.0	0.0
Other providers	0.0	0.0	0.0

Unit: %, p.p.

Source: ANACOM

Note 1: Some operators are active in specific segments of the market. The relative position that operators occupy in this framework should not be interpreted as an indicator of the quality of the services provided or of the performance of these operators in the segments in which they operate.

Note 2: The variations presented do not correspond exactly to the figures contained in the table due to rounding.

In turn, MEO's share of non-residential accesses was 53.0% (Table 8), followed by the NOS Group with 25.2% and Vodafone with 17.5%. Compared to the first half of 2019, the shares of non-residential accesses of the NOS Group and MEO increased 0.5 and 0.2 p.p., respectively. Vodafone's share decreased by 0.6 p.p.

Table 8 – Shares of non-residential FTS accesses

	1H2019	1H2020	Var. (p.p.) 1H2019/1H2020
MEO	**52.8**	**53.0**	0.2
NOS Group	24.7	25.2	0.5
NOS Comunicações	24.2	24.7	0.5
NOS Madeira	0.5	0.4	0.0
NOS Açores	0.1	0.1	0.0
Vodafone	18.2	17.5	-0.6
NOWO / Onitelecom Group	1.9	1.7	-0.2
NOWO	0.6	0.6	0.0
Onitelecom	1.3	1.1	-0.1
Other providers	2.4	2.4	0.1

Unit: %, p.p.

Source: ANACOM

Note 1: Some operators are active in specific segments of the market. The relative position that operators occupy in this framework should not be interpreted as an indicator of the quality of the services provided or of the performance of these operators in the segments in which they operate.

Note 2: The variations presented do not correspond exactly to the figures contained in the table due to rounding.

5. Fixed Telephone Services and nomadic VoIP Service customers

Following is information on fixed telephone service customers, namely on the evolution of direct access, indirect access and nomadic VoIP customers, together with the shares of direct access customer providers.

5.1. Number of customers

In the first half of 2020, the number of direct access fixed telephone service customers was around 4.2 million, 2.3% more than in the first half of 2019 (Table 9).

Table 9 – Number of FTS customers

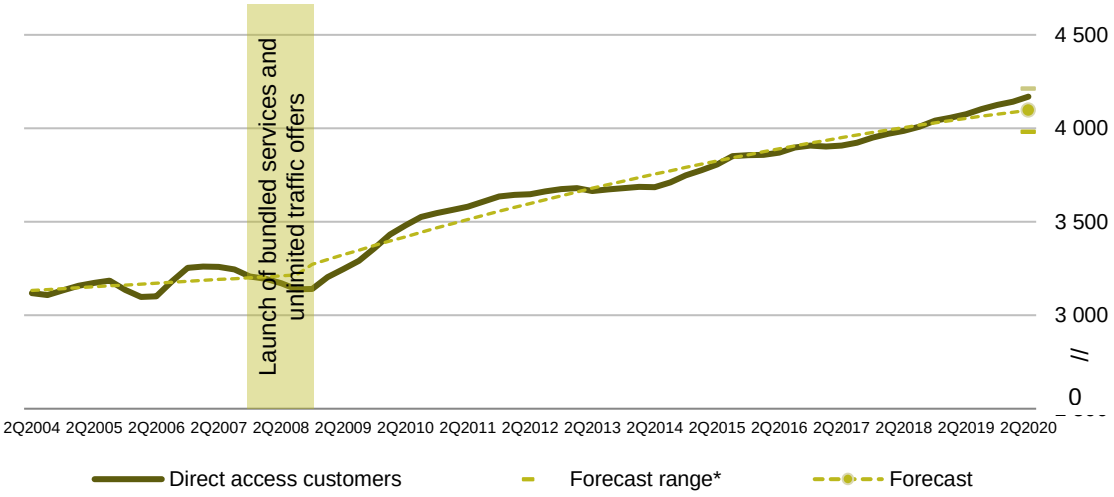
	1H2019	1H2020	Var. (%) 1H2019/1H2020
Direct access customers[5]	4,075	4,169	2.3
Indirect access customers	19	12	-37.3
Pre-selection customers	18	11	-37.3
Call-by-call selection customers	<1	<1	-32.8
Nomadic VoIP customers	51	46	-9.7

Unit: Thousands of customers, %

Source: ANACOM

The observed figure stood within the forecast range derived from the estimated historical trend (Figure 1). Since the end of 2008, there has been a growing trend in the number of customers of this service, although with a slowdown in 2013. This growth is linked to the growing popularity of bundled offers that include fixed telephone.

Figure 1 – Evolution of Direct Access Customers



Unit: Thousands of customers

Source: ANACOM

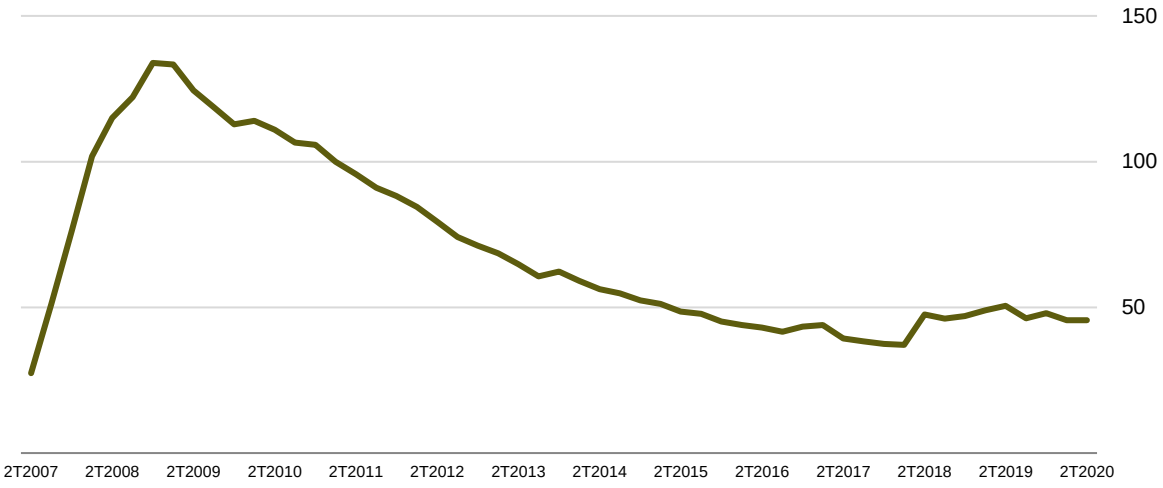
Note: Between 4Q2003 and 3Q2008, the series showed the following linear trend: Y=4.865t. From 4Q2008 onwards, following the introduction of offers, particularly as a bundle, with traffic included, this became quadratic (Y = 3.247.407 + 25.883 t – 166 t2). The model's adjusted R^2 is 0.956.

[5] Includes customers that benefit from ORLA.

Indirect access continued to follow the downward trend in the number of customers started in the second quarter of 2006. This evolution described may be explained, firstly, by the new tariff offers of the incumbent operator and later by new providers focusing on other business models with better profitability perspectives – particularly through own network support – and by the subscription to bundled offers that include free calls.

Concerning nomadic VoIP customers, in the first half of 2020, there were around 46 thousand active customers, down 9.7% year-on-year (Table 9 and Figure 2). It should be noted that, since the beginning of 2009, the number of nomadic VoIP customers has shown a downward trend, which is mainly explained by the fact that one provider migrated a significant number of its customers to a fixed voice telephony solution. However, since 2018, there has been an increase in the number of nomadic VoIP customers associated to the growth of the number of business customers.

Figure 2 – Evolution of the number of nomadic VoIP customers



Unit: Thousands of customers
Source: ANACOM

5.2. Shares per provider

In turn, MEO's share of direct access customers was 42.1% (Table 10), followed by the NOS Group with 35.8%, Vodafone with 18.4% and the NOWO/Onitelecom Group with 3.4%. Compared to the first half of 2019, the shares of direct access customers of MEO,

the NOS Group and the NOWO/Onitelecom Group declined by 0.2, 0.4 and 0.4 p.p., respectively, with Vodafone's share having increased by 0.9 p.p.

Table 10 – Evolution of the shares of FTS direct access customers

	1H2019	1H2020	Var. (p.p.) 1H2019/1H2020
MEO	**42.3**	**42.1**	-0.2
NOS Group	36.2	35.8	-0.4
NOS Comunicações	34.0	33.6	-0.4
NOS Madeira	1.5	1.5	0.0
NOS Açores	0.7	0.7	0.0
Vodafone	17.6	18.4	0.9
NOWO / Onitelecom Group	3.7	3.4	-0.4
NOWO	3.7	3.4	-0.4
Onitelecom	<0.5	<0.5	0.0
Other providers	0.3	0.3	0.1

Unit: %, p.p.

Source: ANACOM

Note 1: Some operators are active in specific segments of the market. The relative position that operators occupy in this framework should not be interpreted as an indicator of the quality of the services provided or of the performance of these operators in the segments in which they operate.

Note 2: The variations presented do not correspond exactly to the figures contained in the table due to rounding.

The concentration level, measured by the Herfindahl-Hirschman index[6], although high, fell slightly when compared to the previous year in relation to direct access customers.

6. Traffic generated in the fixed network

This section presents information on fixed telephone service traffic in minutes, namely the number of minutes generated in the network, the average number of minutes per access, the average call duration and the share of traffic of providers.

[6] The Herfindahl-Hirschman index (HHI) is often applied by the European Commission to assess market concentration levels. This index is calculated by adding the squares of the individual market shares of all market participants. Its theoretical values range from approximately zero (in a fragmented market) to 10,000 (in the case of an absolute monopoly). When the HHI is greater than 1,800, the market is considered to be extremely concentrated. Between 1,000 and 1,800, the market is considered to be moderately concentrated.

6.1. Evolution of traffic

Total traffic generated in the fixed network during the first half of 2020 stood at around 2.3 billion minutes (Table 11), 9.3% more than in the first half of 2019.

Table 11 – Traffic generated in the fixed network – minutes

	1H2019	1H2020	Var. (%) 1H2019/1H2020
Fixed telephone service traffic	2,060	2,239	8.7
National traffic	1,942	2,129	9.6
National Fixed-Fixed traffic	1,512	1,653	9.3
National Fixed-Mobile traffic	252	298	18.2
National Fixed-Short traffic and non-geographic numbers	121	113	-6.5
National traffic generated in public pay phones	4	2	-40.4
Other traffic generated in the fixed network	53	63	17.9
Outbound international traffic	118	110	-6.4
Of which generated in public pay phones	<1	<1	-67.5
Nomadic VoIP traffic	54	70	29.8
Total traffic generated in the fixed network	2,114	2,309	9.3

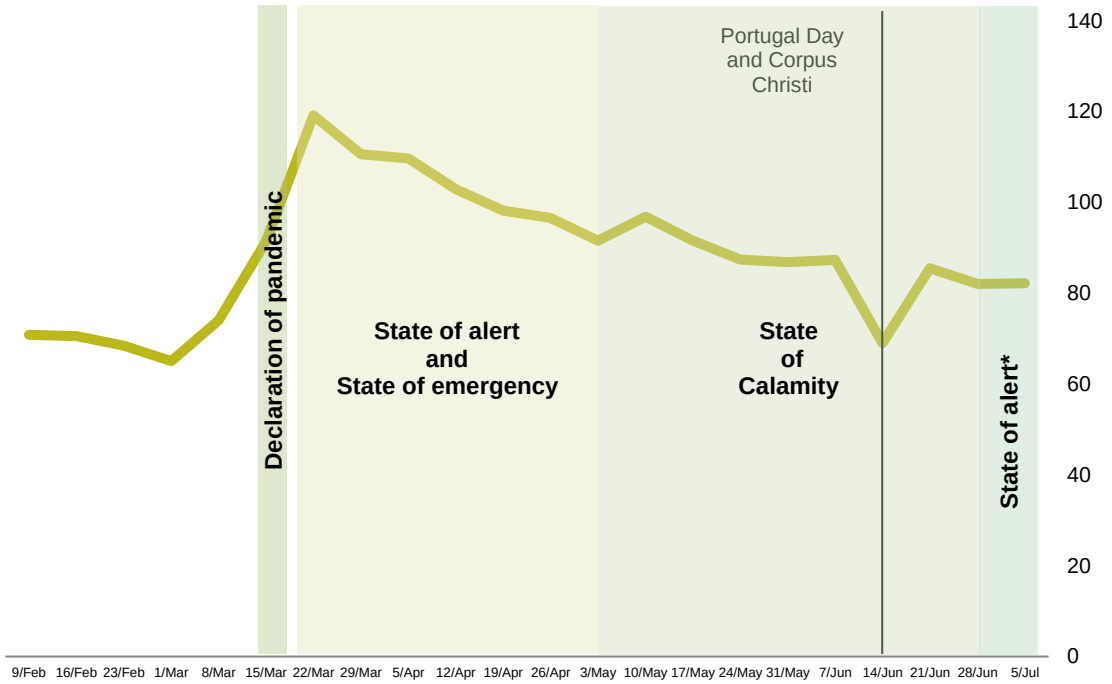
Unit: Millions of minutes, %

Source: ANACOM

This is the first such increase since the first half of 2012. It should be noted that the traffic had decreased by 16.1% year-on-year.

This traffic increase stemmed from the change in the normal service use patterns due to COVID-19. For example, in the week in which the state of emergency was declared (16 to 22 March), fixed voice traffic grew 61% compared to the week prior to the declaration of the pandemic (2 to 8 March) – see Figure 3.

Figure 3 – Weekly evolution of fixed voice traffic from February to July 2020



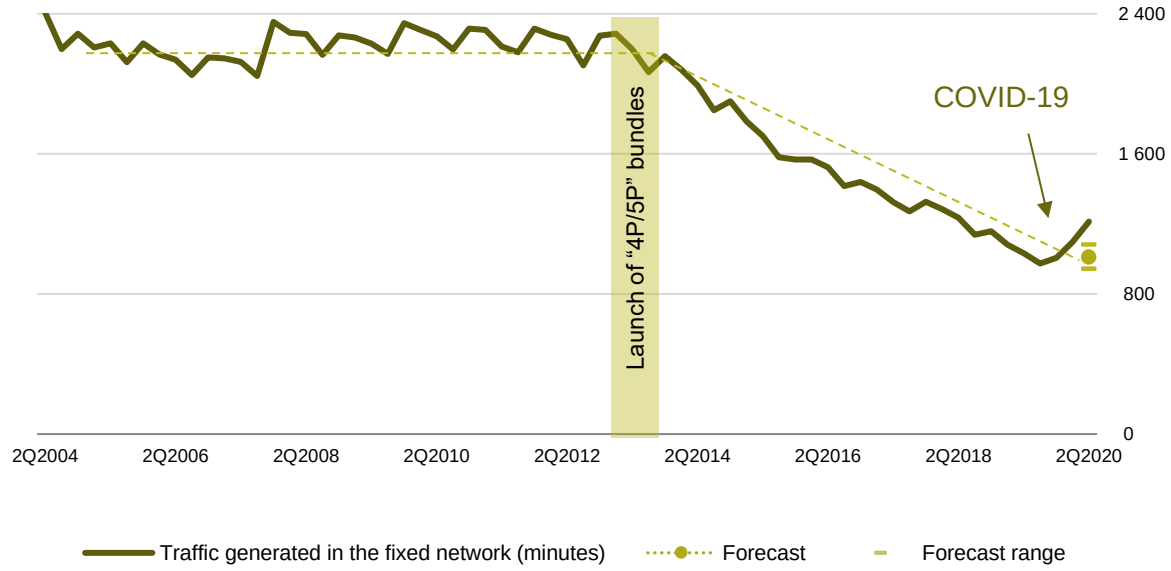
Unit: Millions of minutes

Source: ANACOM

Note: * State of calamity in 19 Greater Lisbon parishes in effect from 1 to 31 July, transitioning to a state of contingency beginning on 1 August; state of calamity in the Autonomous Region of Madeira and on five islands of the Autonomous Region of the Azores; state of calamity in the rest of the Lisbon Metropolitan Area; state of alert in the rest of the territory.

For the aforementioned reasons, the volume of minutes recorded in the second quarter of 2020 stood above the forecast range derived from the trend and the estimated seasonal effect (Figure 4). Traffic in minutes has been falling since the start of 2013 (and more intensely since the end of 2013), particularly affecting larger providers. The decrease in traffic is linked to the increase in the penetration of “4P/5P” bundles, which include mobile services with free calls to all networks and, also, the growing penetration of new forms of communication supported on the internet.

Figure 4 – Evolution of the total traffic generated in the fixed network



Unit: Millions of minutes

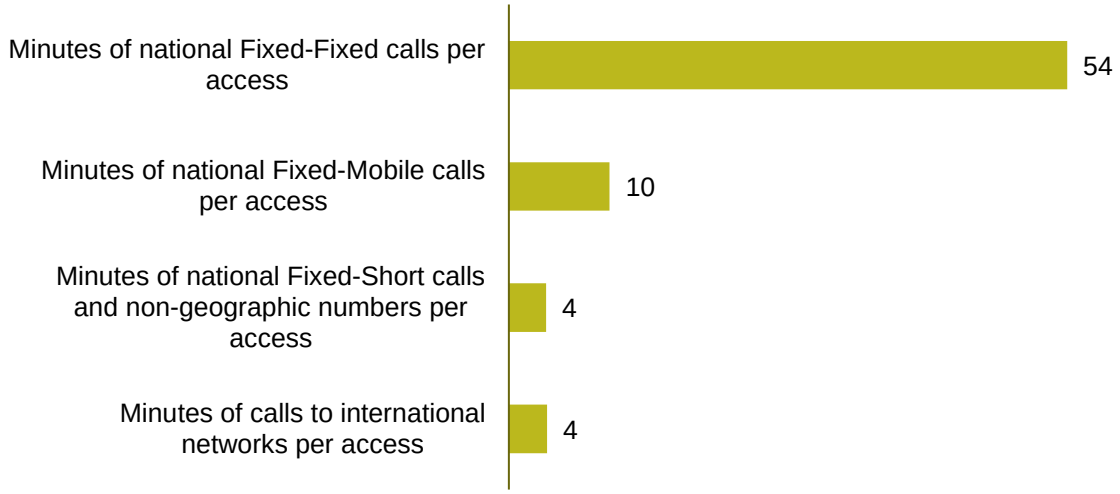
Source: ANACOM

Note: The modelling of this series used a regression model with quadratic trend from the first quarter of 2013. The following seasonality indices were considered for the multiplicative model: T1= 1.02; T2= 1; T3= 0.96; T4= 1.02. Regression equation: $Y=2.363.311 - 73.850\ t + 939\ t^2$. The model's adjusted R^2 is 0.986.

This growth was mainly due to the growth of national fixed-fixed (+9.3%), and fixed-mobile traffic (+18.2%). It should also be noted that the drop in international traffic (-6.4%) was the gentlest since the first half of 2015 and that the decrease in national traffic generated from public pay phones (-40.4%) was the greatest on record. VoIP nomadic traffic (+29.8%) saw the greatest increase since the first half of 2017.

In the first half of 2020, an average of 75 minutes per access per month were consumed, of which 54 minutes were fixed-fixed calls, 10 minutes were fixed-mobile calls and 4 minutes were international calls (Figure 5). Compared to the first half of 2019, 5 more minutes per access were consumed per month (+7.8%).

Figure 5 – Monthly average number of minutes per main access – 1st half of 2020



Unit: minutes

Source: ANACOM

For the aforementioned reasons, the average duration of calls generated in the fixed network increased by around 41 seconds year-on-year (+20.2%) – see Table 12. The average duration of fixed-fixed domestic calls increased by 58 seconds (+23.6%).

Table 12 – Average duration of calls by type of traffic

	1H2019	1H2020	Var. (%) 1H2019/1H2020
Fixed telephone service traffic	202	243	20.5
National traffic	197	239	21.2
National Fixed-Fixed traffic	246	304	23.6
National Fixed-Mobile traffic	100	124	23.8
National Fixed-Short traffic and non-geographic numbers	181	196	8.2
National traffic generated in public pay phones	53	42	-21.0
Other traffic generated in the fixed network	120	145	20.7
Outbound international traffic	343	378	10.5
Of which generated in public pay phones	165	154	-6.6
Nomadic VoIP traffic	178	204	14.4
Total traffic generated in the fixed network	201	242	20.2

Unit: seconds, %

Source: ANACOM

6.2. Shares per provider

With regard to traffic, MEO's share of total traffic in minutes generated in the fixed network was 40.6%, followed by the NOS Group with 35.2% and Vodafone with 16.5% (Table 13).

Table 13 – Evolution of shares of total traffic in minutes generated in the fixed network

	1H2019	1H2020	Var. (p.p.) 1H2019/1H2020
MEO	**40.4**	**40.6**	0.2
NOS Group	33.8	35.2	1.4
NOS Comunicações	31.6	33.1	1.5
NOS Madeira	1.1	1.1	-0.1
NOS Açores	1.1	1.1	0.0
Vodafone	16.5	16.5	0.0
NOWO / Onitelecom Group	4.1	3.3	-0.7
NOWO	2.4	2.6	0.2
Onitelecom	1.6	0.7	-0.9
G9	1.7	2.0	0.3
Colt Telecom	2.0	1.2	-0.9
AR Telecom	0.8	0.6	-0.2
Other providers	0.6	0.6	0.0

Unit: %, p.p.

Source: ANACOM

Note 1: Some operators are active in specific segments of the market. The relative position that operators occupy in this framework should not be interpreted as an indicator of the quality of the services provided or of the performance of these operators in the segments in which they operate.

Note 2: The variations presented do not correspond exactly to the figures contained in the table due to rounding.

Methodological note

Methodological note

a. Sources

- Quarterly questionnaire on electronic communication networks and services.

  Information collected quarterly from the electronic communications providers in accordance with the specifications and definitions laid down in annex 2 of the Regulation on the provision of statistical information (Regulation 255/2017 of 16 May 2017: https://www.anacom.pt/render.jsp?contentId=1415433). The reference date of the information presented is 30-07-2020. The quarterly information presented in this report may be subject to revision or updating.

- Statistical aggregates published by Statistics Portugal (INE).

  This report uses the most recent estimates of the population, conventional dwellings and private households, following the 2011 Census. For this reason, the penetration values now published are not comparable to those of previous reports.

b. Definitions and notes

- Accesses, customers, traffic and revenue: See sections I.2, II.3, III.1 and IV.1.1, respectively, of annex 2 of the Regulation on the provision of statistical information (Regulation 255/2017 of 16 May 2017: https://www.anacom.pt/render.jsp?contentId=1415433).

  From 1Q2018, the number of VoIP/VoB accesses henceforth included the number of voice channels or contracted simultaneous sessions associated to the telephone service at a fixed location. Up to 4Q2017, the number of accesses was recorded.

- Total main accesses: Sum of the indicators “number of analogue accesses” and “number of equivalent ISDN and Diginet accesses”, “number of GSM/UMTS/LTE accesses” and “number of VoIP/VoB accesses” concerning direct access, including accesses installed at the request of customers, public pay phones and own stock. In the case of digital accesses, the unit used is the number of equivalent digital accesses. “Other digital accesses” include “Diginet” and FWA.

- Direct and indirect access: Direct access is defined as the form of providing the service where access to the customer is ensured by the customer's own or hired infrastructure. In the case of indirect access, access to the customer is assured by third parties in the call pre-selection and call-to-call modalities.

- Private households: Statistical aggregate made up of the set of persons resident in the same accommodation and who have relations of kinship (de jure or de facto) with each other, including an independent person who may occupy all or part of the accommodation (see http://smi.ine.pt/Conceito/Detalhes/1123#Hist%C3%B3rico).

- Short and non-geographic numbers: Numbers shorter than 9 digits and numbers with prefixes 800, 802, 808, 809, 884, 707, 708, 760, 761 and 762 respectively.

- Total traffic generated in the fixed network includes Fixed-Fixed, Fixed-Mobile, Fixed-Short and non-geographic numbers, national traffic through calling cards, traffic generated in public pay phones and outbound international traffic, nomadic VoIP traffic and other traffic generated in the fixed network, through direct access and indirect access modalities.

- Nomadic VoIP: Services with typically nomadic use, i.e. able to be used in diverse locations. These services are provided using the “30” numbering range. It does not include “Voice through public Internet” type offers.

c. Initials and abbreviations

FTTH	Fibre-to-the-home	VoIP/VoB	Voice-over-IP/Voice-over-broadband	1H2020	1st half of 2020
FTS	Fixed telephone service	1H2019	1st half of 2019		

d. Conventional signs

%	percentage	p.p.	percentage points