SUBSCRIPTION TELEVISION SIGNAL DISTRIBUTION SERVICE

First quarter of 2020

Version 1

Contents

EXECUTIVE SUMMARY 4

1. Penetration and number of subscribers to the subscription television signal distribution service 7

2. Evolution in the number of subscribers by technology 9

   2.1 Subscribers to the optical fibre (FTTH) television service 9
   2.2 Cable television service subscribers 10
   2.3 Satellite (DTH) television service subscribers 11
   2.4 Television service subscribers over ADSL 12

3. Shares per provider 13

Methodological note 16

Index of tables

Table 1 – Subscribers to the STV signal distribution service by technology 8

Table 2 – Shares of subscribers to the subscription TV signal distribution service 14

Index of figures

Figure 1 – Evolution of total subscribers to STV signal distribution services 7

Figure 2 – Evolution in subscribers to STV signal distribution services by technology 8

Figure 3 – Evolution in subscribers to the STV signal distribution service supported by optical fibre (FTTH) 9

Figure 4 – Evolution in subscribers to the cable STV signal distribution service 10

Figure 5 – Evolution in subscribers to the satellite STV signal distribution service (DTH) 11

Figure 6 – Evolution in ADSL-supported STV signal distribution service subscribers 13

Executive summary

EXECUTIVE SUMMARY

The number of TV signal distribution service subscribers grew by 4.1% and 89% of households are customers of this service

In 1Q2020, about 89% of households had the subscription television (STV) signal distribution service, 3 p.p. more than in the same quarter last year.

The number of subscribers to the subscription TV signal distribution service reached 4.1 million, 160 thousand more (+4.1%) than in the same quarter last year. This is the largest annual growth in absolute terms recorded since 2016. This figure is, however, within the variation range resulting from the historical trend for this indicator.

The growth in the service was due exclusively to deals supported by optical fibre (FTTH), which registered a further 271 thousand subscribers year-on-year (+15.9%).

Optical fibre was the main form of access to the service; Evolution of DTH and ADSL may have been influenced by the State of Emergency

FTTH continued to be the main form of access to this service (48.0% of total subscribers), followed by cable television (32.2%), DTH (11.2%) and ADSL (8.5%), as has been the case since the beginning of 2018.

In 1Q2020, the decreasing trend in DHT subscribers, which has been recorded since 2016, lessened. In this quarter, the number of DTH subscribers fell by 4.7%, while it decreased by 9.1% one year ago. At least one provider recorded an increase in the number of subscribers to this technology. This evolution may have been influenced by the State of Emergency associated with COVID-19 that came into force on 18 March 2020 and was extended beyond the time frame of this report.

Likewise, the number of ADSL accesses was slightly above the forecast range resulting from the recent historical evolution. This evolution may also have been influenced by COVID-19.

We also recall that the process to change TDT frequencies began on 07/02/2020 and was suspended on 13/03/2020 due to difficulties associated with COVID-19.

Shares per provider

Although it dipped below 40% for the first time, the NOS Group was the provider with the highest share of subscribers to the subscription TV signal distribution service (39.9%), followed by MEO (39.7%), Vodafone (16.5%) and NOWO (3.7%).

Vodafone and MEO were the providers that, in net terms, had the largest number of subscribers compared to the same quarter last year, with their shares increasing by 1.0 p.p. and 0.3 p.p. respectively. On the other hand, there was a decrease in the shares of the NOS Group (-0.9 p.p.) and NOWO (-0.3 p.p.).

The concentration level, as measured by the Herfindahl-Hirschman index, although high, decreased slightly compared to the same quarter last year. The current decreasing concentration trend began in 2013 with the launch of Vodafone's triple play deal supported on FTTH. Since the start of 2018, the concentration level has only decreased slightly.

Report

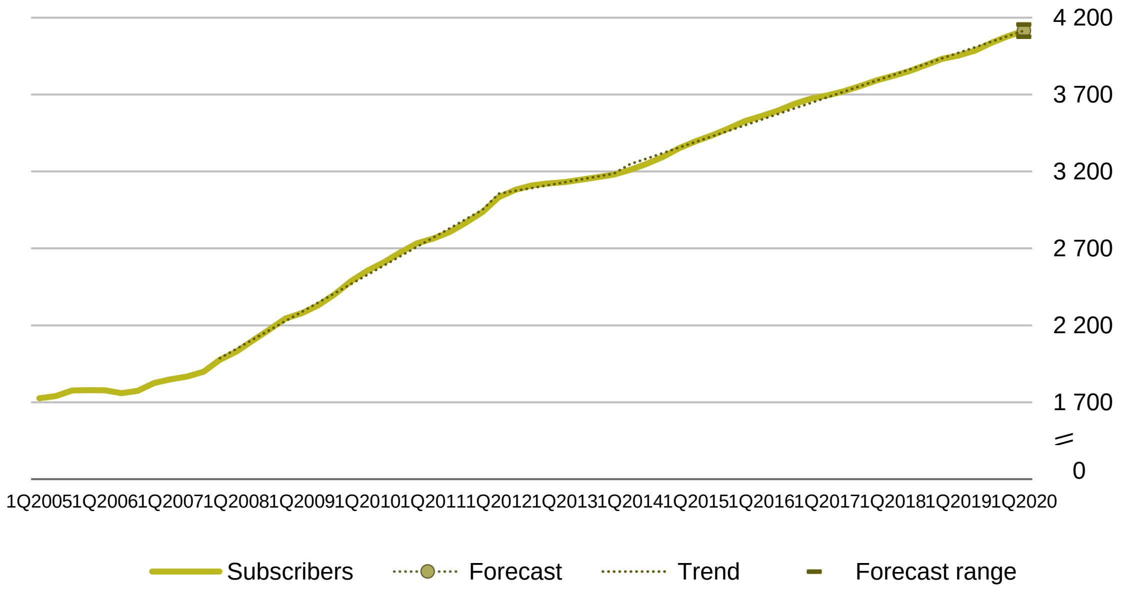
1. Penetration and number of subscribers to the subscription television signal distribution service

In 1Q2020, residential penetration of the STV signal distribution service reached 88.5 subscribers for every 100 private households, 3 p.p. more year-on-year.

The total number of subscribers to the STV signal distribution service was 4.1 million, 160 thousand more (+4.1%) year-on-year. This is the largest annual growth in absolute terms recorded since 2016.

The number of subscribers registered in 1Q2020 was within the forecast range resulting from the recent historical evolution of this variable (Figure 1). The current trend began in 2014.

Figure 1 – Evolution of total subscribers to STV signal distribution services



Unit: 1000 subscribers

Source: ANACOM

Note: The estimation started in 4Q2007, that is, after the change in the market structure resulting from the spin-off of PT Multimedia. For the purposes of modelling this series, a multiple linear regression model was used with a different linear trend depending on the periods: between 4Q2007 and 4Q2011; between 1Q2012 and 4Q2013 associated with the macroeconomic environment; from 1Q2014:

Yt = 1,925,971 + 60,305 t1 + 796,064 est2 + 18,541 est2*t2 + 381,382 est3 + 36,173 est3*t3,

est2 and est3 being structural change dummy variables. Forecast range with a significance level of 95% and R^2 adjusted from 0.999.

The growth observed was due to offers supported by optical fibre (FTTH). This growth resulted not only from attracting new customers, but also from the transfer to FTTH of customers who were previously supported by other networks (Table 1).

Table 1 – Subscribers to the STV signal distribution service by technology

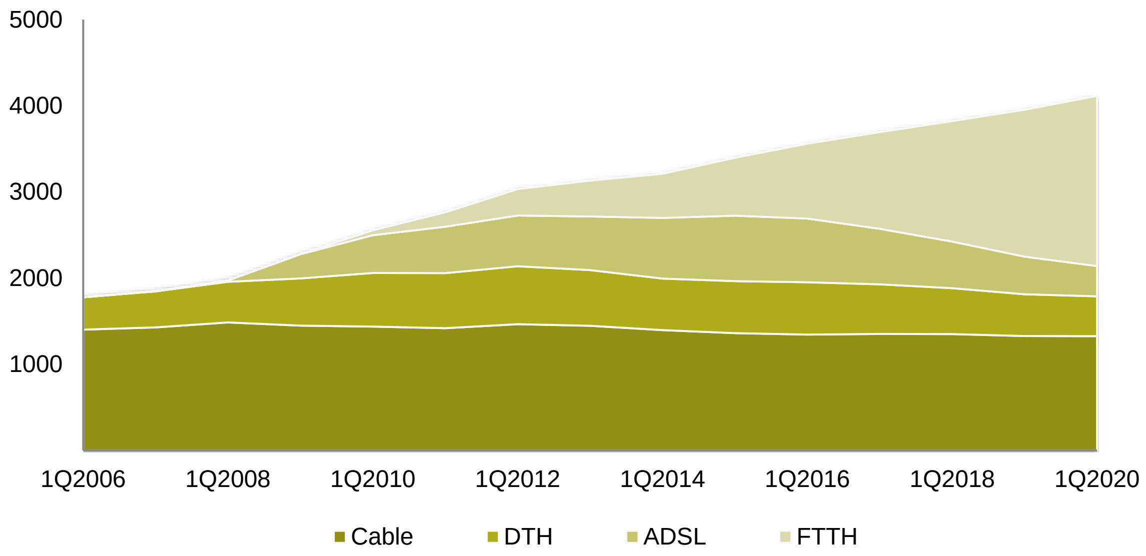
	1Q2019	1Q2020	Variation (%) 1Q2019/1Q2020
FTTH	1,705	1,976	15.9
Cable	1,328	1,326	-0.2
DTH	485	462	-4.7
ADSL	437	351	-19.7
Total	**3,955**	**4,115**	**4.1**

Unit: 1000 subscribers; %

Source: ANACOM

In 1Q2020, optical fibre continued to be the main form of access to the service (48.0%), followed by cable television (32.2%), DTH (11.2%) and ADSL (8.5%). Since the first quarter of 2018, optical fibre (FTTH) has been the main form of access to this service (Figure 2).

Figure 2 – Evolution in subscribers to STV signal distribution services by technology



Unit: 1000 subscribers

Source: ANACOM

Note: This refers only to the number of subscribers per technology at the end of each year.

2. Evolution in the number of subscribers by technology

The evolution in the number of television subscribers by technology is presented in more detail below: optical fibre (FTTH), cable, satellite (DTH) and ADSL.

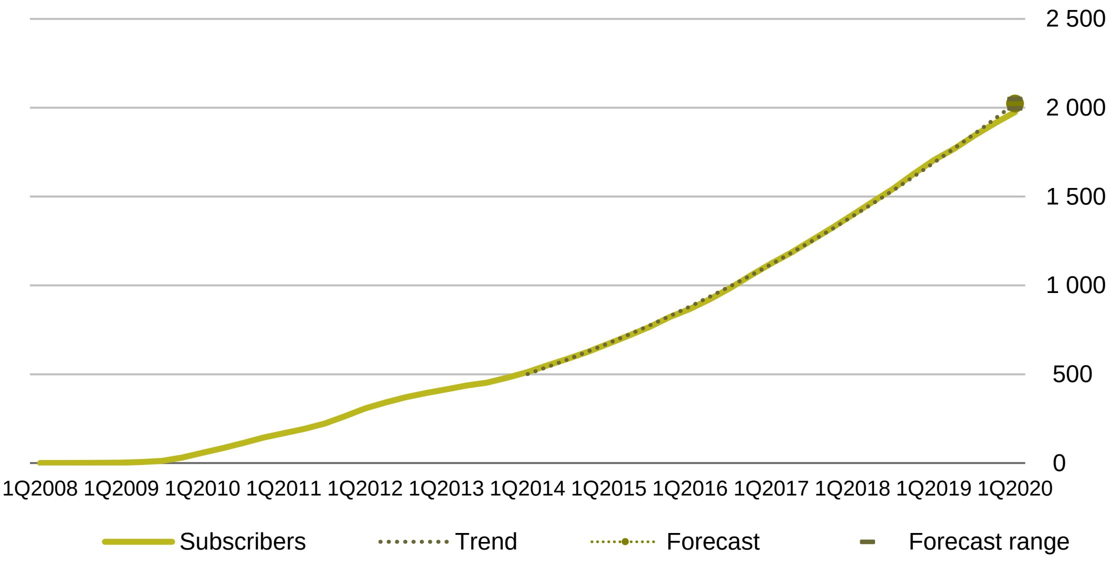
2.1 Subscribers to the optical fibre (FTTH) television service

There are currently six entities that provide offers for the distribution of STV signals over optical fibre (FTTH): MEO, Vodafone, NOS Group, Pinkhairezonanet, NOWO and OTNETVTEL.

In 1Q2020, the number of subscribers to the TV signal distribution service supported by optical fibre (FTTH) reached 2 million, 271 thousand more (+15.9%) than in the same period last year. The variations that occurred were mainly related to the activity of MEO and, to a lesser extent, to the activity of Vodafone and NOS Comunicações.

The number of subscribers registered in 1Q2020 was within the forecast range resulting from the recent historical evolution (Figure 3).

Figure 3 – Evolution in subscribers to the STV signal distribution service supported by optical fibre (FTTH)



Unit: 1000 subscribers

Source: ANACOM

Note: For the purposes of modelling the series, a regression model with a quadratic trend was used: Y= 462,257 + 37,685 t + 990t^2.
Forecast range with a significance level of 95% and R^2 equal to 0.9994.

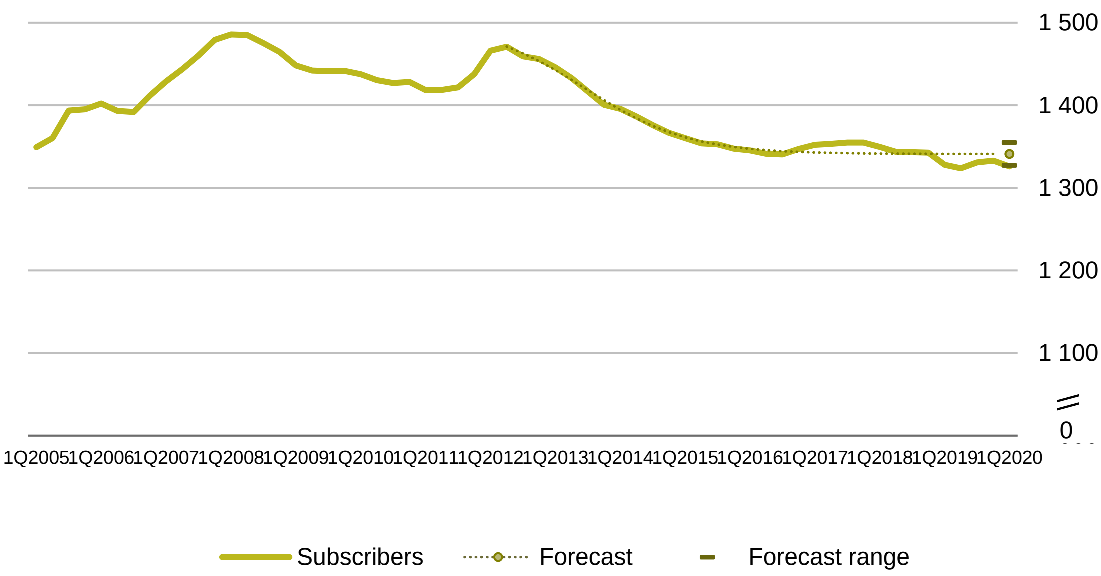
2.2 Cable television service subscribers

There are six entities that have reported information on the provision of this service through cable TV networks: NOS Group, NOWO, Associação de Moradores de Almancil, Transview, Cyclop Net and Sousa Pinheiro Telecomunicações.

In 1Q2020, the total number of subscribers to the cable television service was 1.3 million, 2 thousand fewer (0.2%) than in the same quarter last year. Between the end of 2016 and the end of 2017 there was an inversion of the downward trend recorded over the previous years. However, as of the end of that period, the number of cable TV subscribers decreased again, reaching its lowest levels in 2Q2019 and 1Q2020.

In 1Q2020, the total number of subscribers to this service was below the forecast range resulting from the historical trend (Figure 4), with the verified decrease being mainly related to the activity of NOWO and, to a lesser extent, to the activity of NOS Comunicações.

Figure 4 – Evolution in subscribers to the cable STV signal distribution service



Unit: 1000 subscribers

Source: ANACOM

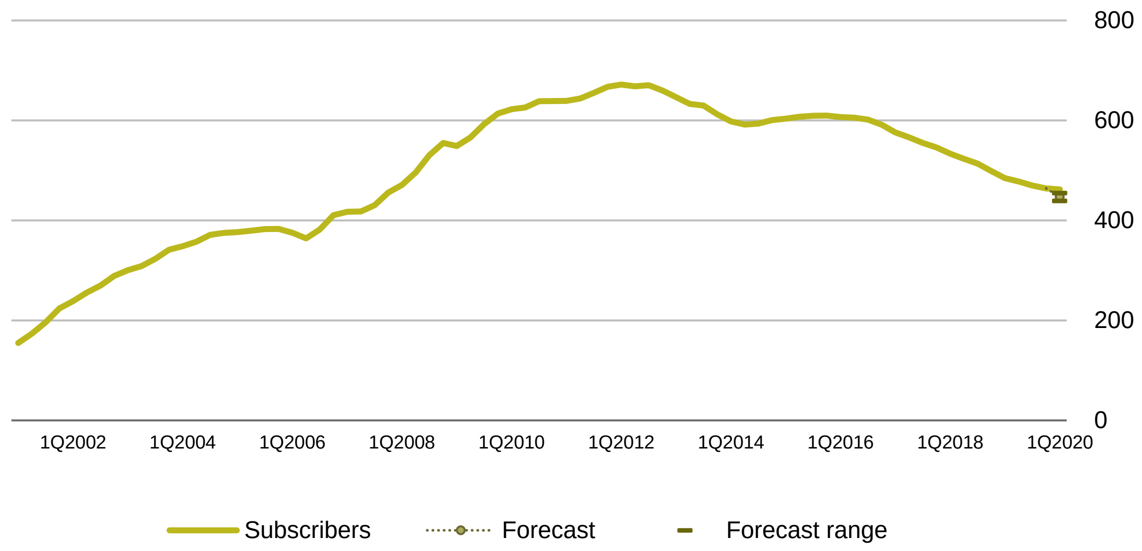
Note: For the purposes of modelling this series, a non-linear logistic model was used: Y=1,340,997+158,673/(1+exp(0.31*(t-5.84))).
The modelling was carried out from the second quarter of 2012. Forecast range with a significance level of 95% and R^2 adjusted from 0.974.

2.3 Satellite (DTH) television service subscribers

At the end of 2019, the number of Direct To Home (DTH) subscribers – a service provided by the NOS Group companies and by MEO – reached 462 thousand, 23 thousand less (-4.7%) year-on-year. This is the lowest absolute and relative fall since 2016.

Between the second quarter of 2012 and the second quarter of 2014, there was a reduction in the number of subscribers supported by satellite. As of the third quarter of 2014, the trend was reversed due to the launch (in the second quarter of 2014) of convergent deals for satellite TV and internet and voice services supported by 4G. From 2016, a new declining trend began in DTH subscribers perhaps associated with the increasing penetration of the next generation of fixed networks (Figure 5). In 1Q2020, this trend slowed. In this quarter the number of DTH subscribers fell by 4.7%, while it decreased by 9.1% in the previous year. At least one provider recorded an increase in the number of subscribers to this technology. This evolution may have been influenced by the State of Emergency associated with COVID-19 that came into force on 18 March 2020 and was extended beyond the time frame of this report.

Figure 5 – Evolution in subscribers to the satellite STV signal distribution service (DTH)



Unit: 1000 subscribers

Source: ANACOM

Note: For the purposes of modelling this series, a linear regression was used: Y = 685,749 – 10,848t – 80,955est + 11,028est*t, est being a dummy variable associated with the period from 4Q2014 to 3Q2016, during which the launch of convergent deals for satellite TV and internet and voice services supported by 4G occurred, which reversed the downward trend seen since the beginning of 2012. Modelling started in 4Q2014.

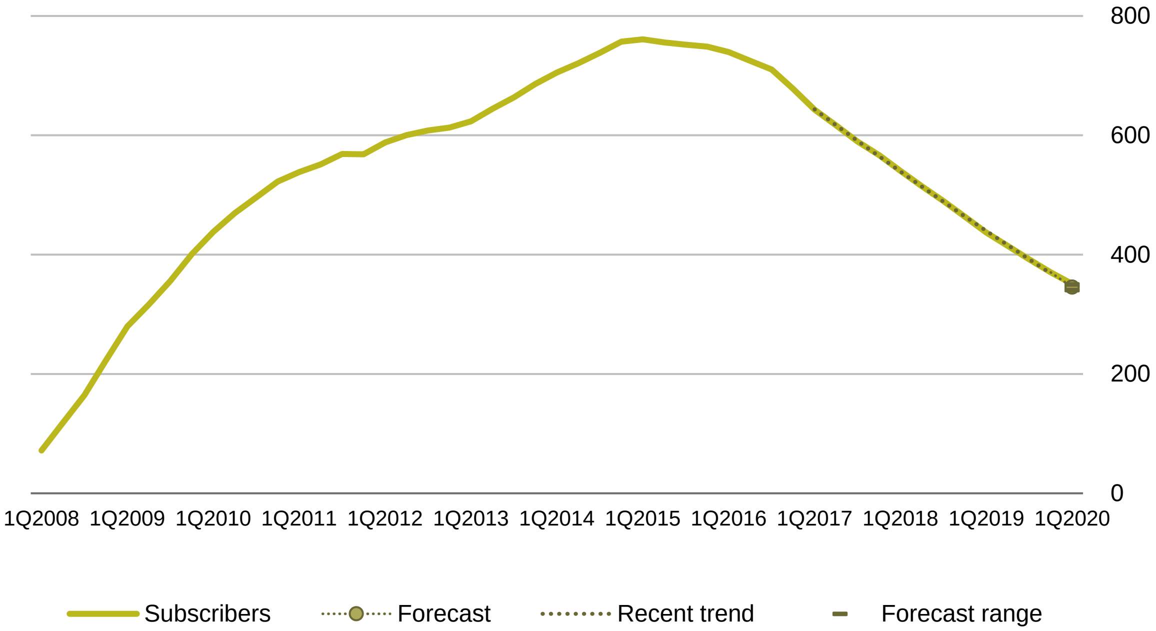
2.4 Television service subscribers over ADSL

There are currently 3 operators that provide ADSL-supported STV signal distribution service deals: MEO, Vodafone and NOS Comunicações.

Subscribers to the ADSL-supported STV signal distribution service were around 351 thousand in 1Q2020, 86 thousand less (-19.7%) than in the same quarter last year. This is the lowest absolute decrease since the end of 2016.

The downward trend started in the second quarter of 2015 is maintained, following an increase in coverage and the penetration of next generation networks. In 1Q2020, this trend slowed down. The number of subscribers supported by ADSL remained slightly above the forecast range resulting from the recent historical evolution (Figure 6). As with the mentioned DTH technology, this evolution may have been influenced by the State of Emergency associated with COVID-19 that came into force on 18 March 2020 and was extended beyond the time frame of this report.

Figure 6 – Evolution in ADSL-supported STV signal distribution service subscribers



Unit: 1000 subscribers

Source: ANACOM

Note 1: Modelling started in 1Q2017. From 2Q2015, there was a turning point associated with the higher growth in STV customers who adopted new technological platforms (mainly FTTH).

For the purposes of modelling this series, a regression model with a quadratic trend was used: $Y = 670{,}398 – 27{,}003\ t - 154t^2$. Forecast range with a significance level of 95% and R^2 adjusted from 0.999.

Note 2: This series includes subscribers who subscribe to the STV signal distribution service through AR Telecom's deals over fixed wireless access – FWA using a proprietary standard. This provider stopped offering this type of service on 30 November 2011.

3. Shares per provider

At the end of 1Q2020, although it dipped below 40% for the first time, the NOS Group was the provider with the highest share of subscribers to the subscription TV signal distribution service (39.9%), followed by MEO (39.7%), Vodafone (16.5%) and NOWO (3.7%) – see Table 2.

Vodafone and MEO were the providers that, in net terms, had the largest number of subscribers compared to the same quarter last year, with their shares increasing by 1.0 p.p. and 0.3 p.p. respectively. On the other hand, there was a decrease in the shares of the NOS Group (-0.9 p.p.) and NOWO (-0.3 p.p.).

Table 2 – Shares of subscribers to the subscription TV signal distribution service

	1Q2019	1Q2020	Variation (p.p.) 1Q2019/1Q2020
NOS Group	**40.8**	**39.9**	-0.9
NOS Comunicações	38.2	37.3	-0.9
NOS Madeira	1.8	1.8	0.0
NOS Açores	0.9	0.8	0.0
MEO	39.5	39.7	0.3
Vodafone	15.5	16.5	1.0
Cabovisão / NOWO	4.0	3.7	-0.3
Other Providers	0.1	0.1	0.0

Unit: %

Source: ANACOM

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

The concentration level, as measured by the Herfindahl-Hirschman index[1], although high, decreased slightly compared to the same quarter last year. The current decreasing concentration trend began in 2013 with the launch of Vodafone's triple play deal supported on FTTH. Since the start of 2018, the concentration level has only decreased slightly.

[1] The Herfindahl-Hirschman (HHI) index is frequently used 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 vary between approximately zero (in a fragmented market) and 10,000 (in the case of an absolute monopoly). When the HHI is over 1,800, the market is considered to be highly concentrated. Between 1,000 and 1,800, the market is considered to be moderately concentrated.

Methodological note

Methodological note

a. Sources

- Quarterly survey on electronic communications networks and services.

  Information collected quarterly from electronic communications providers in accordance with the specifications and definitions contained in Annex 2 of the Regulation on the provision of statistical information (Regulation 255/2017, published on 16 May 2017: https://www.anacom.pt/render.jsp?contentId=1415433). The reference date for the information presented is 30-04-2020. The quarterly information now made available may be subject to revisions or updates.

- Statistical aggregates published by Statistics Portugal (INE).

  This report uses the most recent estimates of the population, private family homes and private households, after the 2011 Census. For this reason, the penetration figures are not comparable with those of previous reports.

b. Definitions and notes

- Subscribers.

  See Section I.5 of Annex 2 of the Regulation on the provision of statistical information (Regulation 255/2017, published on 16 May 2017: https://www.anacom.pt/render.jsp?contentId=1415433).

  For the purposes of accounting for subscribers and shares, services provided under the protocol signed between the Government of the Republic, Regional Governments, ANACOM, NOS Açores and NOS Madeira and which aim to guarantee citizens of the archipelagos free access to generalist channels nationwide and the gradual migration from analogue to digital technology are not considered.

- Private households.

  Statistical aggregate consisting of the group of people residing in the same accommodation and who have kinship relationships (in law or in fact) with each other, including any independent person who occupies all of part of an accommodation unit (see http://smi.ine.pt/Conceito/Detalhes/1123#Hist%C3%B3rico).

c. Acronyms and abbreviations

ADSL	Asymmetric Digital Subscriber Line	FTTH	Fibre-to-the-Home	1Q2020	First quarter of 2020
DTH	Direct to Home	STV	Subscription television signal distribution service		

d. Conventional signs

%	percentage	p.p.	percentage points