EETT

HELLENIC TELECOMMUNICATIONS & POST COMMISSION

23

MARKET REVIEW

OF ELECTRONIC COMMUNICATIONS & POSTAL SERVICES

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SUMMARY

Summary

a) Electronic communications

In 2023, the telecommunications sector in Greece appears to be stabilizing despite some minor negative fluctuations in key economic figures. The General Consumer Price Index (CPI) increased by an average of approximately 3.5% compared to 2022, in contrast to the Communications Sub-index, which declined on average by 2.5% compared to the previous year. Additionally, the completion of the NOVA-WIND merger was one of the largest structural changes affecting the sector in 2023. Investment plans kept on being implemented with a focus on the development of next-generation networks and 5G infrastructure. At the same time, competition among providers remained high, particularly in data services and bundled offers, driven mainly by high-speed broadband access (fixed and mobile) and Pay-TV services.

Financial data

The industry's turnover decreased to 5.0 billion euros, with revenues from telecommunications services accounting for its largest share (85.2%). The contribution of the industry's turnover to Greece's Gross Domestic Product (GDP) was 2.3% in 2023, having decreased compared to 2022, given that the GDP increased annually by 6.6%, while the turnover in the telecommunications market decreased by 1.4%. Total investments made by the electronic communications operators amounted to approximately 1 billion euros, ranging at 20.3% of their total turnover and having increased by 9.3% compared to 2022.

Broadband

At the end of 2023, fixed broadband connections amounted to 4,513,239 lines, registering an annual increase of 0.6%, with a 43.3% fixed broadband penetration in the population. VDSL lines amounted to 2,503,673 compared to 2,393,631 in December 2022 (annual increase by 4.6%), accounting for 55.5% of all broadband lines.

Moreover, there was a significant increase in the percentage of ultra-high-speed broadband lines (nominal download access speed of 100 Mbps and above), which now account for 32.6% of the country's broadband lines (up from 26.3% at the end of 2022). The high-speed broadband lines (nominal download access speed of 30 Mbps up to 100 Mbps) constituted 30.1% compared to 30.5% at the end of 2022.

Regarding national broadband coverage, the Next Generation Access Networks' (NGA) coverage increased by 3.6 percentage points to 88.9% (versus 86.3% in 2022), still lagging the respective European average of 92.9%, as providers mainly focused on developing Fiber to the Premises (FTTP), which increased significantly by 10.6 percentage points from 27.8% to 38.4%.

Despite the progress made in the very high-capacity networks (VHCNs), Greece with a 38.4% coverage in 2023 and given the lack of cable infrastructure and relying mainly on developing FTTP networks, still lagged the European average of 78.8% by 40.4 percentage points (versus 73.4% in June 2022). In terms of total fixed broadband coverage, Greece, with a rate of 97.3%, was still below the EU average of 97.7%. This gap highlights the significant potential for further investments, especially in rural areas where infrastructure is less developed.

The total 5G coverage increased by 12.4 percentage points, reaching 98.1% in June 2023, exceeding the European average (89.3%), while especially for the 3.4-3.8 GHz band, the coverage increased by 22 percentage points, reaching 58.8% of households, also over the EU average (50.6%).

Finally, the total number of active mobile telecommunications connections that used data services reached 9,612,244, registering an annual increase of 3.3% and a population penetration rate of 92.3%.

Fixed communications

In December 2023, the number of fixed telephony lines amounted to 5,091,488, having increased annually by 4.4% with the respective penetration in the population reaching 48.9%. However, the total fixed telephony traffic declined annually by

10.1%, mainly due to the decreasing traffic duration of national fixed calls (1.1 billion minutes less compared to 2022, a drop of 11.9%) and is attributed to both OTE (a 18.2% drop in its total traffic compared to 2022) and the alternative operators (a 2.2% decrease of their total traffic compared to the previous year).

OTE still remains the incumbent operator with a 52.9% share as regards to fixed telephony lines (compared to 55.4% in 2022) and a 45.2% share in terms of traffic (versus 49.6% in 2022). The fixed telephony lines of the other operators gained a 47.1% share having increased by 10.3% (223,090 lines) compared to the previous year.

Retail revenues from telephony and Internet services at a fixed location amounted to 1.38 billion euros, registering a further decrease by 2% compared to 2022. The revenues from Internet services continued to grow (6.5% increase compared to 2022), compensating for the ongoing decline of the retail fixed telephony revenues at a fixed location (a 6.9% drop).

Mobile communications

In 2023, the number of mobile telephony connections amounted to 13.7 million, registering a marginal decrease of 0.8% compared to 2022, while active connections reached approximately 11.3 million. As regards mobile operators' market shares in terms of total connections, COSMOTE's share decreased to 46.5% (from 47.8%), while, on the contrary, both NOVA and VODAFONE's shares increased to 22.8% (from 21.9%) and to 30.6% (from 30.2%) respectively. In terms of active connections, COSMOTE's share lies in the range of [45%-55%], followed by VODAFONE with a share in the range of [25%-35%].

The use of mobile communications networks in 2023 was characterized by the 8.1% growth in the domestic voice traffic with the post-paid residential users holding the largest share of its volume (49%), followed by pre-paid users (36.8%). 49% of the calls were on-net. The volume of data services recorded once again a remarkable increase by 48%, reaching 1,249 million GB compared to 844 million GB in 2022. More analytically, a post-paid residential user consumed on average 11.3 GB per month, followed by a pre-paid user with 8 GB and a business user with 7.9 GB.

Finally, the retail revenues from mobile communications services (post-paid and pre-paid) rose by 2.1% amounting to 1.8 billion euros. The average annual revenue per postpaid (connection) and pre-paid user stood at 240 euros (about 20 euros per month) and 83 euros respectively (about 7 euros per month), compared to 250 euros and 79 euros in 2022.

Pay-TV

Pay-TV subscriptions provided by the electronic communications operators increased by 9.7%, amounting to 1.3 million at the end of 2023. For the first time, the subscriptions via IP accounted for the largest share (52%) surpassing the satellite ones (48%), whereas the bundled Pay-TV subscriptions exceeded the unbundled ones. This demonstrates the growing consumer preference for combining multimedia services with traditional telecommunications services.

Bundled offers

At the end of 2023, bundled offers amounted to 4.5 million. For the first time, the most popular type of bundled offer was the triple play of fixed telephony, fixed broadband access and mobile service(s) with 1.89 million subscriptions, followed by the double play of fixed telephony and fixed broadband access with 1.88 million subscriptions, the 4-play (~386 thousand), and triple play of fixed telephony, fixed broadband access and Pay-TV (~292 thousand). Notably, bundled offers that include mobile services amounted to 2.3 million by the end of 2023, accounting for about 52% of all bundled offers.

Price Observatory (Pricescope)

Based on the data submitted by the telecommunications operators to the Price Observatory (Pricescope) at the end of 2023, NOVA, OTE-COSMOTE and VODAFONE commercially offered nearly 1,200 products/programs in the domestic market, recording a 9% decrease compared to 2022. VODAFONE led the market in terms of the total number of available programs, followed by

COSMOTE and OTE, while NOVA nearly doubled its programs due to its merger with WIND. The products of COSMOTE and NOVA mainly targeted residential customers, whereas a great percentage of OTE's and VODAFONE's programs was addressed to business customers.

97% of mobile post-paid products that provided at least voice services, offered unlimited call minutes to all, registering a 13% increase compared to 2022. 23% of mobile post-paid voice and data products offered unlimited data, having decreased by 11% compared to 2022. Finally, 48% of the fixed telephony products that provided at least voice services, offered unlimited call minutes to mobiles, registering an impressive increase by 66% compared to 2022.

b) Postal services

In 2023, the Greek postal market kept on growing, characterized mainly by the significant rise in revenues. There was a notable increase in the number of handled parcels-small packages, which is related to the continued growth of e-commerce, while a further decrease was evident in the number of handled letters.

Specifically, the revenues of the Greek postal market increased by 11.3% compared to 2022, amounting to 729 million euros, and stemmed from handling 316 million postal items, increased by 2% compared to the previous year. It is noted that 76 new companies under General Authorization entered the market, increasing the total number of active postal companies to 731.

The growth rate of parcel lockers was impressive, with their number increasing by 186% in 2023, reaching 5,570 mailboxes compared to 1,947 the previous year.

The Universal Service Provider's (USP) revenue share in the overall market dropped further to 15% from 18% in 2022, while at the same time, the courier companies' share increased to 83% from 80% the previous year. The share of companies with an Individual License remained at the same level (2%).

The share of parcels-small packages increased both in the total revenue of the handled postal items, reaching 68% in 2023, compared to 65% in 2022, and in the total volume of items, rising to 29% compared to 26% in 2022. Specifically, the revenue from the handling of 91 million parcels amounted to 494 million euros, showing a 16.5% increase compared to 2022. In contrast, handled letters reached 225 million, recording a 1.6% drop compared to the previous year, while generating revenue of 236 million euros, up by 1.8% compared to 2022.

89% of the total items was handled within the country, generating the largest share of the Greek postal market revenues (63%). It should be noted that the majority of postal items was delivered from Attica (74%) and Macedonia (12%) to both domestic and international destinations. Regarding international activity, the largest volume of postal items delivered to Greece, originated mainly from the EU (86%), the rest of Europe (6%) and the USA-Canada (4%). Meanwhile, postal items shipments to international destinations were mainly destined to the EU (66%) followed by the USA-Canada (14%) and the rest of Europe (11%).

In addition to the USP, ten companies with an Individual License were active in the Universal Service sector (US-regular mail), in 2023, handling 21% of the postal items of the US sector and generating 12% of its revenues. Letters were undoubtedly the dominant postal item in the US sector, accounting for 91% of handled postal items and generating 82.7% of the sector's revenues.

In 2023, 720 companies under General Authorization were active in the courier services sector. 33% of postal items handled by courier companies was letters and 67% was parcels-small packages. Letters generated significantly less revenue for companies under General Authorization (21%) than parcels-small packages (79%).

Significant data about the Greek electronic communications market for 2023

Key figures

5 billion euros turnover
1.4% drop compared to 2022

2.3% contribution to GDP

1 billion euros investments of electronic communications operators
9.3% increase compared to 2022

Broadband

4,513,239 fixed broadband connections
0.6% increase compared to 2022

43.3% fixed broadband penetration in the population

1,443,058 ultra high-speed broadband lines (>100 Mbps)
24% increase compared to 2022

9,612,244 mobile connections with Internet usage
3.3% increase compared to 2022

92.3% mobile broadband penetration in the population

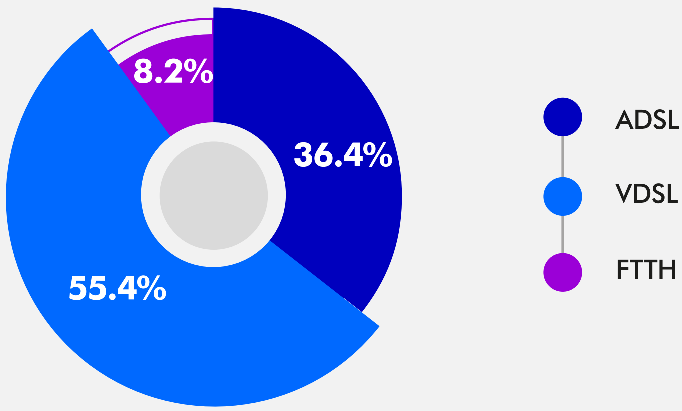
NGA
1,301,099 lines
21.9% increase

VDSL
2,503,673 lines
4.6% increase

Full LLU
1,025,046 lines
17.7% drop

Significant data about the Greek electronic communications market for 2023

Breakdown of broadband lines per technology, December 2023



Fixed telephony

5,091,488 telephony lines

48.9% penetration in the population

1.38 billion euros retail revenues
2% drop compared to 2022

10.2 billion minutes outgoing traffic of national fixed calls
10.1% drop compared to 2022

346,130 ported numbers
10.7% increase compared to 2022

Mobile telephony

11.3 million active connections

109% penetration in the population

1.76 billion euros retail revenues
2.1% increase compared to 2022

36.6 billion minutes of voice calls
8.1% increase compared to 2022

673,187 ported numbers
56.9% increase compared to 2022

Average monthly revenue from fixed & mobile telephony

Per connection from the provision of telephony services at a fixed location & Internet: **22.6 euros**

Per connection from the provision of telephony services at a fixed location: **13.6 euros**

Per post-paid user: **20 euros**

Per pre-paid user: **7 euros**

Significant data about the Greek electronic communications market for 2023

Average monthly use of data services & call duration in mobile telephony

Post-paid residential user: 11.3 GB, 316 minutes to mobiles & 42 minutes to fixed lines

Pre-paid user: 8 GB, 169 minutes to mobiles & 16 minutes to fixed lines

Business user: 7.9 GB, 268 minutes to mobiles & 33 minutes to fixed lines

DATA

48% increase

1,249 million GB
versus
844 million in 2022

SMS

0.2% increase

2.38 billion messages

MMS

13.2% increase

10.8 million messages
versus
9.6 million in 2022

Bundled offers

4.5 million
bundled offers

42.2%
was 3-Play offers
(fixed telephony and fixed
broadband access
and mobile services)

Pay-TV

1.3 million
Pay-TV subscriptions
9.7% increase
compared to 2022

52%
was IP network subscriptions

48%
was satellite TV subscriptions

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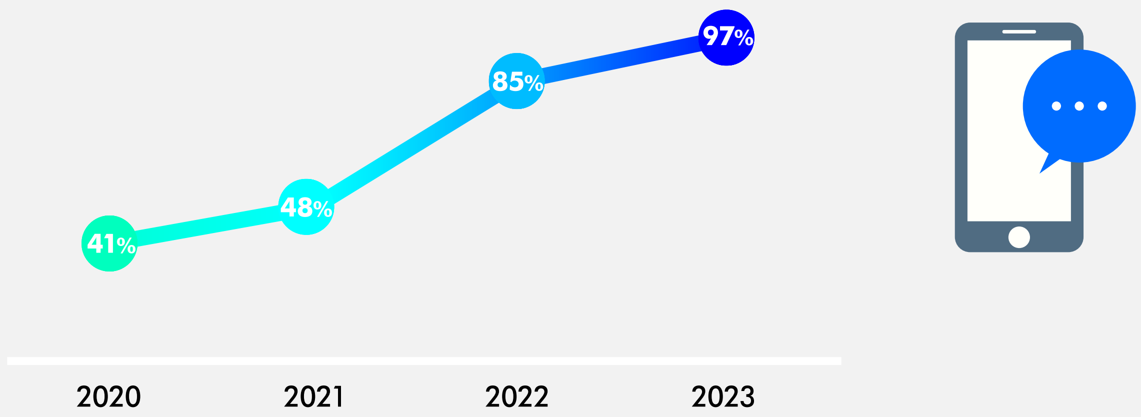
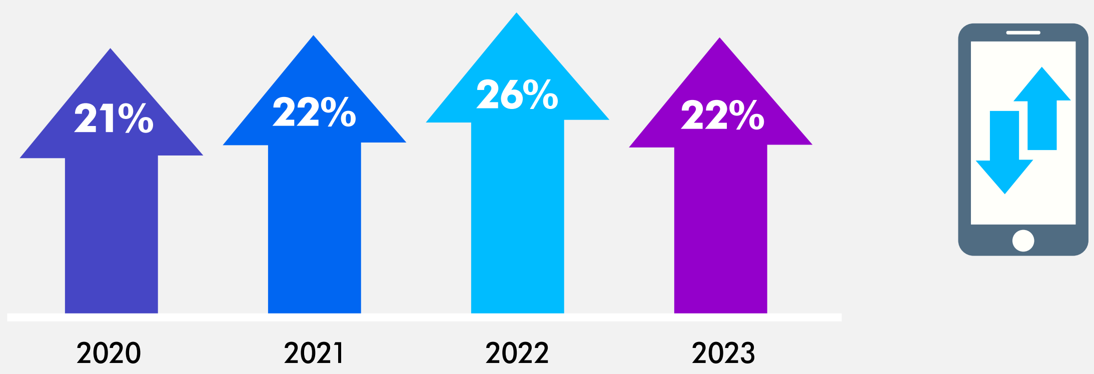
Significant data about the Greek electronic communications market for 2023

Price Observatory-Pricescope

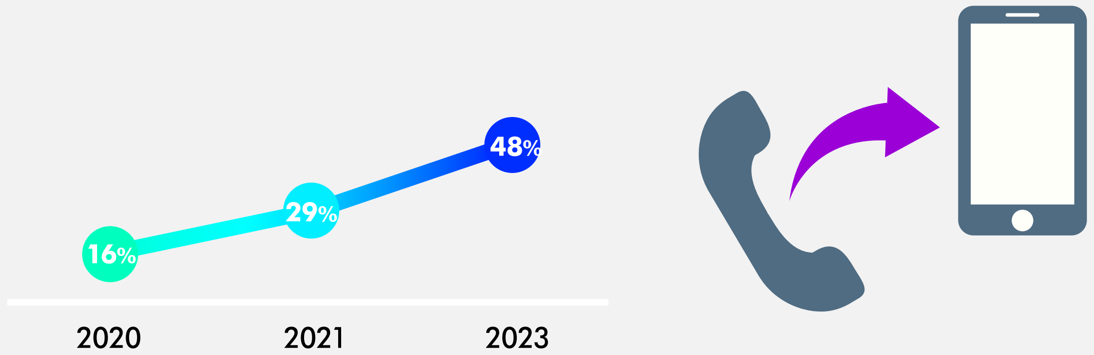
Mobile post-paid products with unlimited call minutes to all



Mobile post-paid products with unlimited data



Fixed telephony products with unlimited call minutes to mobiles



Significant data about the Greek postal market for 2023

729 million euros revenue
11.3% increase compared to 2022

316 million handled postal items
2% increase compared to 2022

731 postal companies

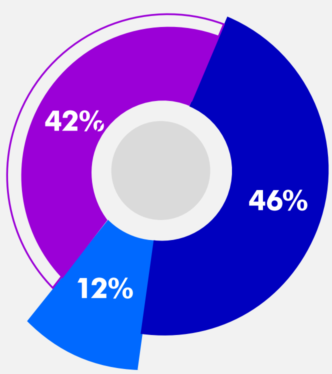
20,213 employees

76 new companies in the courier services market

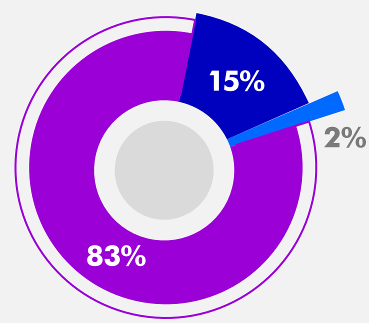
5,570 parcel lockers

Postal items volume and revenue shares per postal sector, 2023

Volume share



Revenue share



USP · Individual License · General Authorization

Universal Service Provider

108 million euros revenue
7% drop compared to 2022

143 million handled postal items
3% drop compared to 2022

Companies with Individual License

14 million euros revenue
12% drop compared to 2022

39 million handled postal items
5% drop compared to 2022

Companies under General Authorization

607 million euros revenue
16% increase compared to 2022

134 million handled postal items
11% increase compared to 2022

Significant data about the Greek postal market for 2023

Volume and revenue share of letters and parcels per postal sector, 2023

Letters

	Volume share	Revenue share
General Authorization	19%	53%
Universal Service	81%	47%

Parcels-small packages

	Volume share	Revenue share
General Authorization	99%	97%
Universal Service	1%	3%

Letters

225
million
handled letters

1.6% drop
compared to 2022

236
million euros revenue
from the handling of letters

1.8% increase
compared to 2022

Parcels-small packages

91
million
handled parcels-small packages

12.2% increase
compared to 2022

494
million euros revenue
from the handling
of parcels-small packages

16.5% increase
compared to 2022

3

ELECTRONIC COMMUNICATIONS

1. Electronic communications

1.1. The Greek electronic communications market

In 2023, the number of licensed operators (active or non-active) in the electronic communications market amounted to 671, compared to 649 in 2022. At the same time and upon the merging of NOVA and WIND, the number of operators offering mobile communications services and the main providers of fixed telephony and broadband services was reduced to three (Table 1.1).

51% of the licensed services was related to the provision of broadband access/internet access and telephone services. Chart 1.1 shows the number of providers that were licensed for each service in 2023[1]. The sector's turnover decreased to 5.0 billion euros[2] (a 1.4% drop), while its contribution to Greece's Gross Domestic Product (GDP) in 2023 was 2.3%, having decreased compared to 2022, since the GDP registered a 6.6% annual growth (Chart 1.2). It is noted that for the period 2014-2023, the weighted average GDP increase was 2.4%, while the reduction for the telecommunications turnover was 0.6%. The number of employees in the electronic communications sector increased by 3.1% compared to 2022, reaching approximately 9.2 thousand versus 8.9 thousand (Chart 1.3).

The Consumer Price Index (CPI) increased by an average of almost 3.5% compared to 2022, while the Communications sub-index kept on spiraling down by an average of 2.5% compared to 2022. The general cost trend for electronic communications services is reflected in the evolution of the CPI over time, as presented in Charts 1.4 and 1.5. According to the Hellenic Statistical Authority (ELSTAT)[3], the communications' weighting coefficient in the total household expenditure used for calculating the CPI increased to 42.29 from 39.59 in 2022, reflecting the ever-increasing share of specific telecommunications services to the total household expenditure.

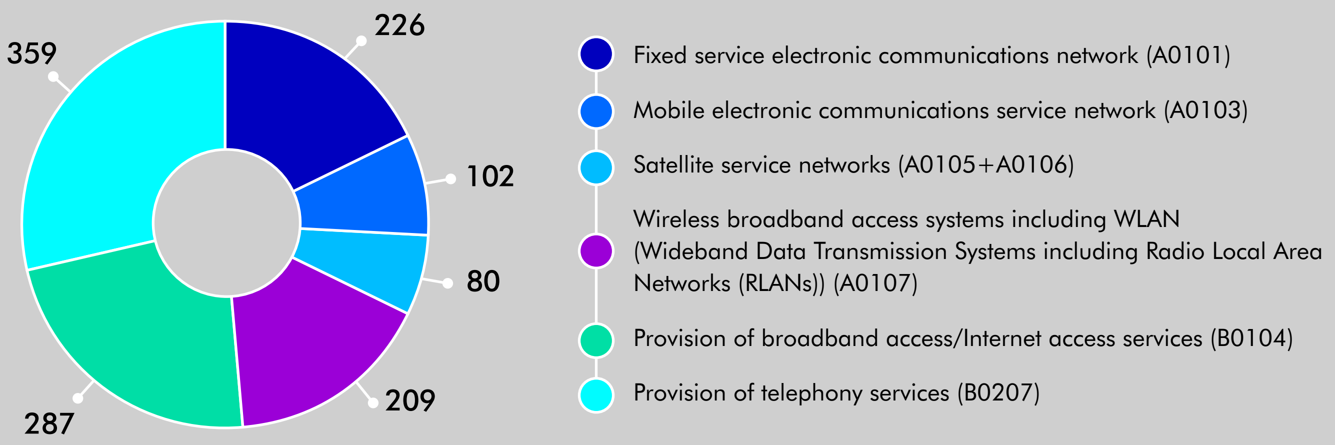
Table 1.1: Mobile Network Operators (MNOs) and main fixed telephony and broadband operators

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Mobile telephony	4	4	4	4	4	3	3	3	3	3
Fixed telephony	8	6	5	5	5	4	4	4	4	3

Source: EETT

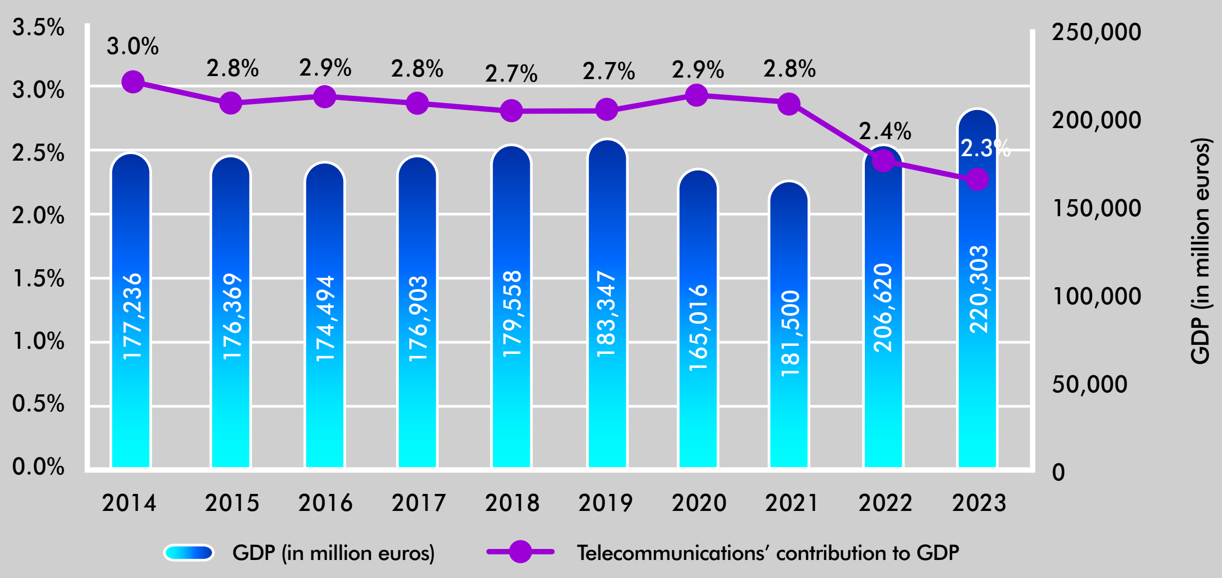
1. It is noted that an operator can be licensed for more than one services.
2. The presented revenues stem from (a) the provision of telecommunications services and the operation of telecommunications infrastructure, (b) the import, trading, construction, installation and maintenance of terminal telecommunications equipment, and (c) audiovisual content services, while other revenues unrelated to telecommunications or audiovisual content are excluded.
3. Single Integrated Metadata Structure (SIMS v2.0) (January 2023-December 2023).

Chart 1.1: Licensed operators per service, 2023



Source: EETT (based on providers' statements in EETT's registry)

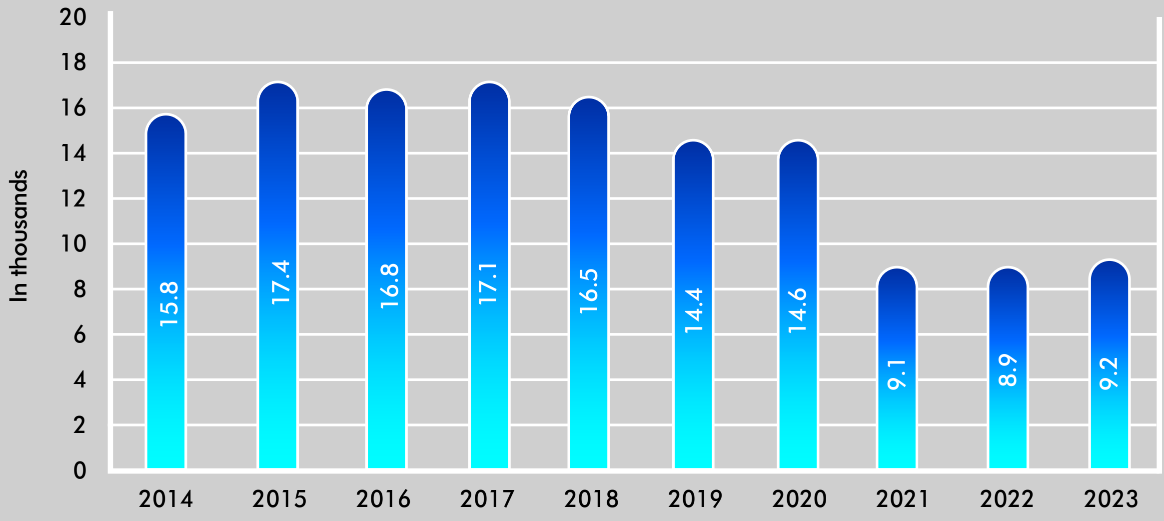
Chart 1.2: Telecommunications' contribution to GDP



Source: EETT (based on questionnaires) and ELSTAT

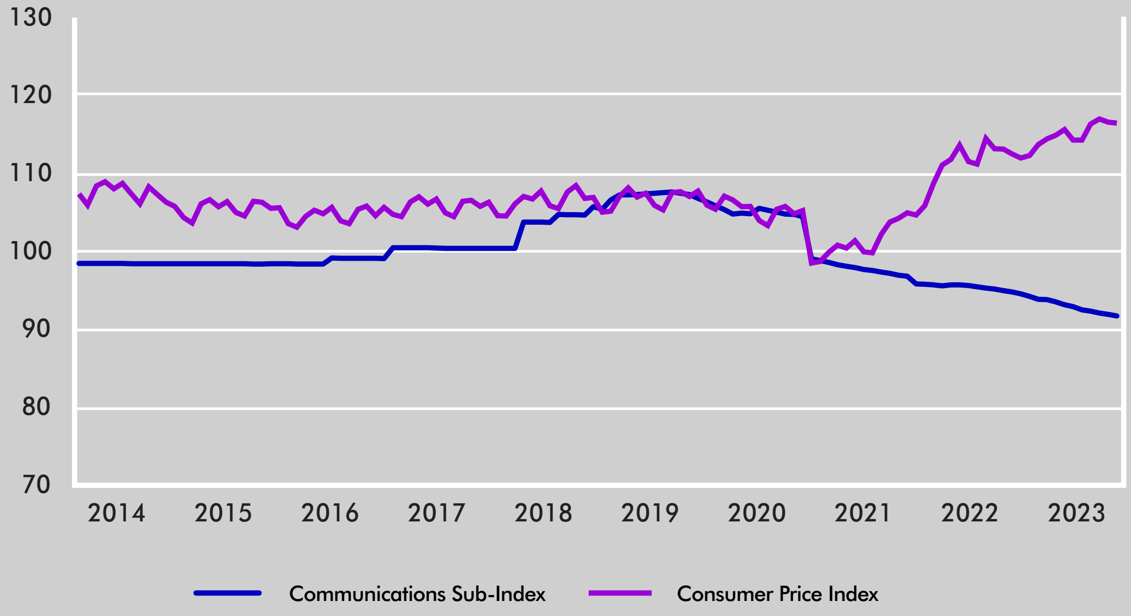
Note: the GDP data and its components for the period 2010-2023 have been estimated with 2015 as the base year. The data revision work with 2015 as the new base year for the period 1995-2009 is ongoing and thus implementing a timeseries break in 2010 at current prices and in 2011 at last year's fixed prices.

Chart 1.3: Number of employees of electronic communications operators



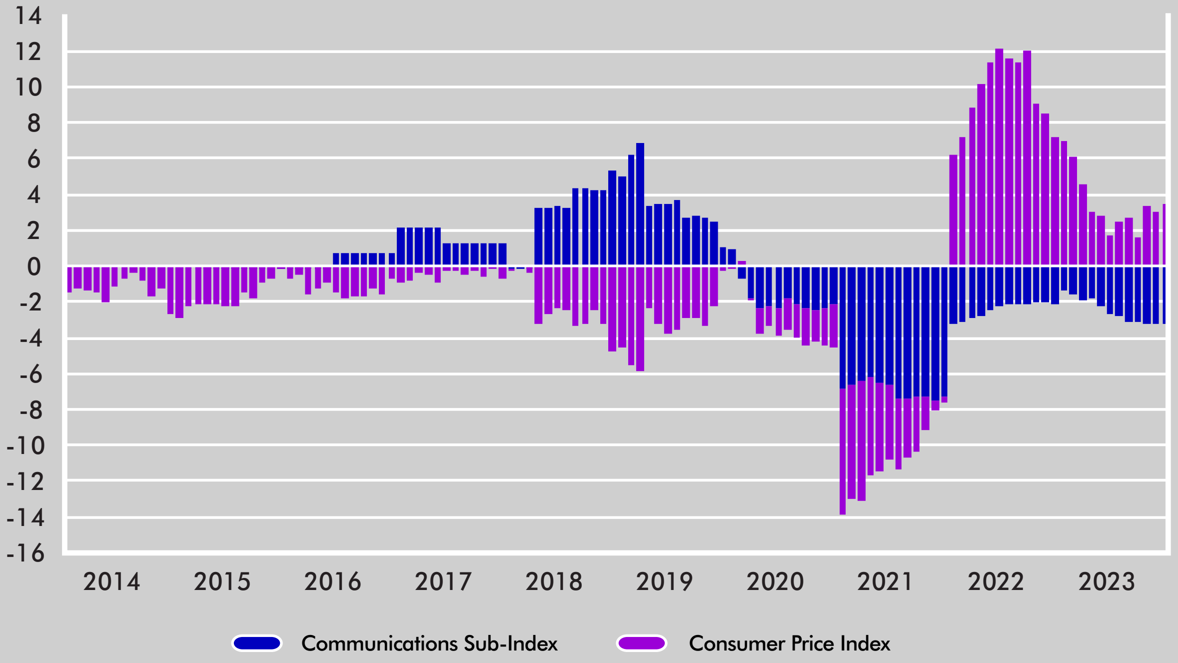
Source: EETT (based on data provided by the active licensed operators)

Chart 1.4: Evolution of the monthly Consumer Price Index (General Index-Communications Sub-Index)



Source: EETT (based on ELSTAT data)

Chart 1.5: Variation of the monthly Consumer Price Index over time



Source: EETT (based on ELSTAT data)

1.2. Electronic communications market key figures

1.2.1. Financial data

This section presents the key financials of the electronic communications market, taking into account the data (turnover, investments, etc.) collected by EETT, from the licensed operators, on a semi-annual basis. In this context, the revenues listed concern those from fixed and mobile communications, telecommunications equipment and Pay-TV of active licensed operators with an annual turnover above 150 thousand euros.

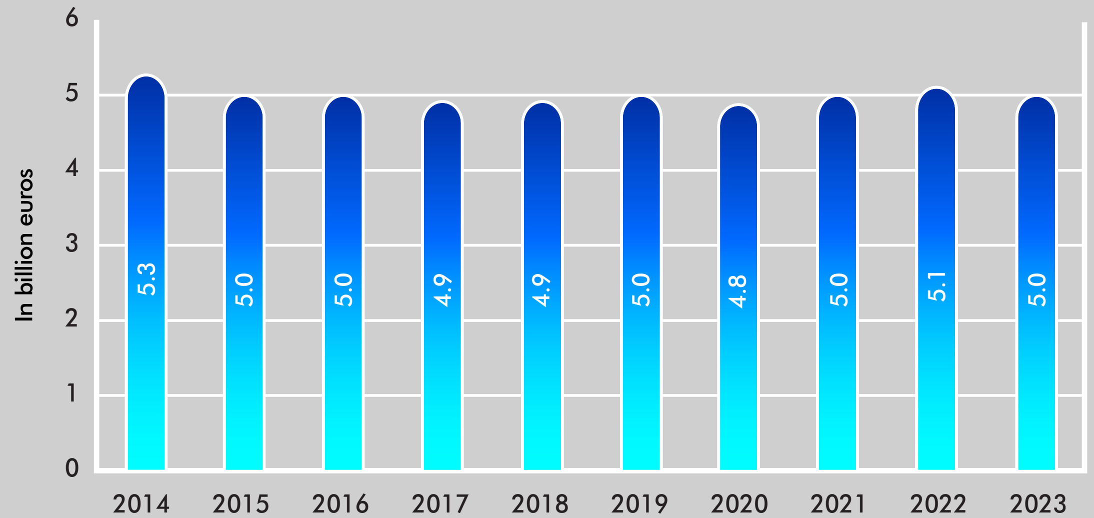
- The telecommunications' sector turnover in 2023 decreased by 1.4%, amounting to 5.0 billion euros (Chart 1.6).
- OTE's turnover grew by 15.4%, while the increase for the MNOs and the alternative operators of fixed telephony and fixed broadband services was 2.3% and 16.1%, respectively (Chart 1.7)[4].
- The telecommunications services revenues accounted for 85.2% of the sector's turnover (Chart 1.8).
- The fixed communications services revenues constituted 52.8% of the telecommunications services revenues (Chart 1.9). Those include both retail revenues from telecommunications services (teleph-

4. It is noted that in 2023, the integration of OTEGlobe into OTE and of NOVA M.A.E. (formerly FORTHNET) and NOVA BROADCASTING AE (formerly FORTHNET MEDIA) into NOVA M.A.E. (formerly WIND HELLAS TELECOMMUNICATIONS S.A.) was completed, a fact reflected in the revenue of all four categories.

ony and Internet including access to the phone network, leased lines etc.) and wholesale revenues [e.g. interconnection, wholesale access-Local Loop Unbundling (LLU)]. Similarly, the revenues from mobile communications services, which accounted for 44.9% of revenues, include retail revenues from voice and mobile phone data services, as well as wholesale interconnection revenues, roaming etc.

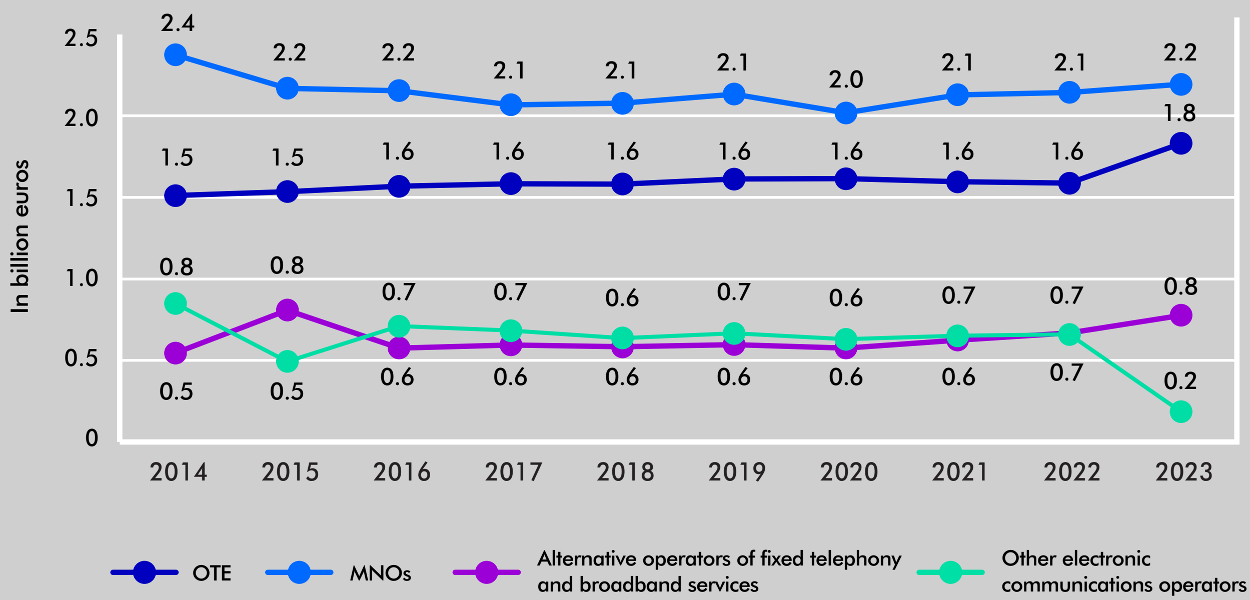
- The retail revenues from telephony and Internet services remained stable, making up approximately 60.4% of the total fixed network revenues, while revenues from interconnection services accounted for 14.3% (Chart 1.10). As far as the mobile networks and services are concerned, the retail revenues from voice and data services made up 59.3% and 28.4%, respectively, of total mobile networks revenues (Chart 1.11).
- The total investments of electronic communications operators ranged at 20.3% of their total turnover, registering a 9.3% increase compared to 2022 (Chart 1.12).
- During the last five years, over 50% of investments have been made in fixed networks, with the exception of 2020, when the radio frequency rights of use were granted in the 700 MHz, 2 GHz, 3400-3800 MHz, and 26 GHz bands to support the development of 5G mobile communication networks (Chart 1.13).
- In 2023, the electronic communications operators invested mostly in telecommunications infrastructure (53.6%), as well as in research and development (e.g. software, new services) (18.7%) (Chart 1.14).
- The majority of investments (over 50%) in the last five years was tangible (infrastructure, buildings, equipment, etc.), except for 2020, when intangible investments (research and development, licenses, etc.) predominated due the granting of the radio frequency rights of use (Chart 1.15).

Chart 1.6: Electronic communications sector's turnover



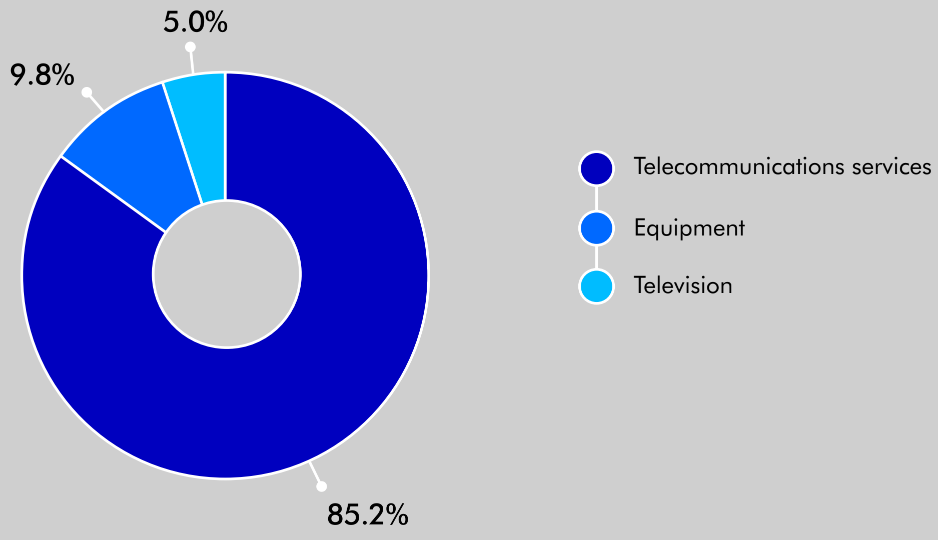
Source: EETT (based on data provided by the active licensed operators)

Chart 1.7: Electronic communications operators' turnover



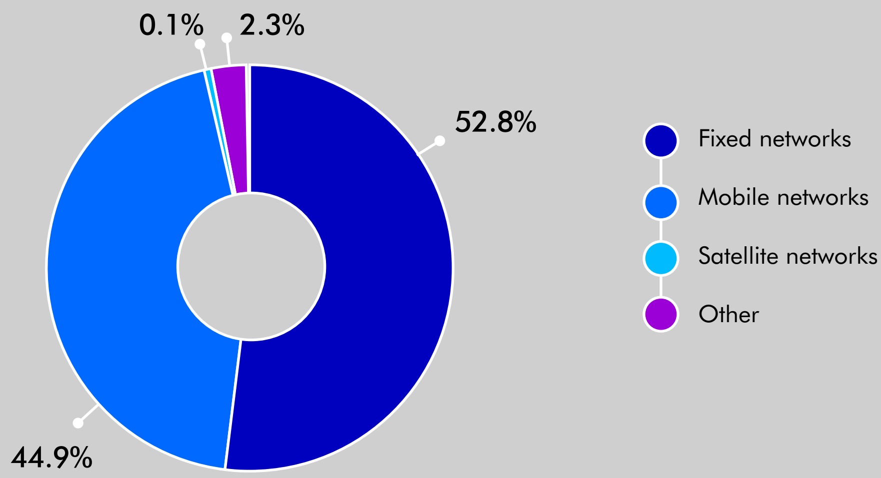
Source: EETT (based on data provided by the active licensed operators)

Chart 1.8: Breakdown of electronic communications operators' turnover, 2023



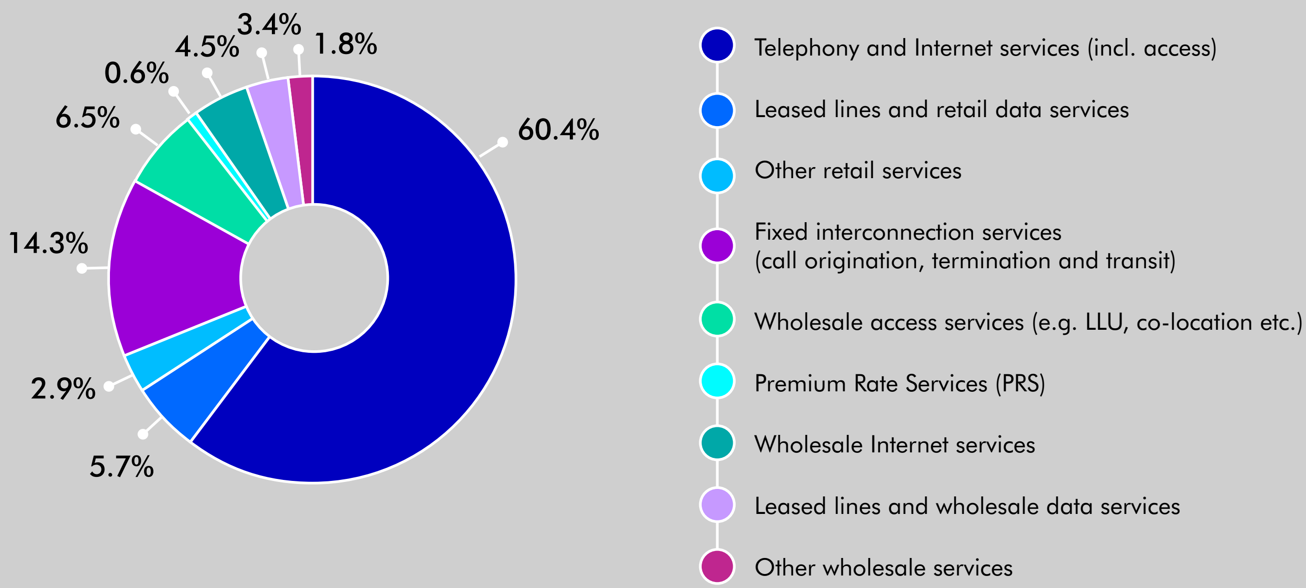
Source: EETT (based on data provided by the active licensed operators)

Chart 1.9: Breakdown of revenues from telecommunications services, 2023



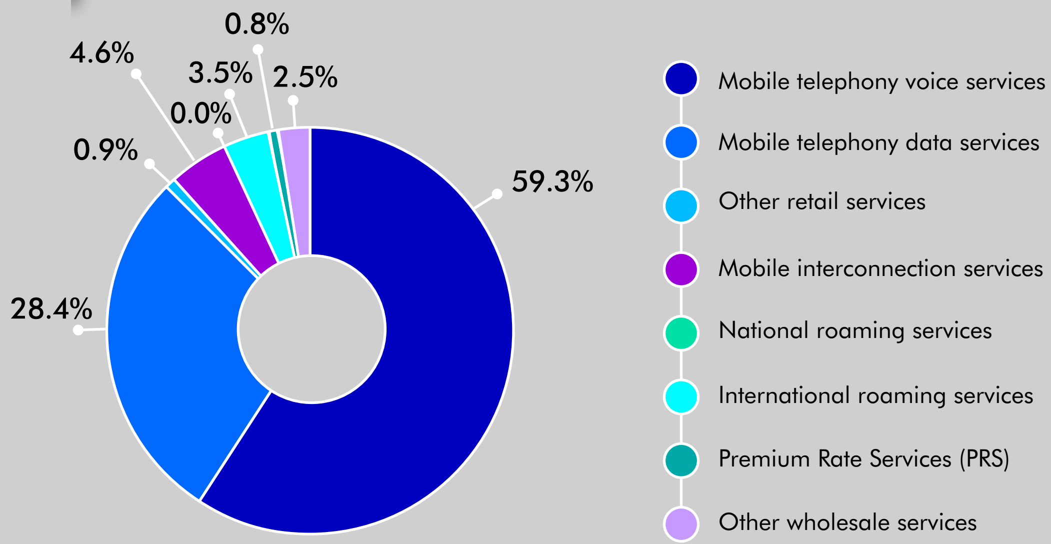
Source: EETT (based on data provided by the active licensed operators)

Chart 1.10: Breakdown of revenues from fixed networks, 2023



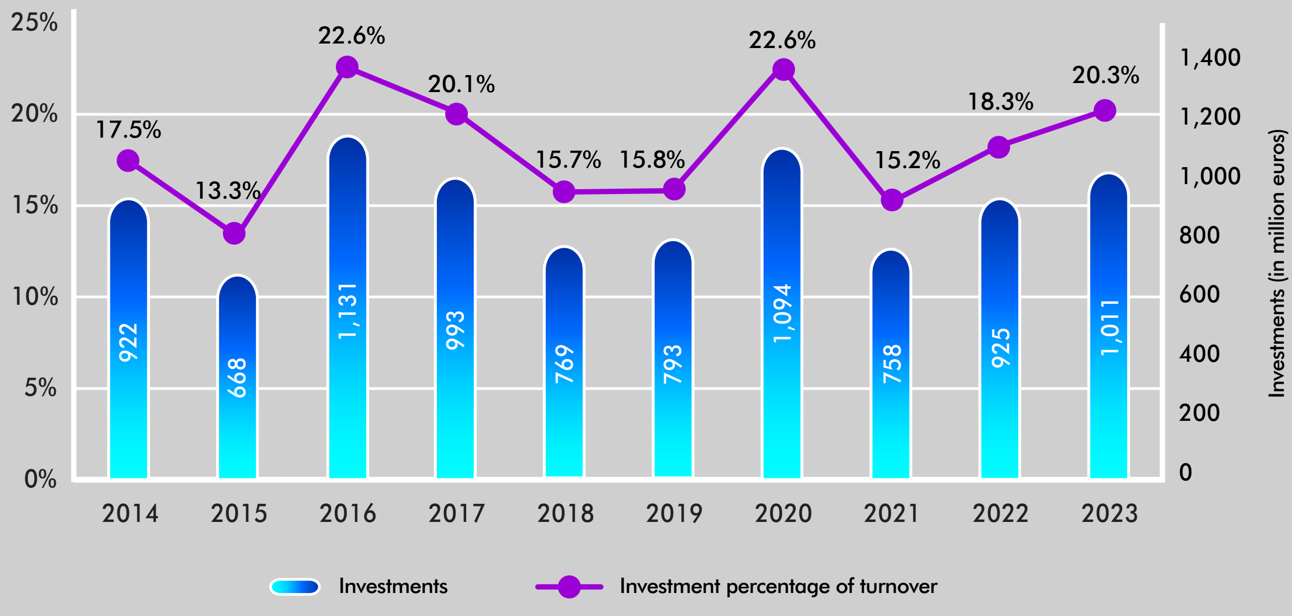
Source: EETT (based on data provided by the active licensed operators)

Chart 1.11: Breakdown of revenues from mobile networks, 2023



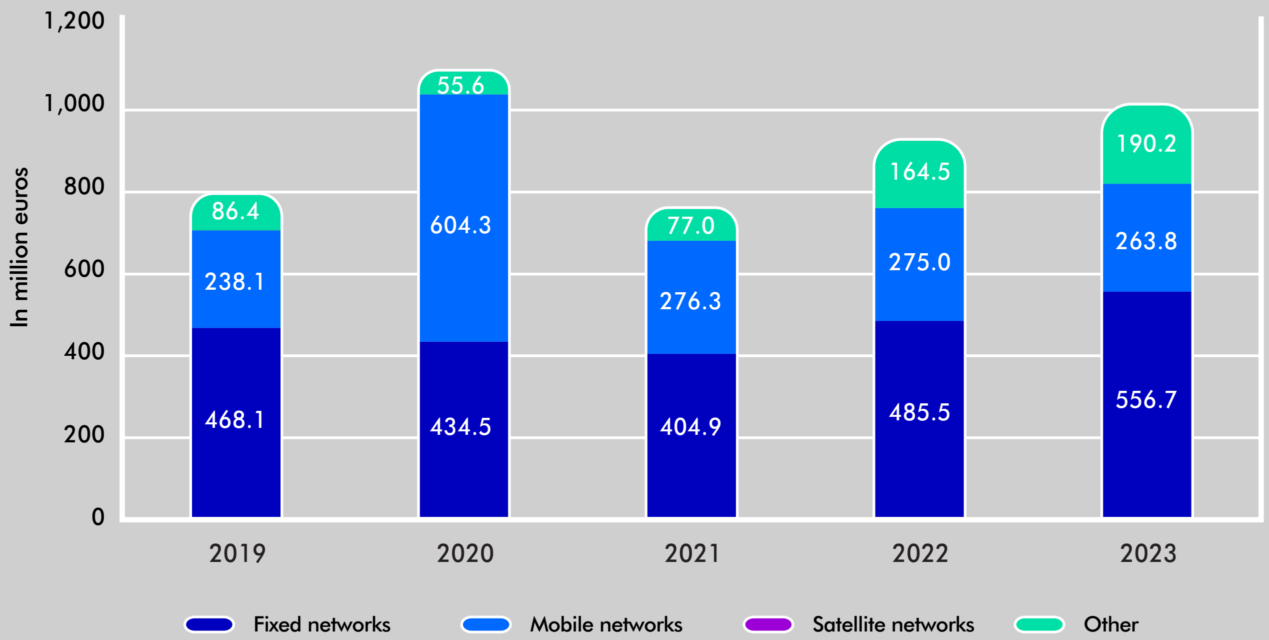
Source: EETT (based on data provided by the active licensed operators)

Chart 1.12: Electronic communications operators' investments



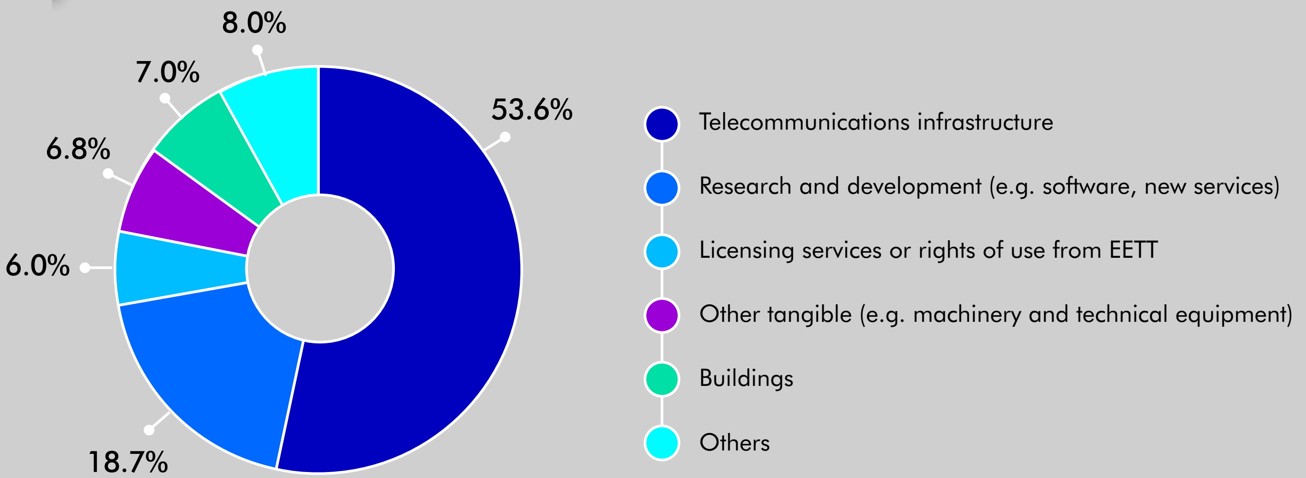
Source: EETT (based on data provided by the active licensed operators)

Chart 1.13: Electronic communications operators' investments per network



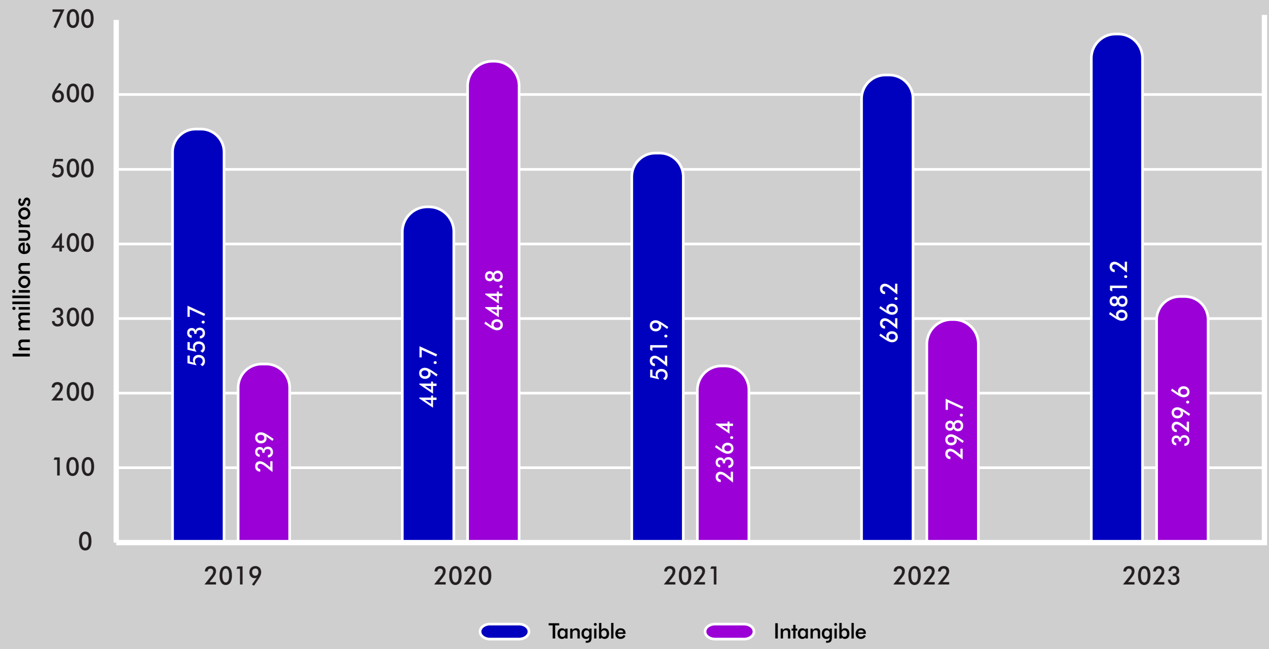
Source: EETT (based on data provided by the active licensed operators)

Chart 1.14: Breakdown of electronic communications operators' investments, 2023



Source: EETT (based on data provided by the active licensed operators)

Chart 1.15: Electronic communications operators' investments per type



Source: EETT (based on data provided by the active licensed operators)

1.2.2. Broadband

Fixed broadband

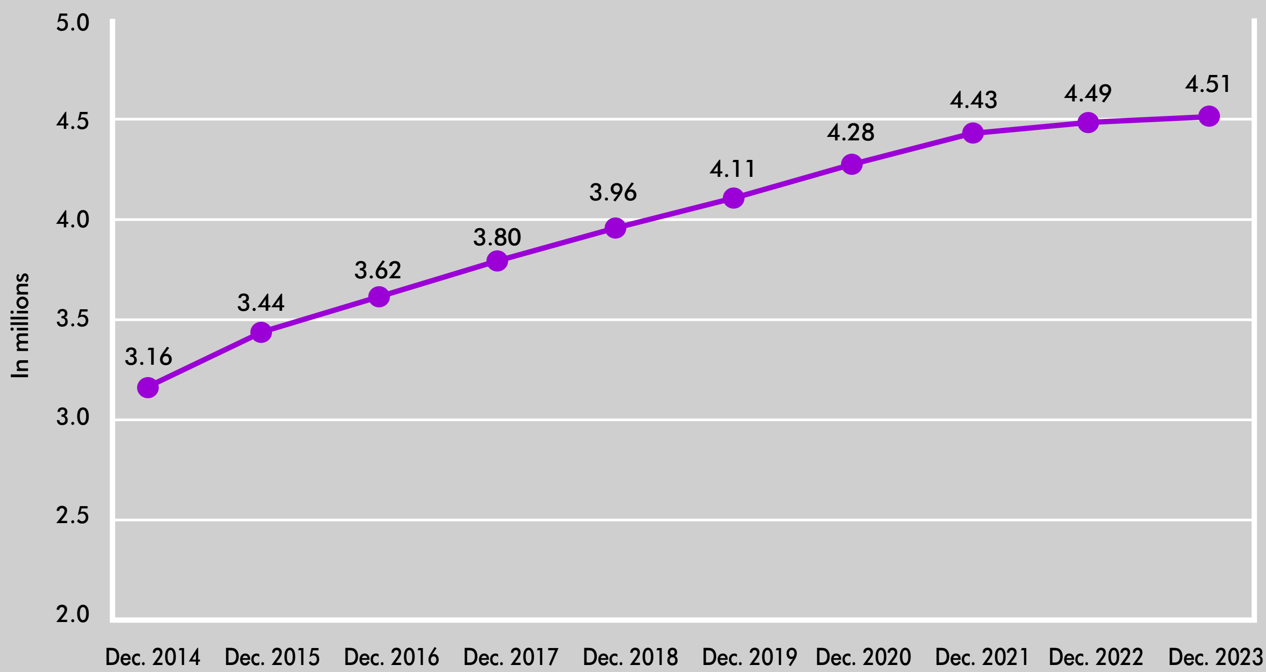
At the end of 2023, broadband connections reached 4,513,239, compared to 4,485,315 at the end of 2022, recording a 43.3% penetration rate in the population. This represents a 0.6% increase on an annual basis, compared to 1.3% in 2022 (Chart 1.16). The average internet traffic for users of fixed broadband access during 2023 reached 2.84 TB per subscriber (up from 2.17 TB per subscriber in 2022). As for the market shares of providers based on the number of fixed broadband lines, COSMOTE leads (45%-55%), followed by NOVA (25%-35%) and VODAFONE (15%-25%) (Table 1.2).

Table 1.2: Market shares of fixed broadband access operators (based on the number of lines)

	December 2023
COSMOTE	45%-55%
NOVA	25%-35%
VODAFONE	15%-25%

Source: EETT (based on data provided by the licensed operators)

Chart 1.16: Evolution of broadband lines



Source: EETT (based on data provided by the licensed operators)

Broadband lines by access type

The breakdown of broadband lines by access type and their over time evolution are presented in Charts 1.17 and 1.18, and are analyzed as follows:

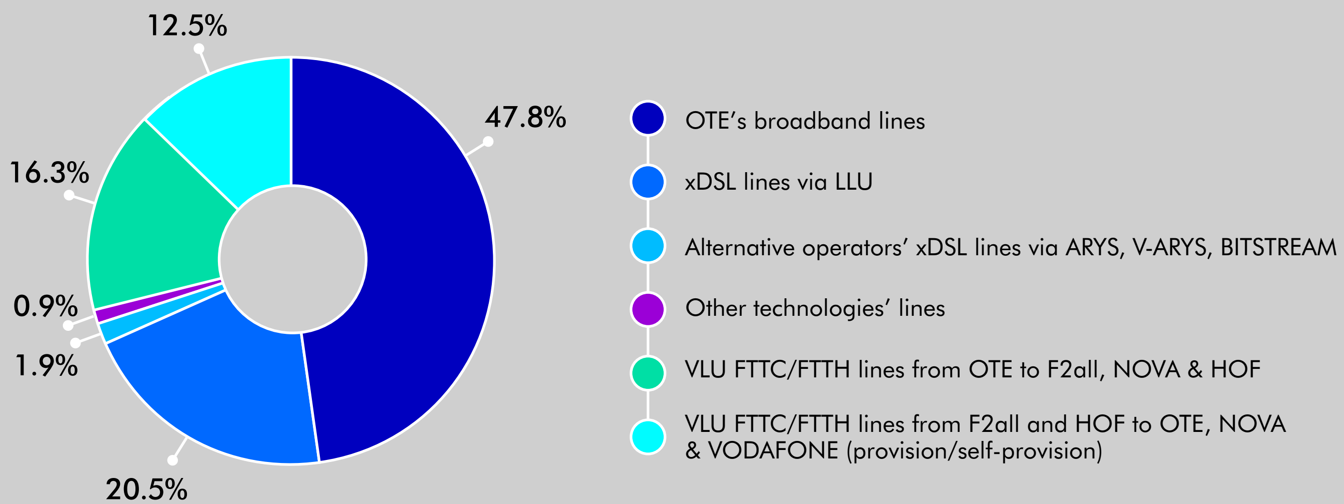
- xDSL lines via LLU decreased at the end of 2023 to 926,961, from 1,118,949 at the end of 2022, with their share of total broadband lines falling to 20.5% from 25% at the end of 2022. Of these, 82,911 lines are provided as Virtual Partial Unbundled loops (VPU)[5].
- The total access lines to Next Generation Access (NGA) networks deployed by providers, as part of the introduction of VDSL Vectoring/FTTH (Fiber to the Home) technology, reached 1,301,099[6], compared to 1,067,751 at the end of 2022. Their share of total broadband lines increased to 28.8% from 23.8% at the end of 2022. Specifically:
  - The access lines from the provision of OTE's VLU FTTC/FTTH lines to F2all (Fiber2All), HOF (Hellenic Open Fiber), and NOVA reached 736,335 (up from 626,287 at the end of 2022). Their

5. It is noted that in providing the VPU product, two technologies coexist, namely voice services via the local loop and VDSL services via the V-ARYS service. Thus, and for the calculation of the individual market shares, these lines are excluded from the local loop lines and are included in the V-ARYS lines.
6. It is noted that VODAFONE and NOVA, by splitting up their fiber optic divisions, have created two new subsidiaries, namely Fiber2All (F2ALLI) and Hellenic Open Fiber (HOF), respectively, with the aim of designing, constructing, and wholesale selling fiber optic infrastructure. The alternative providers INALAN and HCN (Hellenic Cable Networks) are active in providing retail broadband access services at fixed locations exclusively via their own fiber optic access infrastructure (FTTH). These lines are included in the category "Other FTTH/B technologies."

share of total broadband lines was 16.3%, compared to 14% at the end of 2022.
- The access lines provided and self-provided by F2all and HOF to OTE, VODAFONE, and NOVA reached 564,764 (versus 441,464 at the end of 2022). Their share of total broadband lines was 12.5%, compared to 9.8% at the end of 2022.

- Broadband lines from OTE's own infrastructure reached 2,157,143, showing a slight decrease of 0.3% compared to December 2022 (2,164,068 lines). Their share of total broadband lines reached 47.8% (down from 48.2% at the end of 2022). Of these, 1,163,325 (versus 1,050,392 at the end of 2022) were VLU FTTC/FTTH lines provided via OTE's own infrastructure, and 54,242 (versus 51,916 at the end of 2022) were subloop procured by OTE for developing broadband products in rural areas.
- Wholesale ARYS and V-ARYS[7] lines decreased to 87,268, compared to 109,934 in December 2022 (1.9% of total broadband lines, compared to 2.5% at the end of 2022), due to the decrease in the number of VPU products (82,911, compared to 105,954 at the end of 2022).
- Lines from other technologies accounted for 0.9% of broadband lines (up from 0.55% at the end of 2022), including, among others, Fixed Wireless Access (FWA), satellite lines, and fiber lines from alternative providers INALAN and HCN, provided via their own infrastructure.

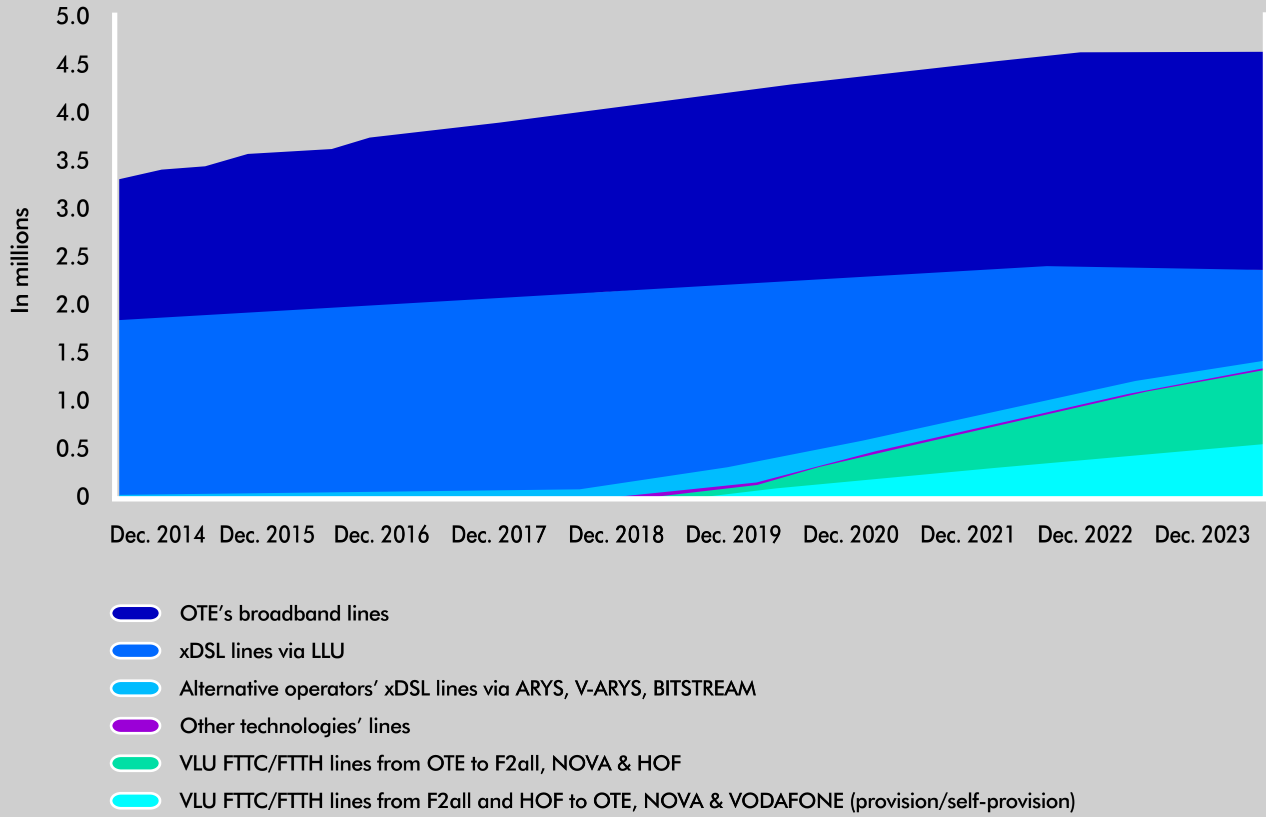
Chart 1.17: Breakdown of broadband lines per access type, December 2023



Source: EETT (based on data provided by the licensed operators)

7. OTE supplies those lines to the alternative operators so they can offer VPU products.

Chart 1.18: Evolution of broadband lines per access type



Source: EETT (based on data provided by the licensed operators)

Broadband lines per technology

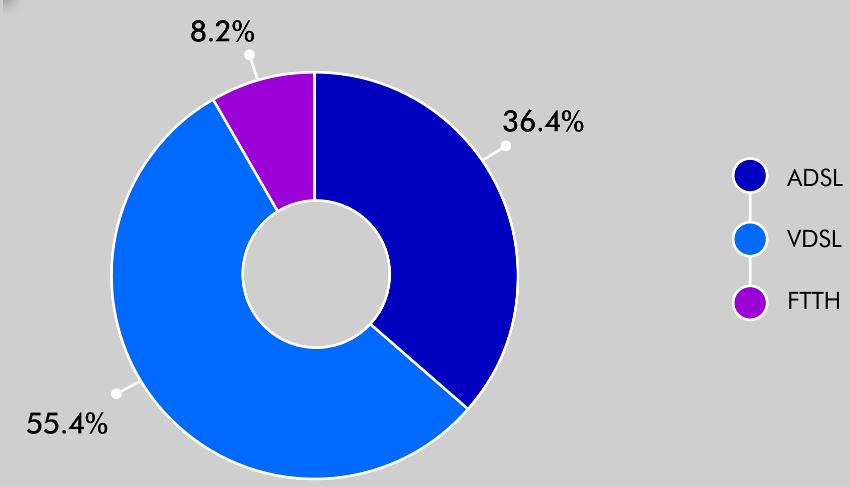
- The VDSL technology held the largest share (55.4%), followed by ADSL (36.4%) and FTTH (8.2%). Compared to previous years, the number of ADSL lines decreased, the number of VDSL lines stabilized, and FTTH lines increased (Charts 1.19 and 1.20).
- The share of FTTH lines in total broadband lines continued to rise, reaching 8.2% at the end of 2023 (versus 4.6% at the end of 2022). This share includes both FTTH lines provided through VDSL Vectoring technology and those implemented by providers via their own access infrastructures[8] (Chart 1.21).
- VDSL lines, which include ≥30Mbps speeds through LLU, VPU, V-ARYS, Bitstream (rural), other technologies, and Vectoring[9] connections, now represent 55.5% of total broadband lines (Chart 1.22).
- At the end of 2023, the share of access lines to NGA networks (VDSL Vectoring/FTTH) from providers and OTE in total broadband lines reached 50.1%, compared to 43.8% at the end of 2022 (Chart 1.23).

8. Certain approximative assumptions have been adopted in order to capture the historical trend in FTTH lines.
9. It is noted that the 2022 prices have been revised after integrating data submitted overdue by a provider.

Additionally, the share of lines from providers[10] (excluding OTE's self-provision) reached 28.8%, compared to 23.8% at the end of 2022. Note that the calculation of the share includes lines implemented by OTE and providers as part of the introduction of VDSL Vectoring/FTTH technology in the access network, as well as OTE's corresponding lines developed via its own infrastructure.

- Regarding retail VLU FTTH/FTTC lines, their share at the end of 2023 was 86% and 14%, respectively (Chart 1.24), with FTTH lines showing a slight but steadily increasing trend over the past two years (Chart 1.25)[11]. Finally, Chart 1.26 reflects the corresponding market share of providers at the end of 2023.

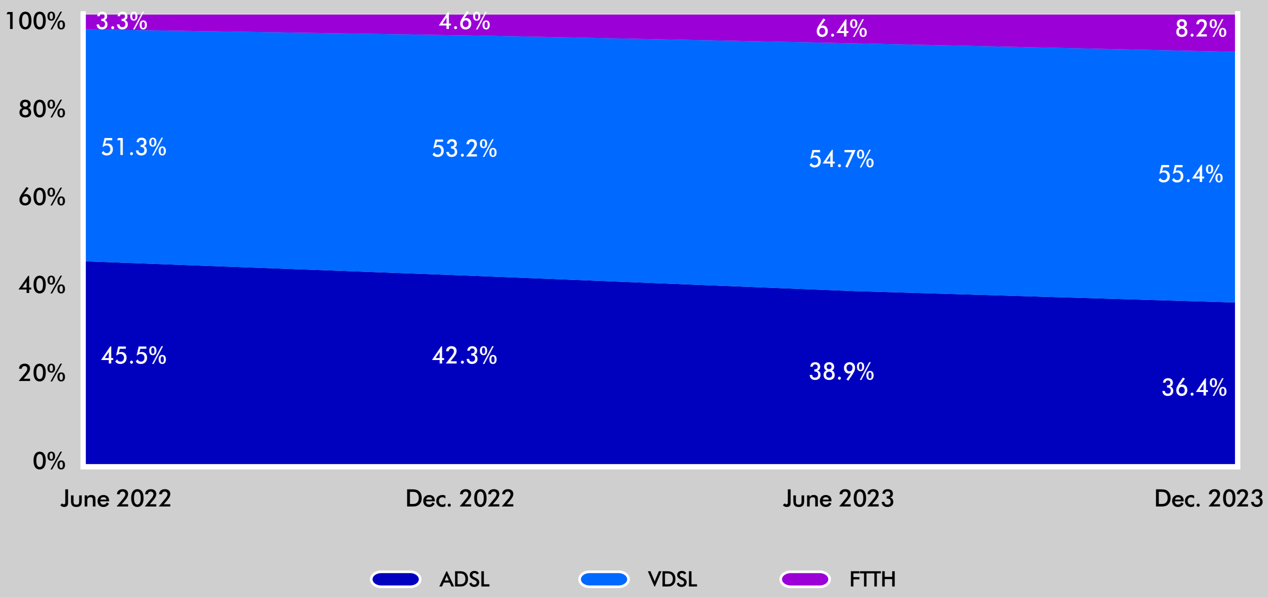
Chart 1.19: Breakdown of broadband lines per technology, December 2023



Source: EETT (based on data provided by the licensed operators)

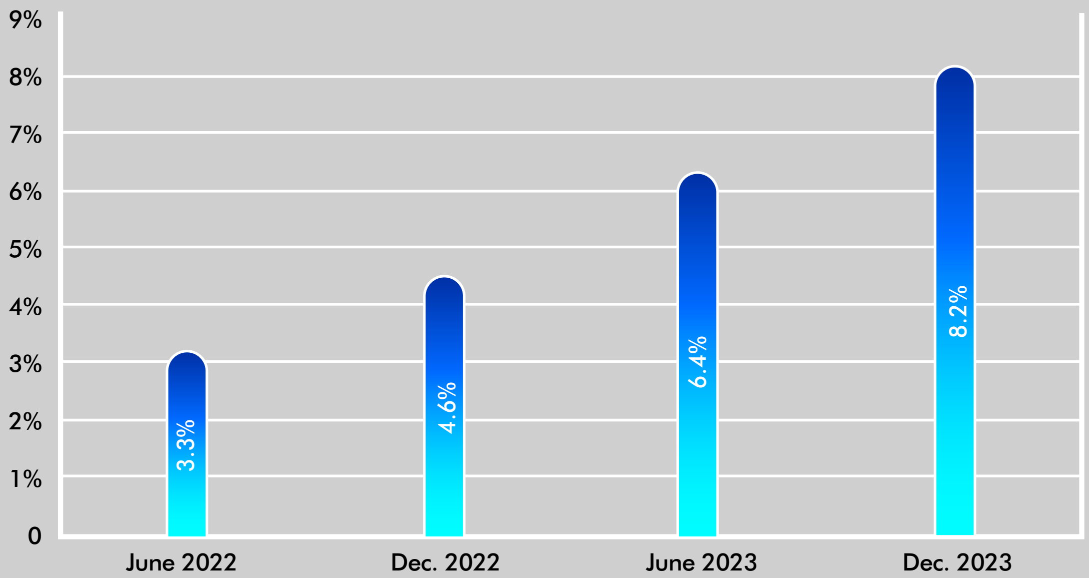
10. Namely from the provision of VLU/FTTC/FTTH lines from: a) OTE to VODAFONE and NOVA, b) F2ALL and HOF to OTE, c) F2ALL and UNITED FIBER to VODAFONE and NOVA and d) VODAFONE and NOVA's self-provision of VLU FTTC/FTTH lines.
11. The shares shown in Chart 1.25 consider only the retail connections implemented by providers via VDSL Vectoring/FTTH technology.

Chart 1.20: Evolution of broadband lines per technology



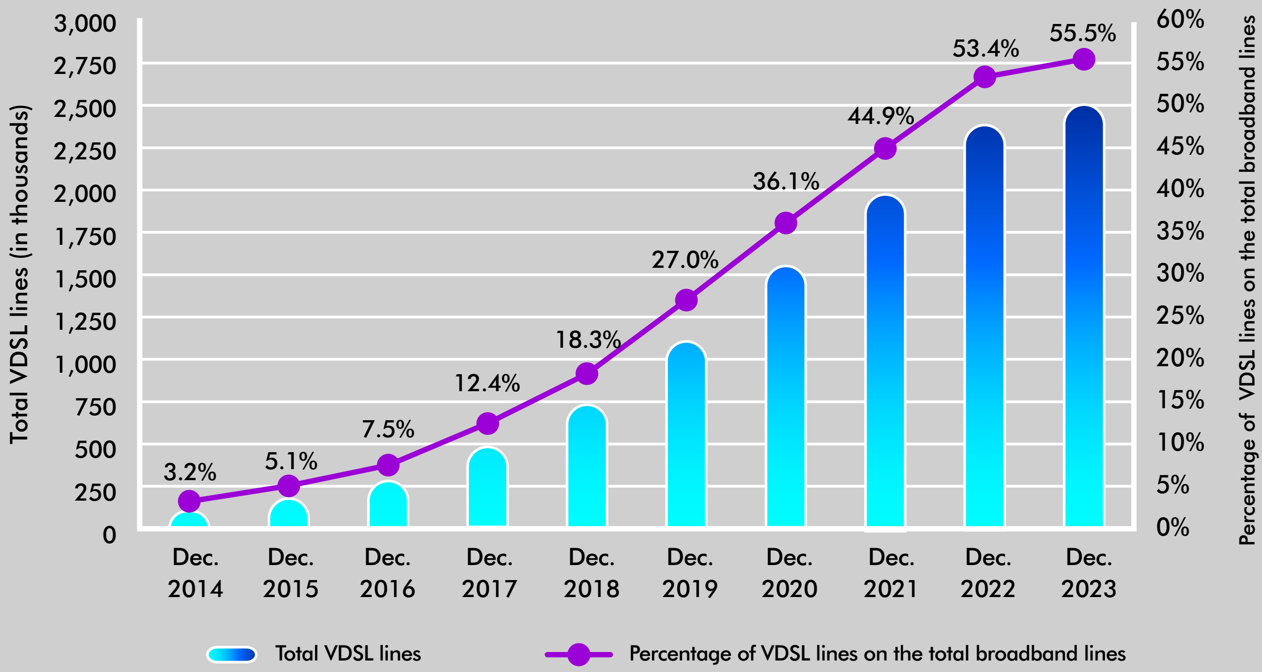
Source: EETT (based on data provided by the licensed operators)

Chart 1.21: Evolution of FTTH lines' share over the total broadband lines



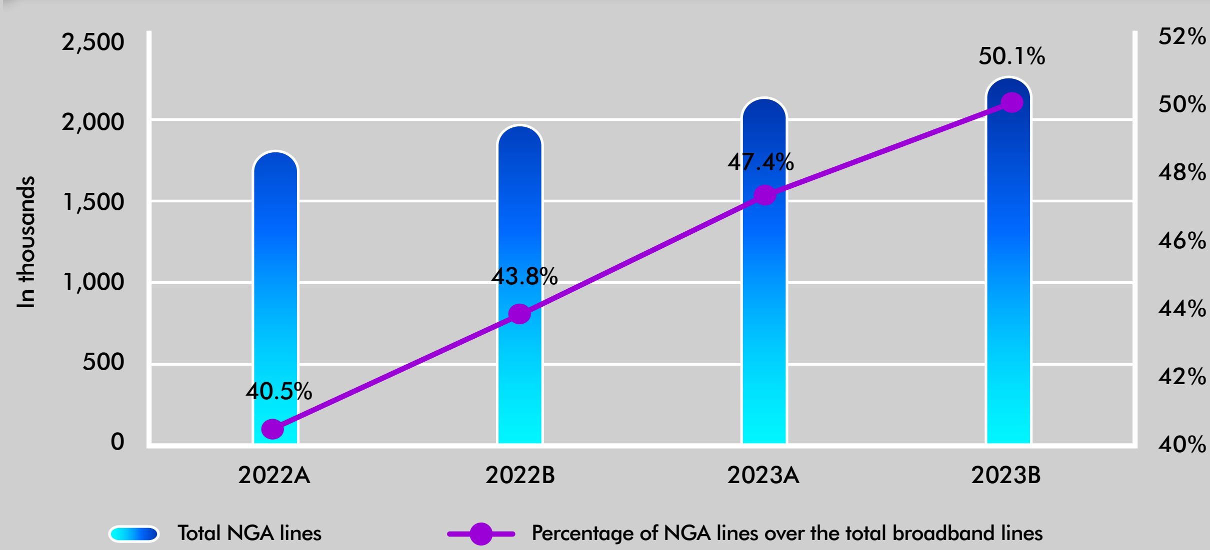
Source: EETT (based on data provided by the licensed operators)

Chart 1.22: Evolution of VDSL lines



Source: EETT (based on data from licensed providers)

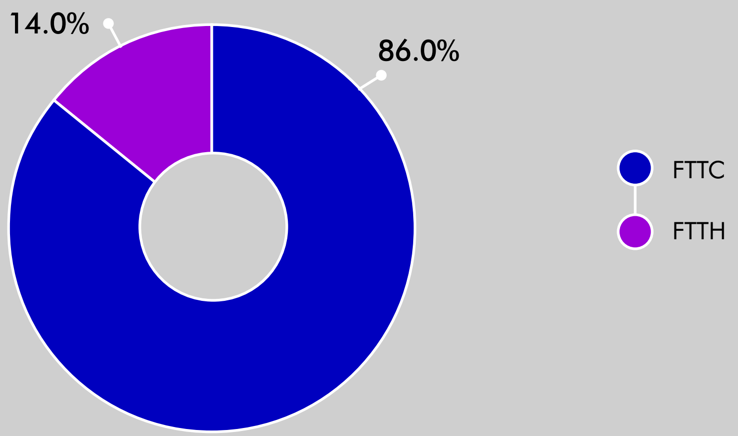
Chart 1.23: Evolution of NGA lines as a share of total broadband lines from alternative operators and OTE



A: 1st semester
B: 2nd semester

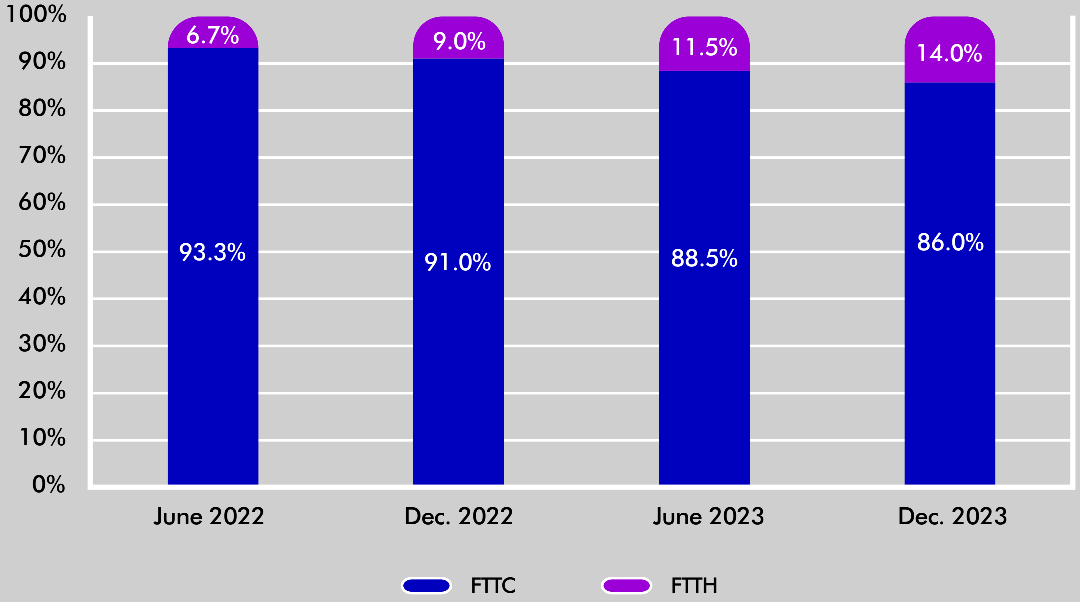
Source: EETT (based on data provided by the licensed operators)

Chart 1.24: Share of retail VLU FTTH/FTTC lines across all providers, December 2023



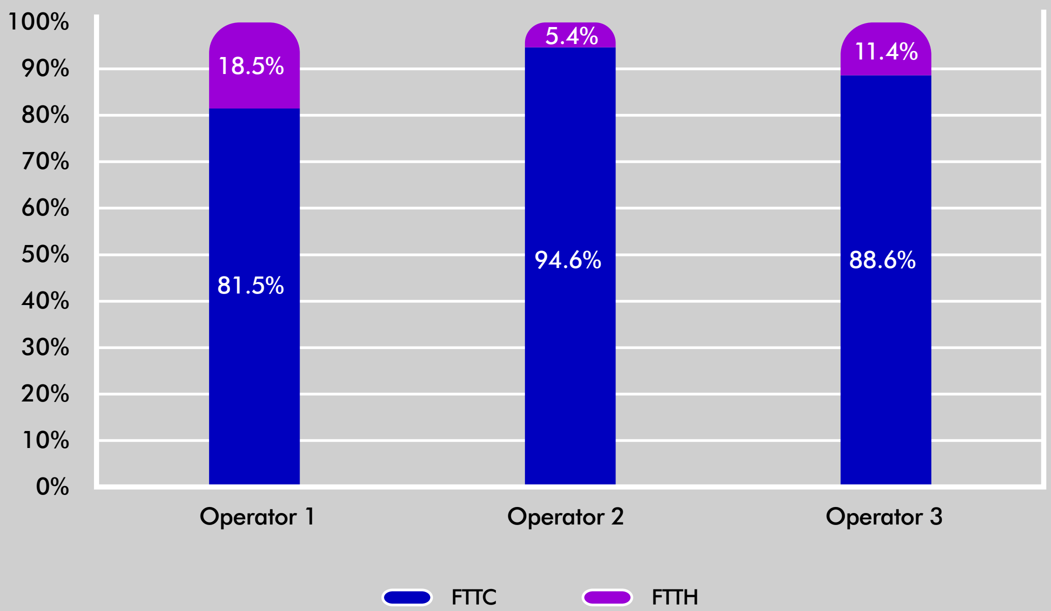
Source: EETT (based on data provided by the licensed operators)

Chart 1.25: Evolution of retail VLU FTTH/FTTC lines' share across all operators



Source: EETT (based on data provided by the licensed operators)

Chart 1.26: Market shares of fixed broadband operators in terms of provided retail VLU FTTH/FTTC lines, December 2023

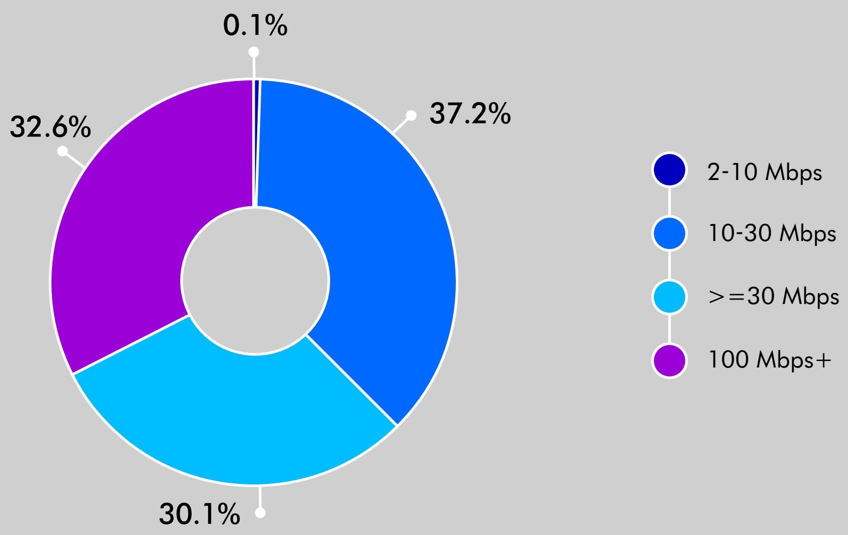


Source: EETT (based on data provided by the licensed operators)

Broadband lines per access speed

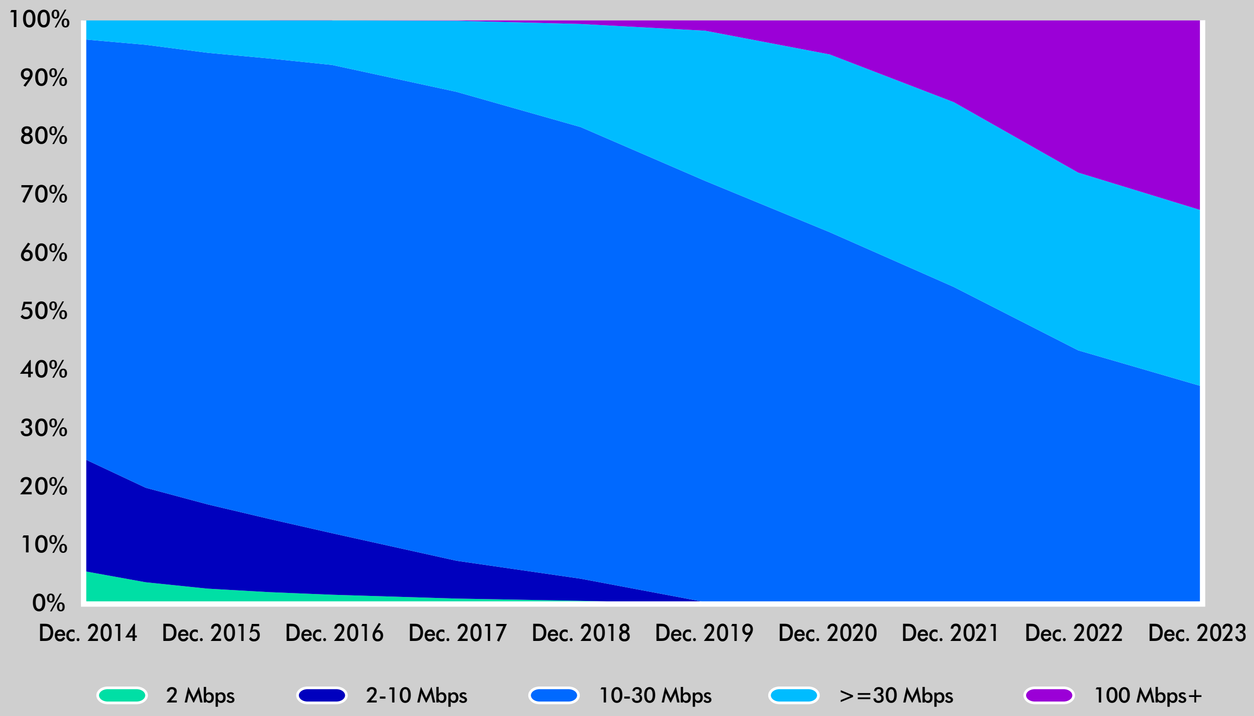
More than 99% of broadband lines corresponds to nominal download access speed of 10 Mbps and above (Charts 1.27 and 1.28). The percentage of ultra-high-speed lines (nominal download access speed of 100 Mbps and above) in the country's broadband lines, increased further to 32.6%, compared to 26.3% at the end of 2022. High-speed lines (nominal download access speed from 30 Mbps to 100 Mbps) accounted for 30.1% of broadband lines in the country, compared to 30.5% at the end of 2022.

Chart 1.27: Breakdown of broadband lines per nominal download access speed, December 2023



Source: EETT (based on data provided by the licensed operators)

Chart 1.28: Evolution of nominal download access speeds for broadband lines

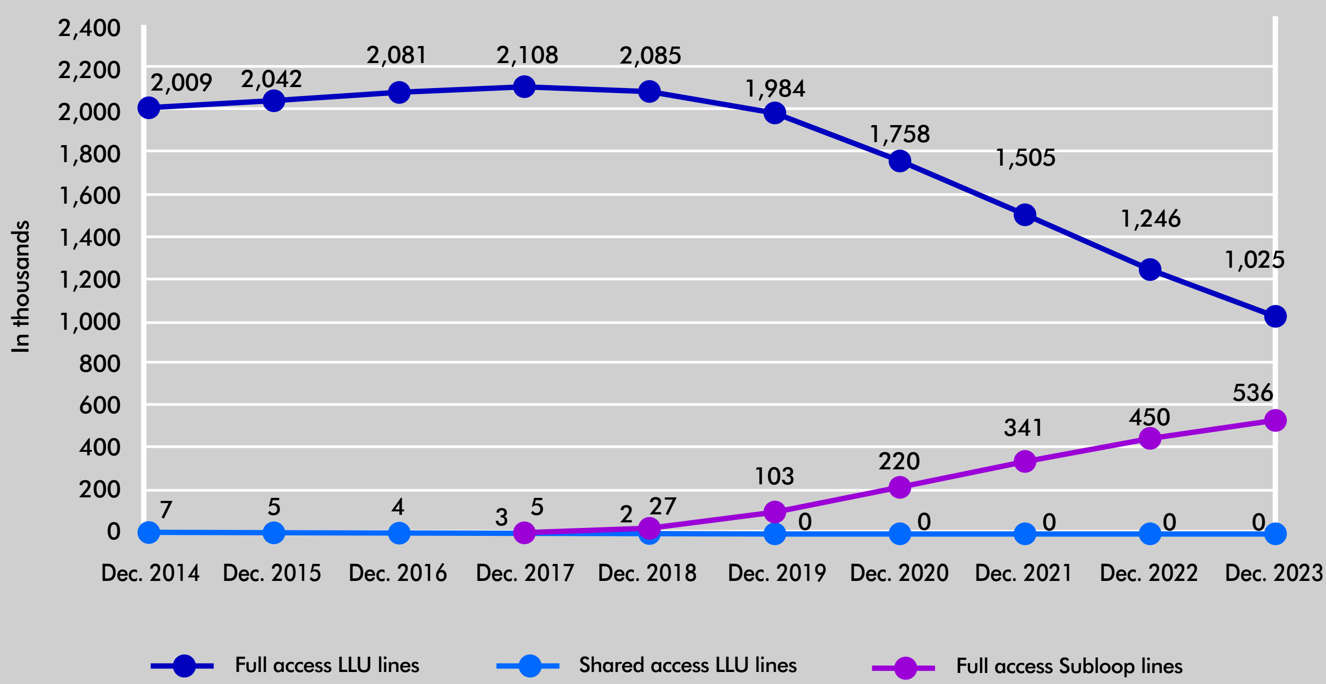


Source: EETT (based on data provided by the licensed operators)

Unbundled access to the Local Loop

Chart 1.29 presents the evolution of the full Local Loop Unbundling (LLU) lines[12], as well as of the full access subloop lines[13]. At the end of 2023, full access lines were further decreased by 17.7%, reaching 1,025,046, compared to 1,245,790 at the end of 2022. On the other hand, the full access subloop lines rose to 535,629 (compared to 450,232 at the end of 2022), 89% of them (477,681) is allocated to the operators for developing NGA, and the remaining 11% (57,948) for the development of broadband products in rural areas. Subloop lines also declined by 7.5%, from 202,852 at the end of 2022 to 187,837 at the end of 2023. The decline of LLU lines is part of the broader trend in the reduction of competitive services that rely on this technology, since these lines are in direct competition with NGA access networks.

Chart 1.29: Evolution of LLU lines



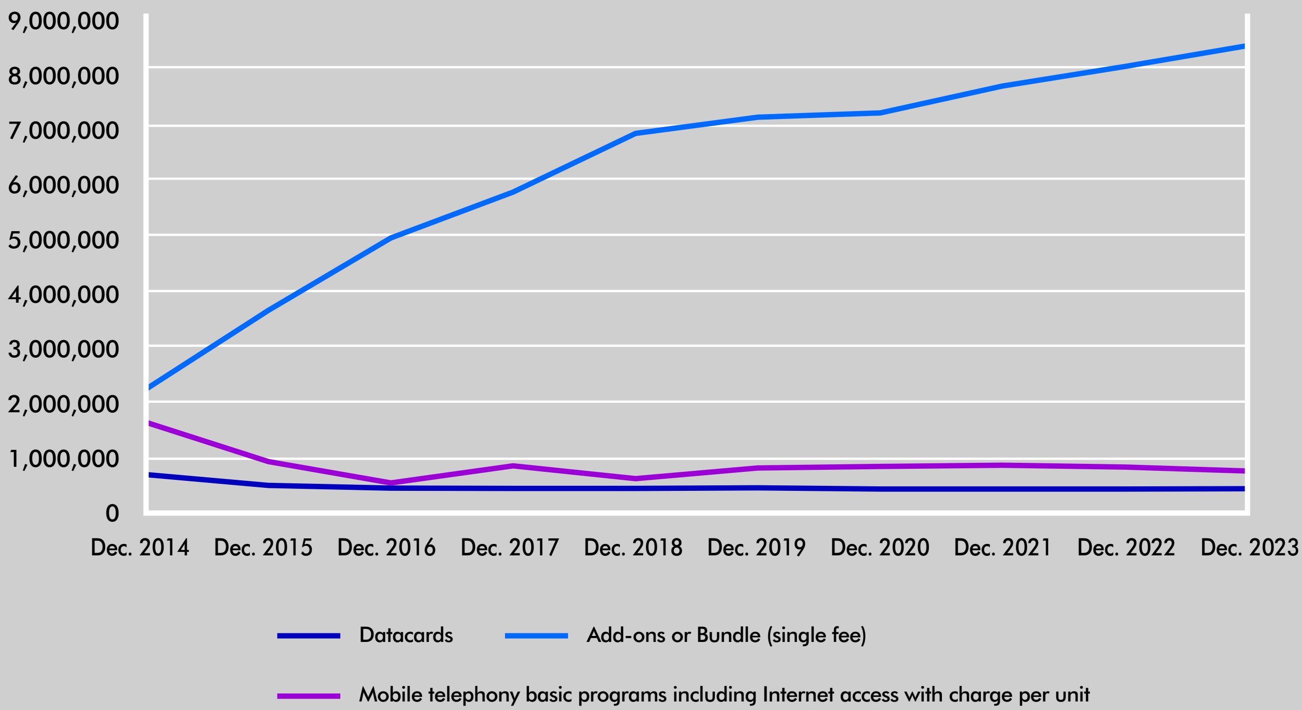
Source: EETT (based on data provided by the licensed operators)

12. The lines used for voice transfer under the VPU services are included.
13. Local Subloop: the section of local loop that connects the termination point of OTE's network at the subscriber's premises to the Local Distribution Frame-LDF or Optical Network Unit-ONU.

Mobile broadband

At the end of 2023, the total number of active mobile telecommunications connections[14] that used data services reached 9,612,244, compared to 9,305,403 at the end of 2022, reflecting a population penetration rate of 92.3% (Chart 1.30). For 8,420,457 connections, an additional data package was either selected as part of the mobile phone package (add-on) or data services were used through mobile programs that, among others, include Internet access with a single charge (bundle). For 756,382 connections, data services were used via mobile plans that, among others, include Internet access with a charge per unit. Finally, 435,405 connections were dedicated exclusively to Internet access (datacards).

Chart 1.30: Evolution of mobile connections with Internet usage



Source: EETT (based on data provided by the licensed operators)

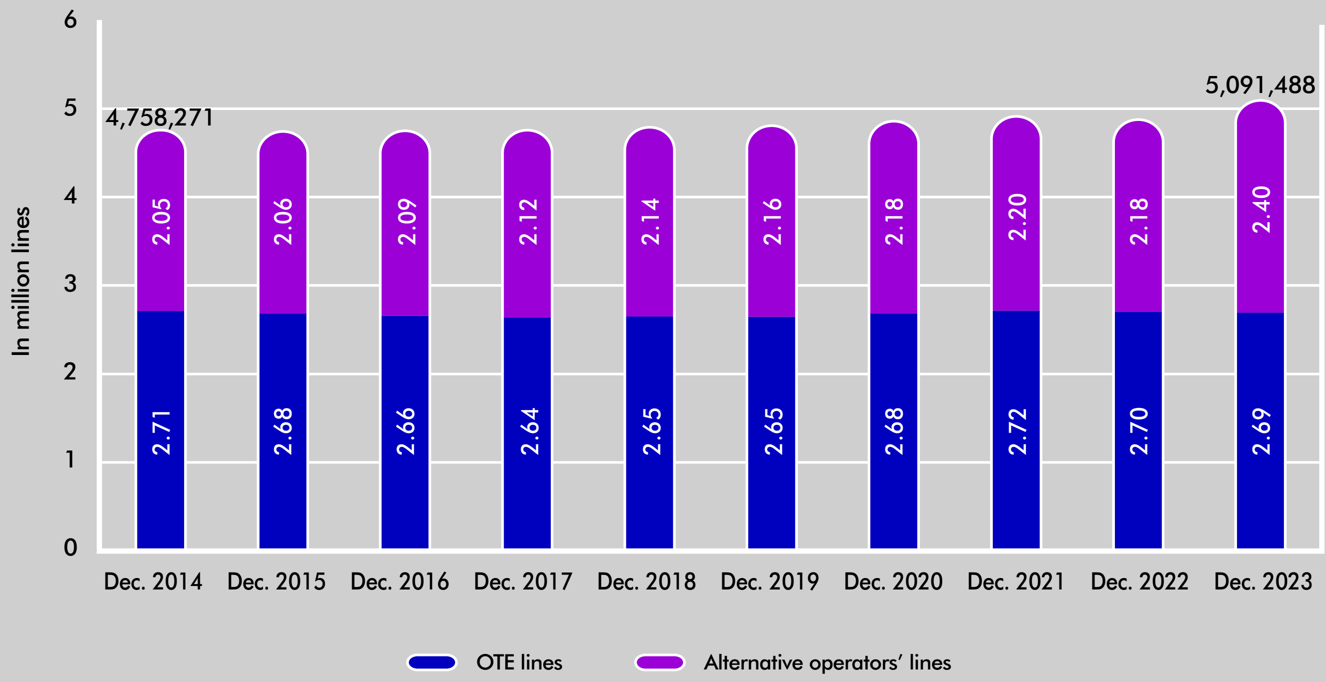
14. It is noted that the 2022 prices have been revised after integrating data submitted overdue by a provider.

1.2.3. Communication services provided at a fixed location

Fixed telephony access lines

In December 2023, the telephone access lines to a fixed public network of electronic communications amounted to 5,091,488 lines, namely a 48.9% penetration in the population, versus 4,877,221 lines at the end of 2022, registering a 4.4% increase compared to the previous year (Chart 1.31 and Table 1.3). OTE's fixed telephony lines decreased marginally by 0.3% (8,823 lines) compared to 2022, with its market share dropping to 52.9% at the end of 2023, compared to 55.4% at the end of 2022 (Chart 1.32). The market share of the alternative operators reached 47.1%, increased by 10.3% (223,090 lines) compared to the previous year, mainly due to the significant increase of the VLU lines (FTTC, FTTH).

Chart 1.31: Evolution of fixed telephony access lines



Source: EETT (based on data provided by the active licensed operators)

Table 1.3: Evolution of fixed telephony access lines per category/type of line

	OTE lines					Alternative operators' lines							Total lines
	PSTN	ISDN BRA	Managed VoIP	ISDN PRA	Total	PSTN & ISDN BRA-excl, WLR	PSTN & ISDN BRA-via WLR	Managed VoIP	VLU (FTTC, FTTH)	ISDN PRA	Other technology	Total	
Dec, 2014	2,377,849	330,034	-	3,499	2,711,382	1,612,296	35,325	396,306	-	2,962	-	2,046,889	4,758,271
Dec, 2015	2,298,569	303,791	78,789	3,242	2,684,391	1,651,635	14,344	390,189	-	2,799	-	2,058,967	4,743,358
Dec, 2016	1,782,963	262,449	609,443	3,069	2,657,924	1,706,449	9,386	374,609	-	2,120	-	2,092,564	4,750,488
Dec, 2017	1,244,008	230,309	1,161,912	2,903	2,639,132	1,754,020	7,746	353,490	-	2,306	-	2,117,562	4,756,694
Dec, 2018	1,048,244	146,459	1,453,662	2,630	2,650,995	1,702,803	12,298	382,051	36,652	2,353	2,979	2,139,136	4,790,131
Dec, 2019	491	109	2,643,064	2,475	2,646,139	1,528,983	10,043	455,104	161,323	2,476	2,565	2,160,494	4,806,633
Dec, 2020	101	45	2,681,400	2,204	2,683,750	1,071,718	8,464	686,561	405,791	2,589	309	2,175,432	4,859,182
Dec, 2021	33	34	2,713,996	1,876	2,715,939	581,120	6,186	923,752	682,217	2,423	437	2,196,135	4,912,074
Dec, 2022	0	36	2,699,554	1,863	2,701,453	172,888	4,957	1,072,902	922,016	2,229	776	2,175,768	4,877,221
Dec, 2023	0	36	2,690,853	1,741	2,692,630	0	8,271	1,277,770	1,107,345	4,404	1,068	2,398,858	5,091,488

Source: EETT

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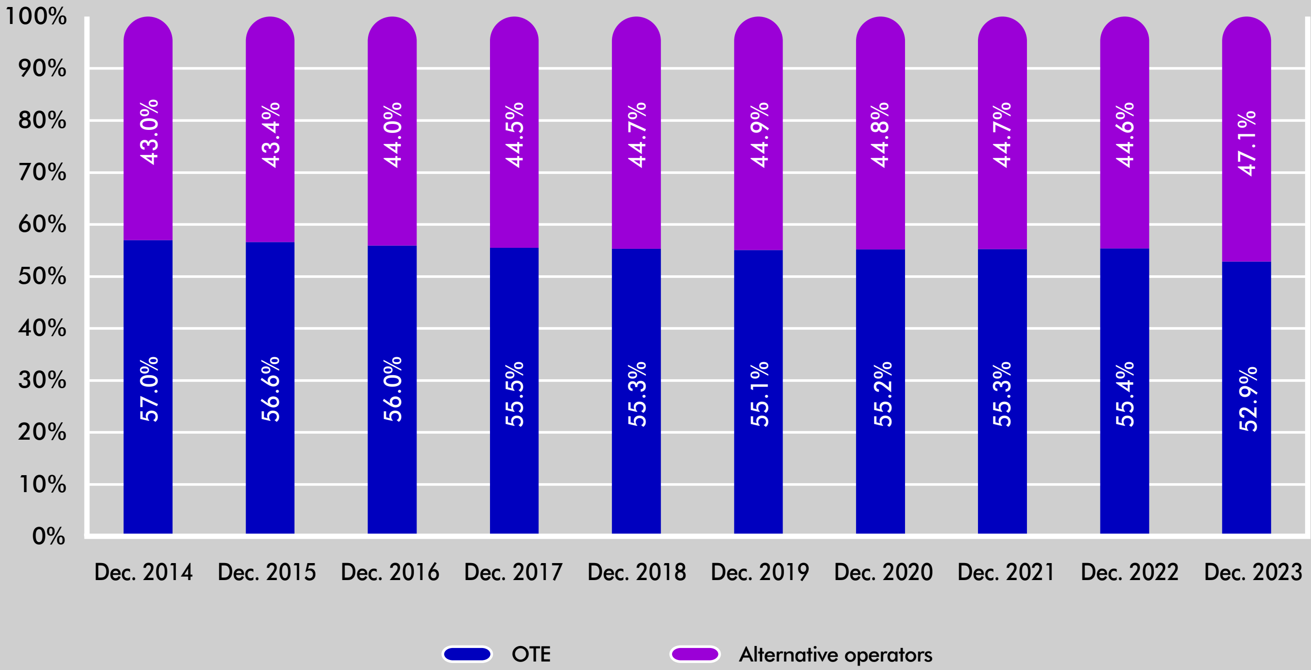
Chart 1.32: Market shares based on fixed telephony access lines



Source: EETT (based on data provided by the active licensed operators)

Retail outgoing traffic

At the end of 2023, total traffic amounted to 10.2 billion minutes versus 11.4 billion minutes at the end of 2022, marking a 10.1% annual decrease. The traffic of the basic call types fell by 10% compared to 2022, due to the drop of the traffic of national fixed calls (1.1 billion minutes less than in 2022), the mobile calls (53.5 million minutes less than in 2022) and the international calls (3.8 million minutes less than 2022) (Charts 1.33, 1.34, and 1.35).

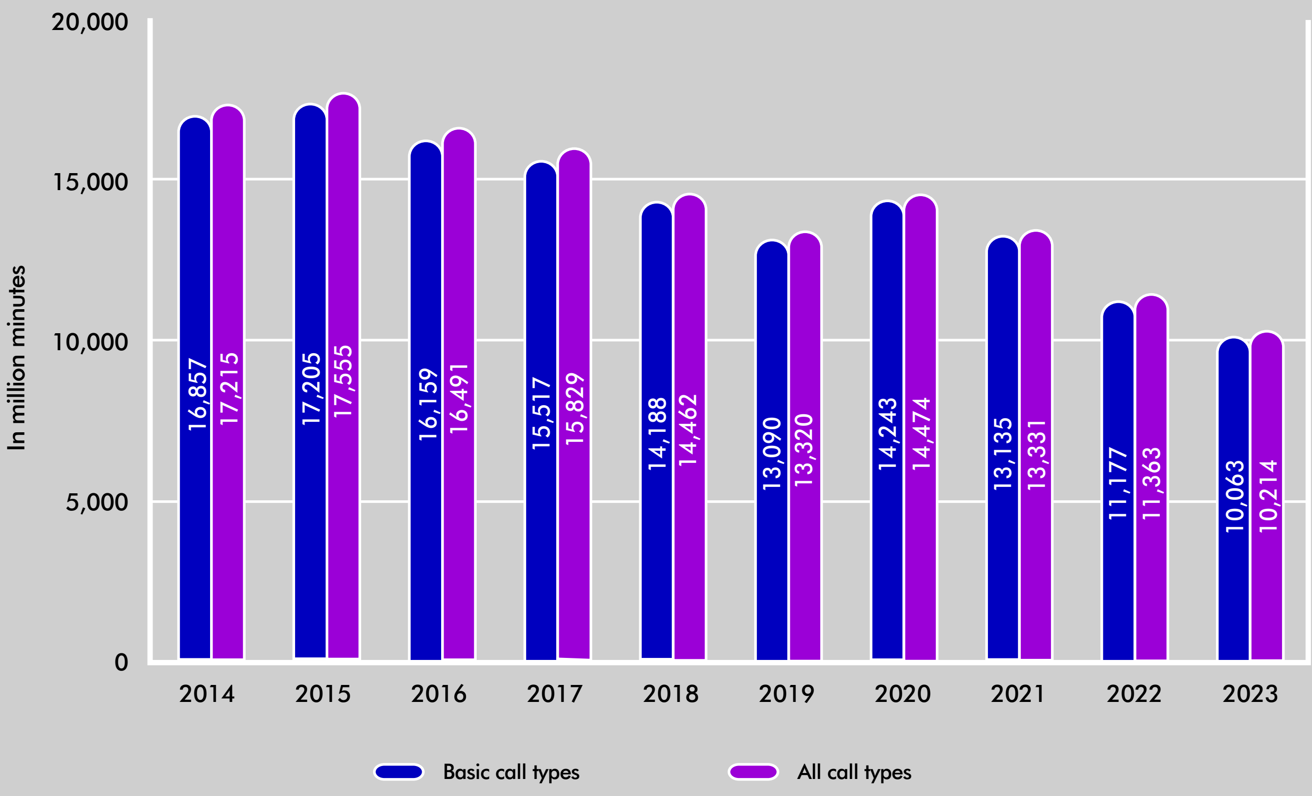
The percentage breakdown of the basic call types' traffic during 2023, was characterized by the drop of the traffic to national fixed calls (77.7% compared to 79.4% in 2022), the growth of mobile calls' share (21.2% compared to 19.6% in 2022) and the marginal increase of international calls (1.1% compared to 1% in 2022). The evolution of traffic per call type is presented in Table 1.4.

OTE's share in terms of both traffic and basic call types decreased again to 45.2% and 45% respectively (compared to 49.6% and 49.4% in 2022), mainly due to the larger drop of its traffic compared to that of the alternative operators. More specifically for OTE, the national fixed and mobile calls, as well as the international calls, decreased by 20.1%, 5.8%, and 20% respectively, compared to 2022. At the same time, the alternative operators registered a drop of their national fixed and mobile calls by 2.9% and 0.4% respectively, while the share of their international traffic increased by 7.3% (Charts 1.36 and 1.37). Currently, an accumulative 99.5% market share of the main call types (based on outgoing traffic) is attributed to OTE and the two alternative operators NOVA and VODAFONE.

Chart 1.38 presents the breakdown of total traffic over time between OTE and the alternative operators. It is noted that the 10.1% decrease in fixed telephony traffic in 2023 compared to 2022, is attributed to both OTE (its total traffic decreased by 18.2% compared to 2022) and the alternative operators (drop of their total traffic by 2.2% compared to 2022).

The average outgoing traffic (of the basic call types) per connection, in 2023, registered a drop of 11.6% compared to 2022 and was estimated at 168.2 minutes per month (versus 190.3 minutes per month in 2022).

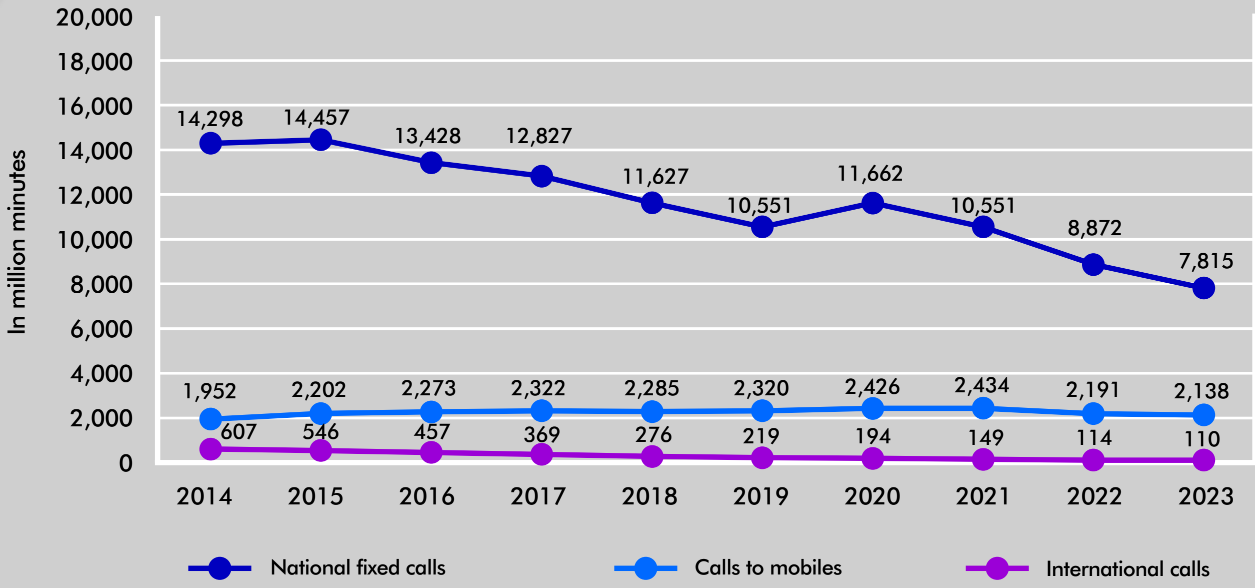
Chart 1.33: Evolution of fixed outgoing traffic



Note: The basic call types include national fixed calls (i.e. local and long-distance), calls to mobiles and international calls.

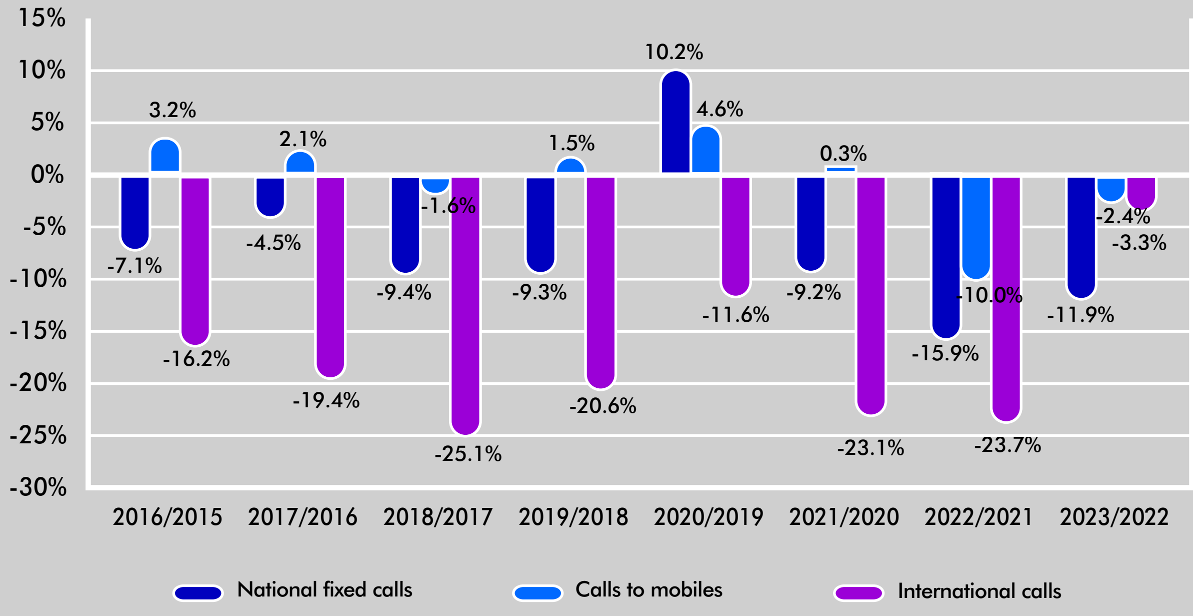
Source: EETT (based on data provided by the licensed operators)

Chart 1.34: Fixed outgoing traffic per basic call type



Source: EETT (based on data provided by the licensed operators)

Chart 1.35: Annual change of fixed outgoing traffic



Source: EETT (based on data provided by the licensed operators)

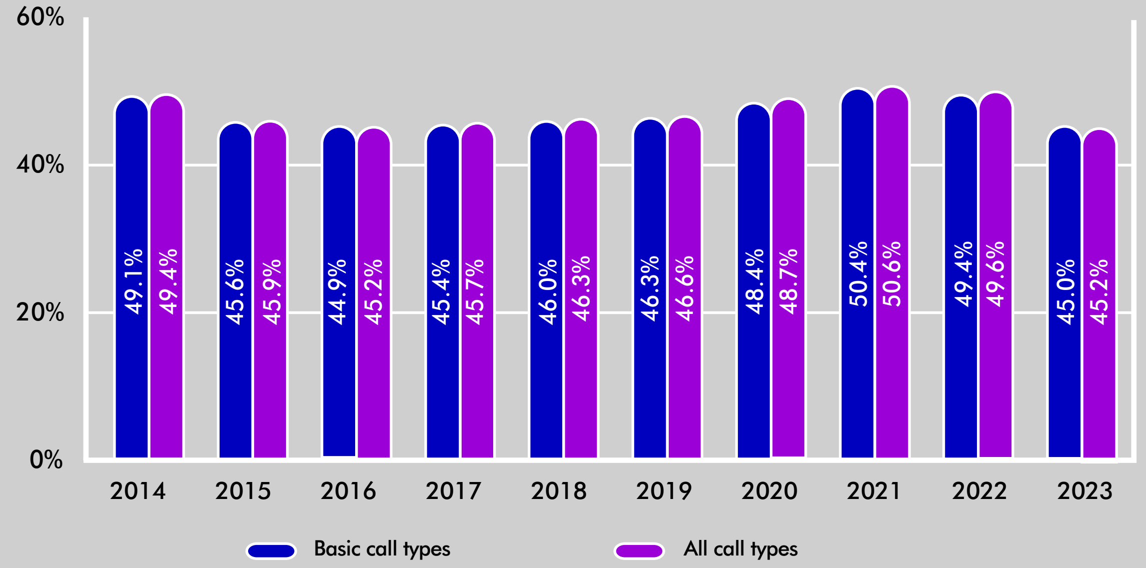
Table 1.4: Fixed outgoing traffic per call type (in million minutes)

	Call type	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Basic call types	National fixed calls	14,298	14,457	13,428	12,827	11,627	10,551	11,622	10,551	8,872	7,815
	Calls to mobiles	1,952	2,202	2,273	2,322	2,285	2,320	2,426	2,434	2,191	2,138
	International calls	607	546	457	369	276	219	194	149	114	110
Other call types	Dial- up calls	29	19	15	12	5	-	-	-	-	-
	Calls to personal numbers (series 70)	0.14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Calls to FreePhone numbers (series 800)	31	58	54	51	40	31	37	42	43	28
	Calls to shared cost services (Shared cost-801)	31									
	Calls to short code services (3-digits, 4-digits, 5-digits) Note 1	229	238	230	221	206	178	174	132	120	99
	Calls to value added services Note 2	37	35	34	28	23	21	20	23	24	24
Basic call types		16,857	17,205	16,159	15,517	14,188	13,090	14,243	13,135	11,177	10,063
All call types, excl dial -up		17,186	17,536	16,476	15,817	14,457	13,320	14,474	13,331	11,363	10,214
All call types		17,215	17,555	16,491	15,829	14,462	13,320	14,474	13,331	11,363	10,214

Note 1: Up to 2009, calls to short code services include short codes for value added services and excluded henceforth
Note 2: Up to 2009, calls to value added services refer only to the code 90 calls. Since 2010, they refer to all the value-added services, including short codes for value added services.

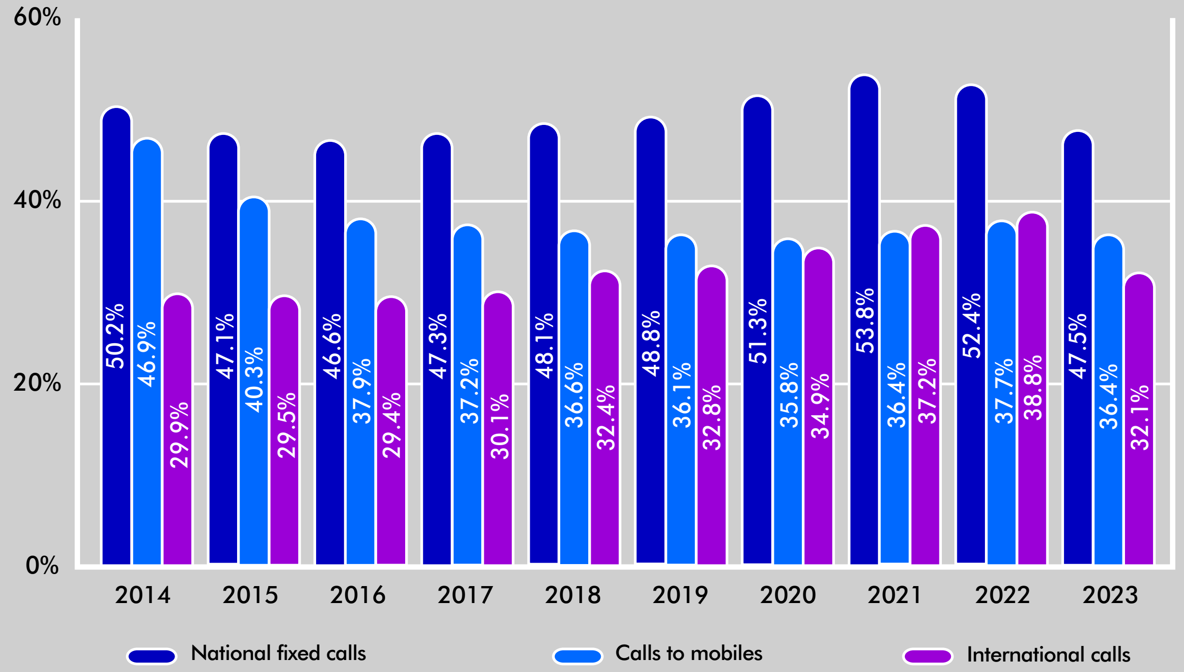
Source: EETT

Chart 1.36: OTE's annual market shares (based on outgoing traffic)



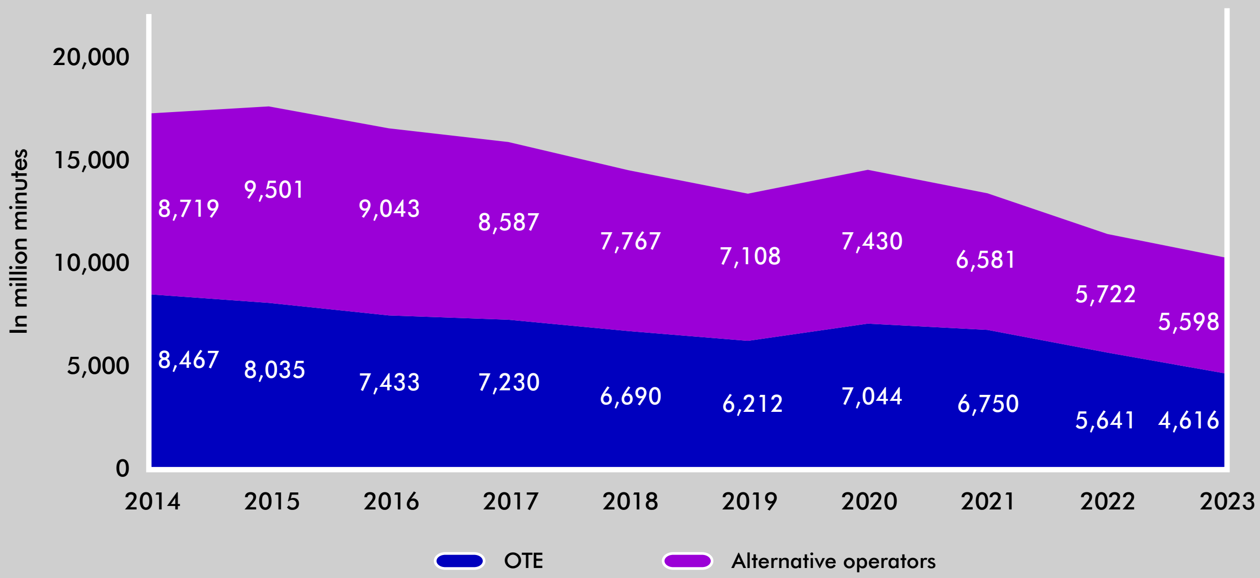
Source: EETT (based on data provided by the licensed operators)

Chart 1.37: OTE's market shares per basic call type (based on outgoing traffic)



Source: EETT (based on data provided by the licensed operators)

Chart 1.38: OTE's and alternative operators' outgoing traffic



Source: EETT (based on data provided by the licensed operators)

Retail revenues from fixed-line telephony and Internet services[15]

In 2023, total retail revenues from the provision of telephony and Internet services at a fixed location amounted to 1.38 billion euros, having decreased by 2% compared to 2022 (Chart 1.39). Specifically, the retail telephony revenues declined further by 61.9 million euros, i.e. a decrease by 6.9% compared to 2022, whereas the revenues from Internet services grew by 6.5% (33.6 million euros) compared to 2022 and amounted to 544.4 million euros. It is clarified that the presented revenues are prior to any returns to third parties and that the telephony revenues include revenues both from access[16] as well as from all call types[17].

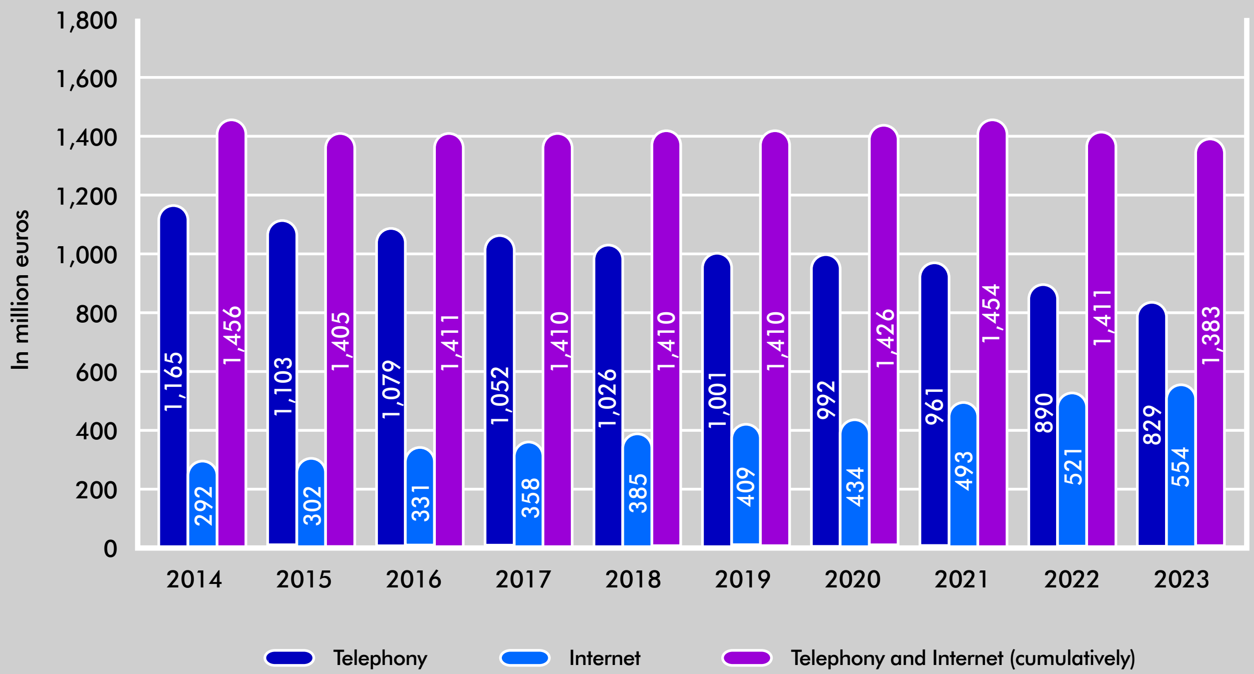
The average monthly revenue per connection from the provision of telephony and Internet services at a fixed location was about 22.6 euros in 2023 compared to 24.1 euros in 2022, whereas the respective figure solely from the provision of telephony services at a fixed location was 13.9 euros (versus 15.2 euros in 2022). The average revenue per minute of

15. It shall be clarified that all the data presented refers to services provided to subscribers; therefore, the pre-paid telephony services are exempted.
16. Such as the initial connection/installation fee etc., the monthly rental for accessing telephony services and revenues from additional facilities.
17. It is noted that the presented data and more specifically the breakdown of the revenues among telephony and Internet is based on assumptions made by most of the operators.

outgoing traffic, considering all call types, increased by 3.5% at 0.081 euros in 2023 versus 0.078 euros in 2022.

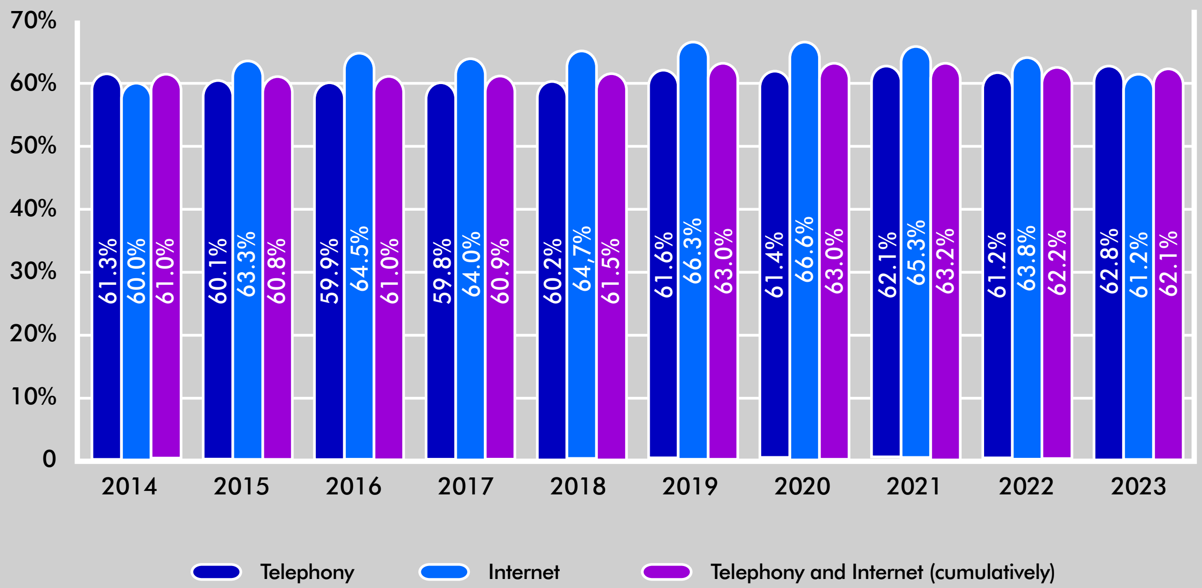
OTE's share based on the retail telephony and Internet revenues stood at 62.1% of the total market, roughly at the same level as in 2022 (62.2%) (Chart 1.40). In particular, OTE's retail Internet revenues increased by 2.1% compared to 2022, while its retail telephony revenues fell by 4.5% compared to the previous year. Table 1.5 presents the market shares of the operators that provide telephony and Internet services at a fixed location, at the end of 2023, based on their retail revenues.

Chart 1.39: Retail revenues from the provision of telephony and Internet services at a fixed location



Source: EETT (based on data provided by the licensed operators)

Chart 1.40: OTE's market shares (based on retail revenues from telephony and Internet services at a fixed location)



Source: EETT (based on data provided by the licensed operators)

Table 1.5: Market shares of operators that provide telephony and Internet services at a fixed location

	Dec. 2018	Dec. 2019	Dec. 2020	Dec. 2021	Dec. 2022	Dec. 2023
OTE	61.5%	63%	63%	63.2%	62.2%	62.1%
VODAFONE	10%-15%	10%-15%	15%-20%	15%-20%	15%-20%	15%-20%
WIND	10%-15%	10%-15%	10%-15%	10%-15%	10%-15%	-
NOVA[1]	5%-10%	5%-10%	5%-10%	5%-10%	5%-10%	20%-25%
CYTA[2]	0%-5%	-	-	-	-	-
Others	0%-5%	0%-5%	0%-5%	0%-5%	0%-5%	0%-5%

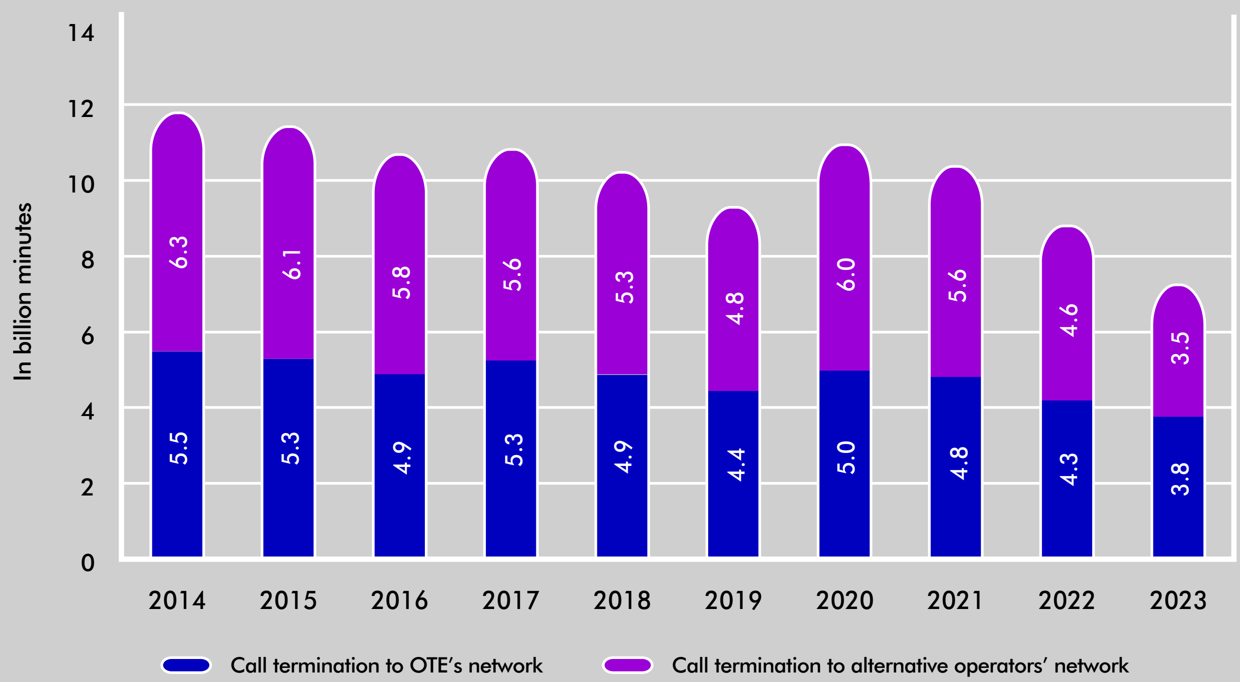
Note 1: FORTHNET up till the fourth quarter of 2022.
Note 2: Up till the first quarter of 2019.

Source: EETT (based on data provided by the licensed operators)

Interconnection of fixed telephony

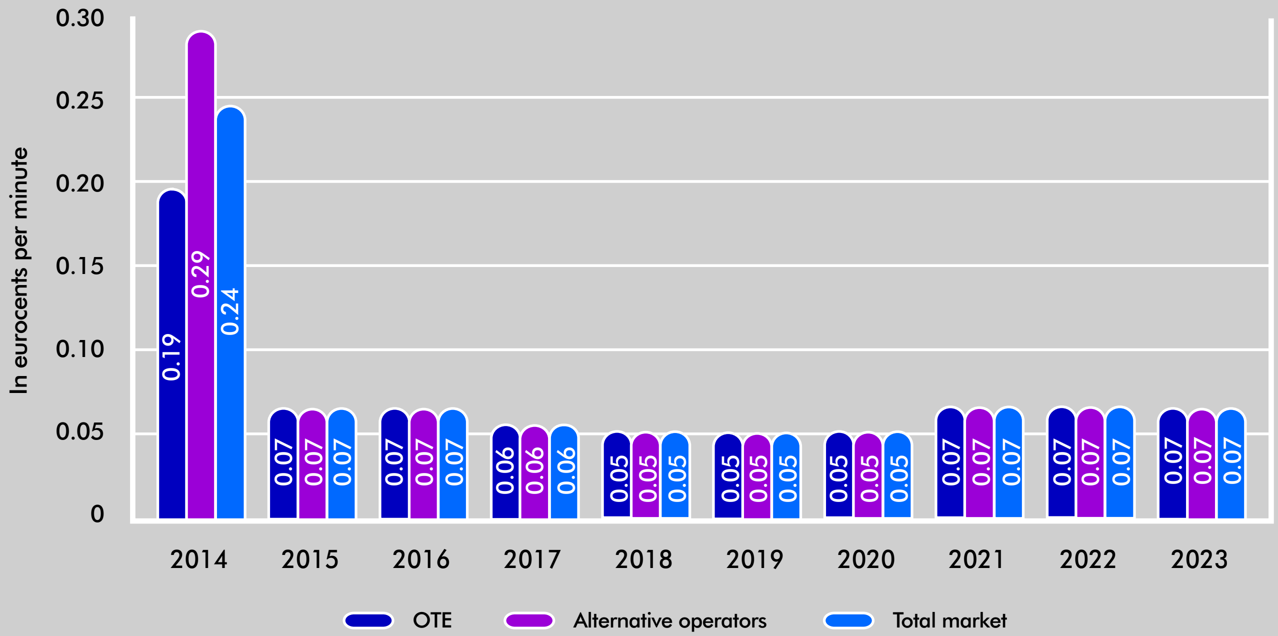
In 2023, call termination to fixed networks (Chart 1.41) amounted to 7.2 billion minutes, dropping by 18.3% compared to 2022 (8.9 billion minutes). Specifically, termination traffic on OTE's network fell by 11.8% in 2023 (3.8 billion minutes versus 4.3 billion minutes in 2022), accounting for 52% of the total terminating traffic. Similarly, the respective traffic of the alternative operators decreased considerably by 24.4% (3.5 billion minutes versus 4.6 billion minutes in 2022), accounting for the remaining 48% of the total terminating traffic. For the past nine years, the call termination rates for all fixed network operators are symmetrical (Chart 1.42).

Chart 1.41: Call termination traffic to fixed networks (OTE-alternative operators)



Source: EETT (based on data provided by the licensed operators)

Chart 1.42: Evolution of call termination rates to fixed networks



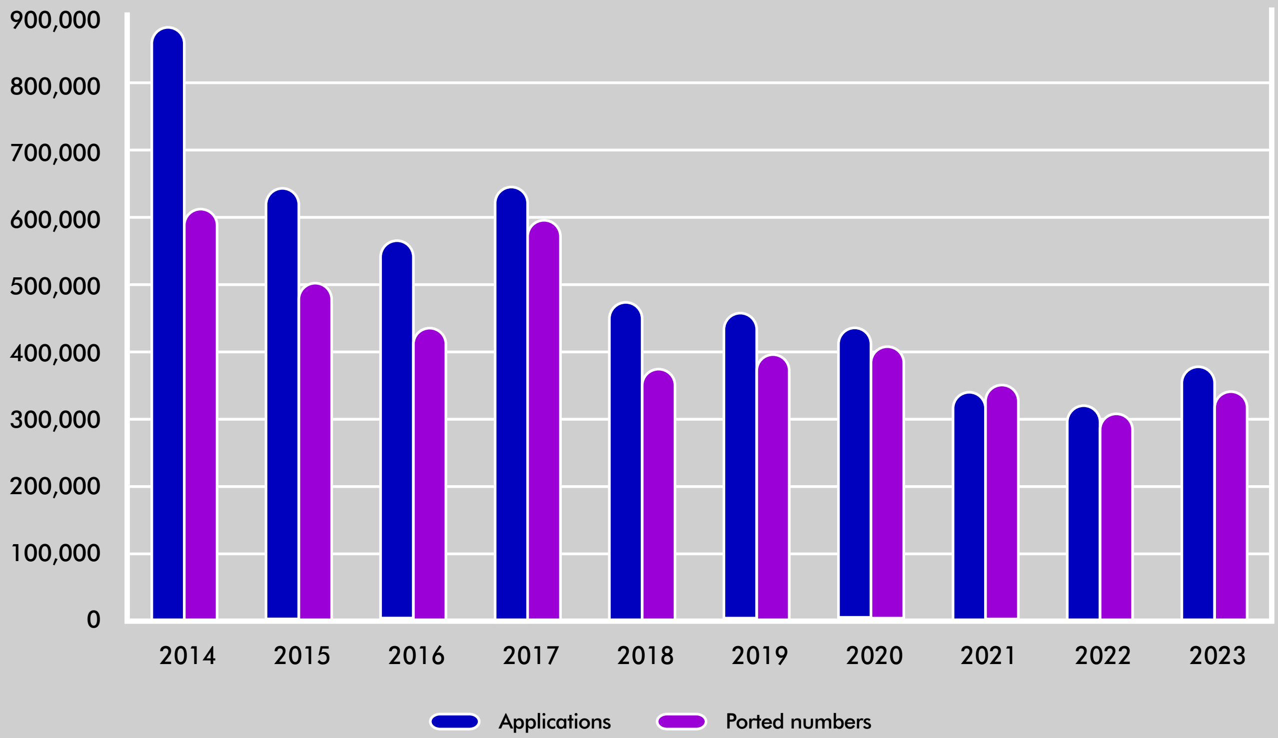
Source: EETT

Number portability in fixed telephony

In 2023, the applications for number portability registered a 18.1% increase since 377,176 applications[18] were submitted compared to 319,425 applications in 2022. Respectively, 346,130 numbers were ported, namely a 10.7% increase compared to 2022 (Chart 1.43). That indicates that approximately 92% of the initial portability applications were seen through.

18. It is noted that one application may concern a group of numbers (e.g. 1,000, 10,000 numbers), so in the case of one application for 1,000 numbers, it will be counted as 1 for the requests and as 1,000 for the ported numbers, if the request is seen through.

Chart 1.43: Portability of fixed telephony numbers



Source: EETT

1.2.4. Mobile communications

Connections

Mobile telephony connections[19] at the end of 2023 decreased slightly both in terms of total registered connections (by 0.8%) and active connections[20] fell (by 0.04%) compared to 2022. The total number of connections, at the end of 2023, was 13.7 million (Table 1.6 and Chart 1.44).

Compared to 2022, the post-paid connections increased by 10.3% amounting to 5.5 million, while the registered pre-paid connections decreased by 7% totaling 8.2 million (Table 1.7 and Chart 1.45). The residential users' connections fell by 1.6% compared to 2022, whereas the business users' connections increased by 7.2%, amounting to 12.3 million and 1.4 million respectively (Table 1.8 and Chart 1.46).

19. The term used is "connection" or "subscription" instead of "subscriber". It is not the number of subscribers as individuals or legal entities that is recorded, but the total connections/subscriptions, since one subscriber may have more than one connections/subscriptions.
20. "Active connections" or "active subscriptions" are defined as connections/subscriptions that have generated retail or wholesale revenues within the last quarter.

MNO's market shares, in terms of total connections, varied considerably compared to the end of 2022. Specifically, COSMOTE's share decreased to 46.5% (from 47.8%) whereas both NOVA's and VODAFONE's shares increased to 22.8% (from 21.9%), and to 30.6% (from 30.2%) respectively (Chart 1.47 and Table 1.9). In terms of active connections[21], COSMOTE holds a share within the range of [45%-55%], with VODAFONE following at [25%-35%] (Table 1.10).

The penetration rate of active (109%) and total (132%) mobile telephony connections on Greece's population remained relatively unchanged compared to 2022 (Table 1.11).

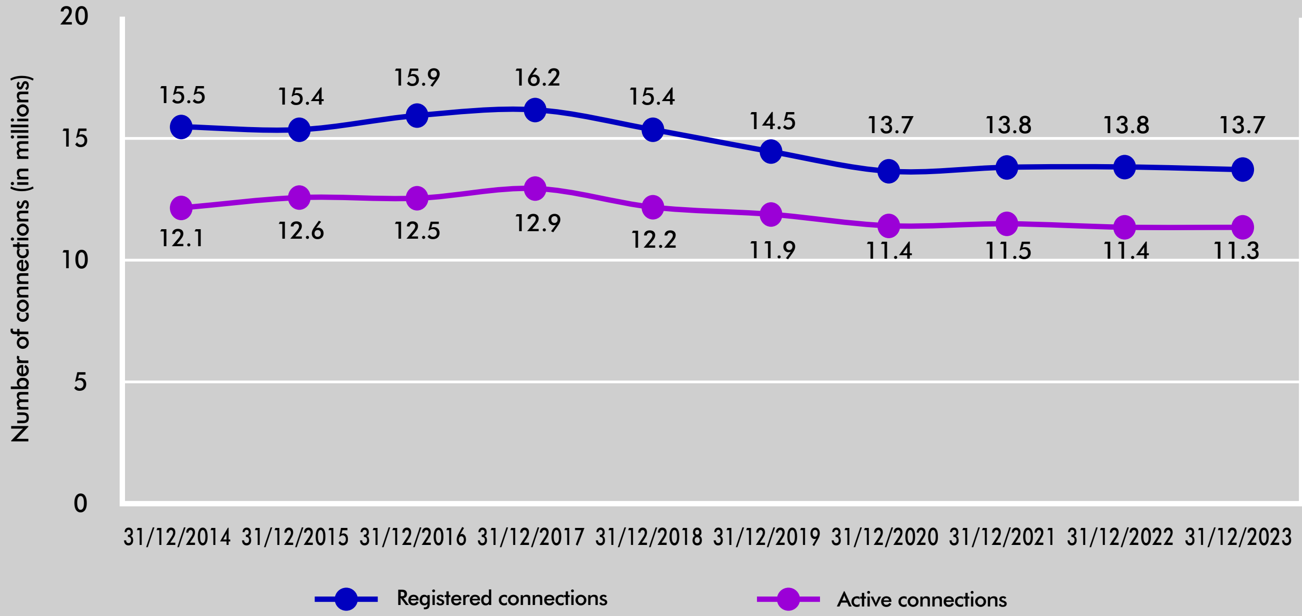
Table 1.6: Total and active mobile telephony connections (excl. datacards)

	Registered connections	Active connections
Dec. 2014	15,473,683	12,144,598
Dec. 2015	15,353,553	12,566,650
Dec. 2016	15,934,294	12,538,927
Dec. 2017	16,167,273	12,937,106
Dec. 2018	15,354,388	12,170,757
Dec. 2019	14,458,145	11,882,081
Dec. 2020	13,650,884	11,412,995
Dec. 2021	13,813,026	11,494,008
Dec. 2022	13,826,201	11,352,410
Dec. 2023	13,717,676	11,348,340

Source: EETT (based on data provided by the licensed operators)

21. The number of active connections and the resulting market shares are confidential data and for this reason the market shares are presented in the form of ranges.

Chart 1.44: Connections/subscriptions of mobile telephony



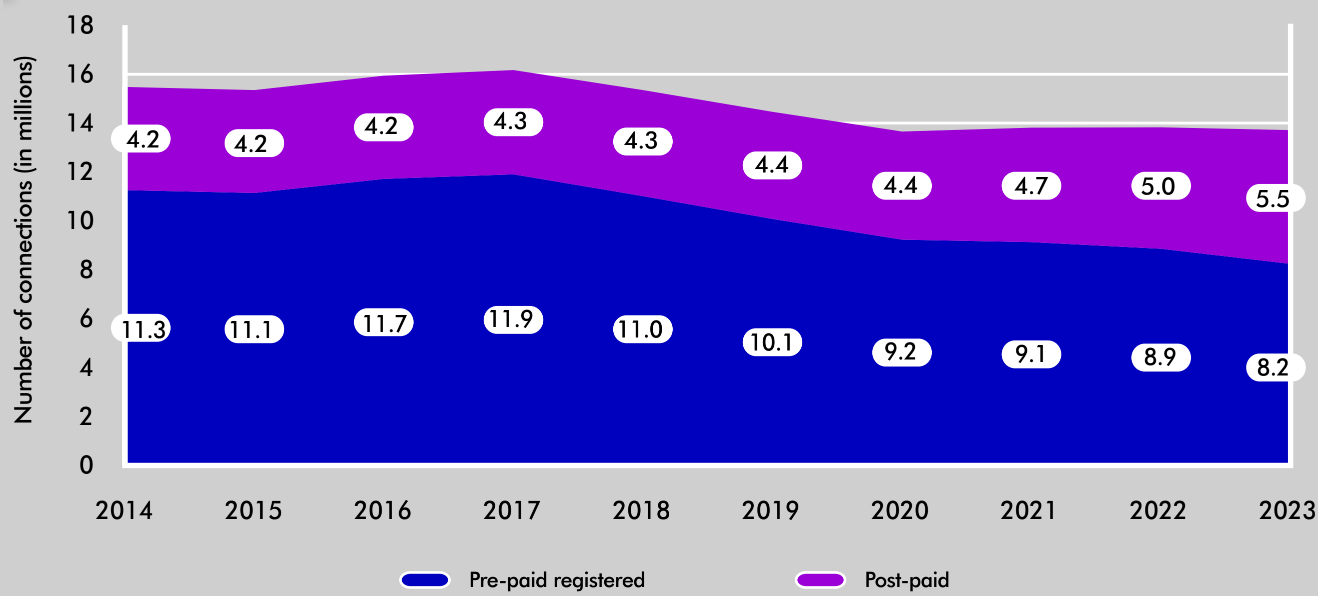
Source: EETT (based on data provided by the licensed operators)

Table 1.7: Total post-paid and pre-paid connections

	Post-paid connections	Pre-paid (registered) connections
Dec. 2014	4,216,579	11,257,104
Dec. 2015	4,211,675	11,141,878
Dec. 2016	4,219,022	11,715,272
Dec. 2017	4,261,140	11,906,133
Dec. 2018	4,336,465	11,017,923
Dec. 2019	4,383,959	10,074,186
Dec. 2020	4,426,244	9,224,640
Dec. 2021	4,685,384	9,127,642
Dec. 2022	4,962,111	8,864,090
Dec. 2023	5,471,648	8,246,028

Source: EETT (based on data provided by the licensed operators)

Chart 1.45: Evolution of total mobile telephony connections (pre-paid and post-paid)



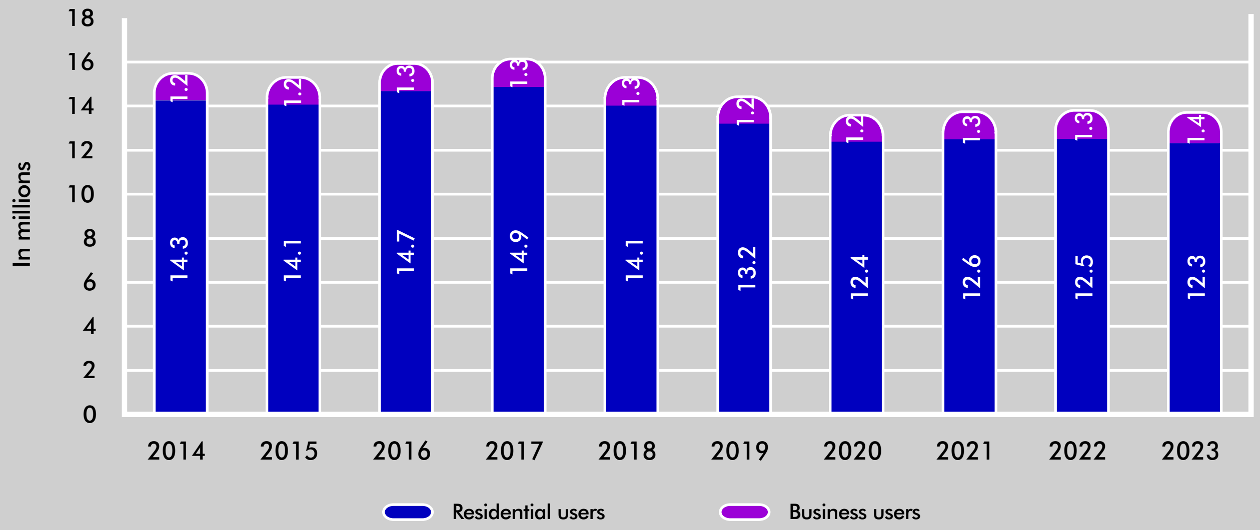
Source: EETT (based on data provided by the licensed operators)

Table 1.8: Total connections of residential and business post-paid and pre-paid users

	Residential	Business
Dec. 2014	14,254,880	1,218,803
Dec. 2015	14,118,156	1,235,397
Dec. 2016	14,682,583	1,251,711
Dec. 2017	14,902,753	1,264,520
Dec. 2018	14,063,618	1,290,770
Dec. 2019	13,234,616	1,223,529
Dec. 2020	12,441,461	1,209,423
Dec. 2021	12,561,275	1,251,751
Dec. 2022	12,520,488	1,305,713
Dec. 2023	12,318,161	1,399,515

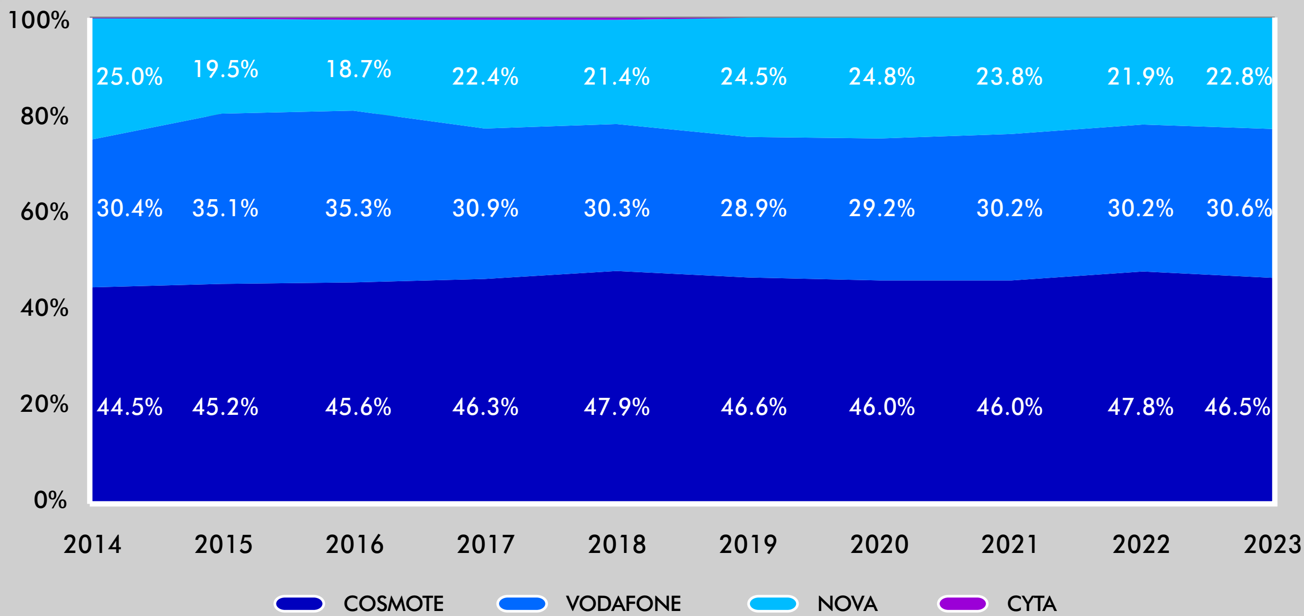
Source: EETT (based on data provided by the licensed providers)

Chart 1.46: Evolution of total mobile telephony connections (residential-business)



Source: EETT (based on data provided by the licensed operators)

Chart 1.47: MNOs' market shares based on registered connections



Source: EETT (based on data provided by the licensed operators)

Table 1.9: MNOs' market shares based on registered connections

	Dec. 2014	Dec. 2015	Dec. 2016	Dec. 2017	Dec. 2018	Dec. 2019	Dec. 2020	Dec. 2021	Dec. 2022	Dec. 2023
COSMOTE	44.5%	45.2%	45.6%	46.3%	47.9%	46.6%	46%	46%	47.8%	46.5%
CYTA	0.1%	0.2%	0.4%	0.4%	0.4%	0%	-	-	-	-
VODAFONE	30.4%	35.1%	35.3%	30.9%	30.3%	28.9%	29.2%	30.2%	30.2%	30.6%
NOVA	25.0%	19.5%	18.7%	22.4%	21.4%	24.5%	24.8%	23.8%	21.9%	22.8%

Source: EETT (based on data provided by the licensed operators)

Table 1.10: MNOs' market shares based on active connections

	Dec. 2014	Dec. 2015	Dec. 2016	Dec. 2017	Dec. 2018	Dec. 2019	Dec. 2020	Dec. 2021	Dec. 2022	Dec. 2023
COSMOTE	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%
CYTA	0%-5%	0%-5%	0%-5%	0%-5%	0%-5%	0%-5%	-	-	-	-
VODAFONE	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%
NOVA	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%

Source: EETT (based on data provided by the licensed operators)

Table 1.11: Penetration rate of connections on the population

	Dec. 2014	Dec. 2015	Dec. 2016	Dec. 2017	Dec. 2018	Dec. 2019	Dec. 2020	Dec. 2021	Dec. 2022	Dec. 2023
Registered connections	142%	141%	148%	150%	143%	135%	127%	129%	132%	132%
Active connections	111%	116%	116%	120%	113%	111%	106%	108%	109%	109%

Source: EETT (based on data provided by the licensed operators)

Use of mobile communications networks

The use of mobile communications networks in 2023 showed an upward trend across all services (domestic voice traffic, SMS, MMS), with data usage continuing its impressive growth.

Voice calls

- The volume of voice calls in 2023 amounted to 36.6 billion minutes, registering a 8.1% increase compared to 2022 (33.9 billion minutes) (Chart 1.48).
- The largest part of this volume was the on-net calls, amounting to 17.5 billion minutes having increased by 3.9% compared to 2022 (Chart 1.49) and accounting also for 49% of the basic call types' volume (i.e. on-net, off-net, mobile to fixed and international calls), from 51% in 2022 (Chart 1.50).
- The volume of the off-net calls increased again by 15.4% compared to 2022 (from 12.4 to 14.3 billion minutes), while the volume of the mobile to fixed calls grew also by 5.9% (from 3.6 to 3.8 billion minutes).
- International calls from mobile phones dropped by 11.3%.

The largest volume of voice calls was made by post-paid residential users, accounting for 49% of all voice calls' volume (17.9 billion minutes), followed by pre-paid mobile subscribers with 36.8% (13.5 billion minutes), and post-paid business users with 14.2% (5.2 billion minutes) (Chart 1.51). Based on the actual traffic, the average monthly call duration, for a post-paid residential user, was approximately 316 minutes to mobile numbers (versus 294 minutes in 2022) and 42 minutes to fixed numbers. For a business user, the duration was 268 minutes to mobile numbers (versus 275 minutes in 2022) and 33 minutes to fixed numbers, while lastly, for a pre-paid user, the average monthly call duration was 169 minutes to mobile numbers (versus 158 minutes in 2022) and 16 minutes to fixed numbers.

Short Message Service (SMS)

- The total number of SMS increased slightly by 0.2% amounting to 2.38 billion in 2023 (Chart 1.52).
- Most of the SMS in 2023 were on-net (40.4% down from 42.5% in 2022), while the percentage of the off-net SMS increased slightly to 37.7% (versus 37.4% in 2022).
- SMS from pre-paid users fell by 16.7%, totaling 0.75 billion messages in 2023 compared to 0.9 billion messages in 2022, while the SMS from post-paid residential users increased by 9.6% amounting to 1.04 billion messages in 2023 versus 0.95 billion messages in 2022. The growth of the SMS from business users was 11.9%, reaching 0.59 billion messages versus 0.53 billion messages in 2022 (Chart 1.53).
- A post-paid business user sent on average 35 SMS per month (up from 34 SMS in 2022), followed by a post-paid residential user with 21 SMS and a prepaid user with 11 SMS.

Multimedia Messaging Service (MMS)

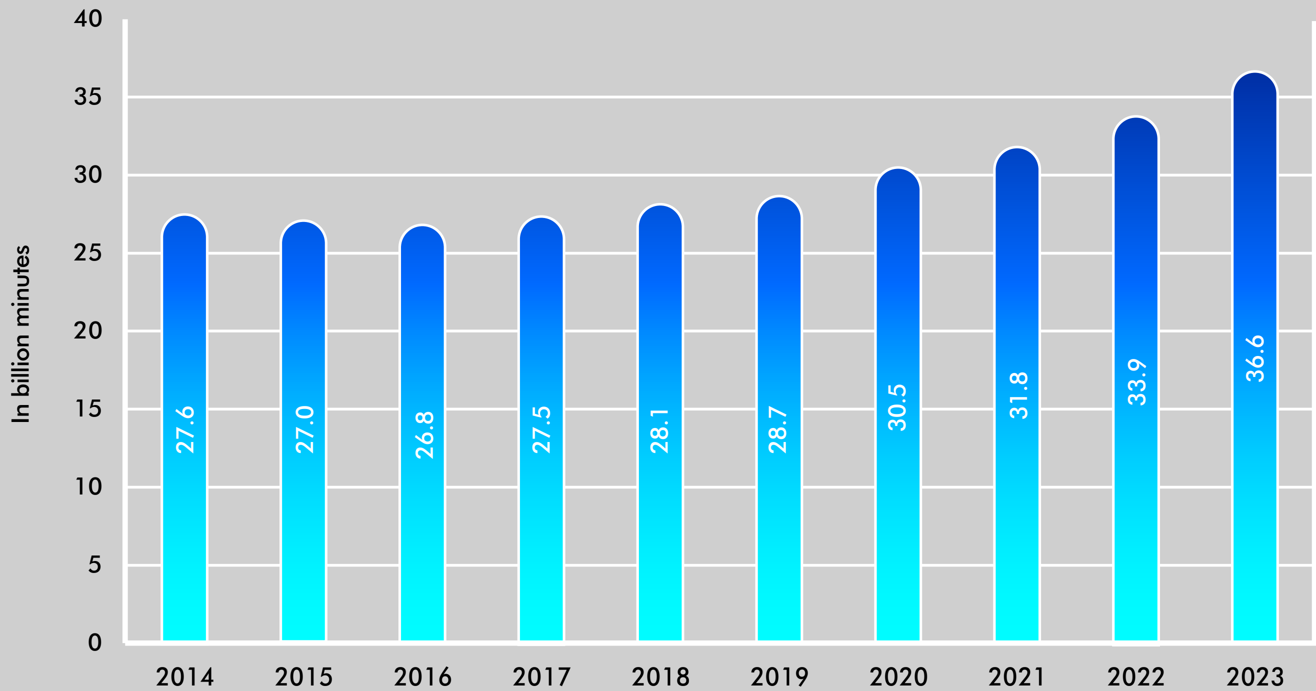
The number of MMS increased considerably by 13.2%, amounting to 10.8 million in 2023 versus 9.6 million in 2022 (Chart 1.54).

Data services[22]

- In 2023, the volume of data services over mobile communications networks increased remarkably by 48%, reaching 1,249 million GB compared to 884 million GB in 2022 (Chart 1.55).
- The majority of data traffic was transferred via mobile phone devices, accounting for 90%, while the remaining 10% via other portable devices using datacards and M2M.
- The largest volume of data was trafficked by prepaid users with 563 million GB, followed by post-paid residential users with 553 million GB and lastly business users with 132 million GB (Chart 1.56).
- All user categories increased significantly their use of data services during 2023. Specifically, a post-paid residential user used on average 11.3 GB per month (versus 8 GB in 2022), followed by a prepaid user with 8 GB (versus 5.5 GB in 2022) and finally, a business user with 7.9 GB (up from 4.5 GB in 2022) (Chart 1.57).

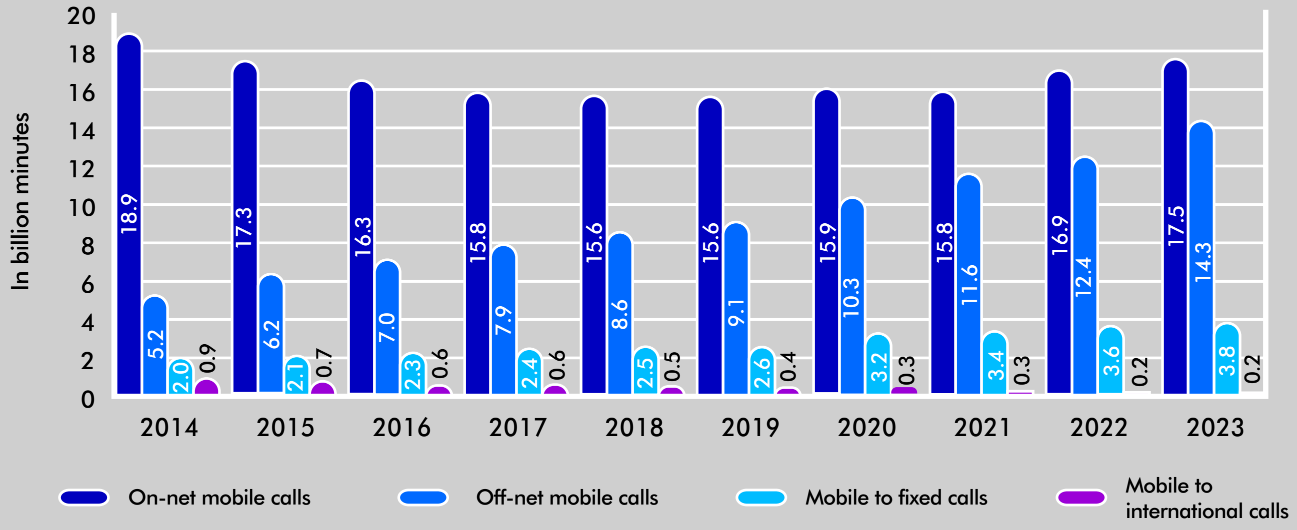
22. It is noted that up till 2012, reporting data use via mobile phones or datacards separately was not feasible.

Chart 1.48: Volume of voice calls originating from mobile



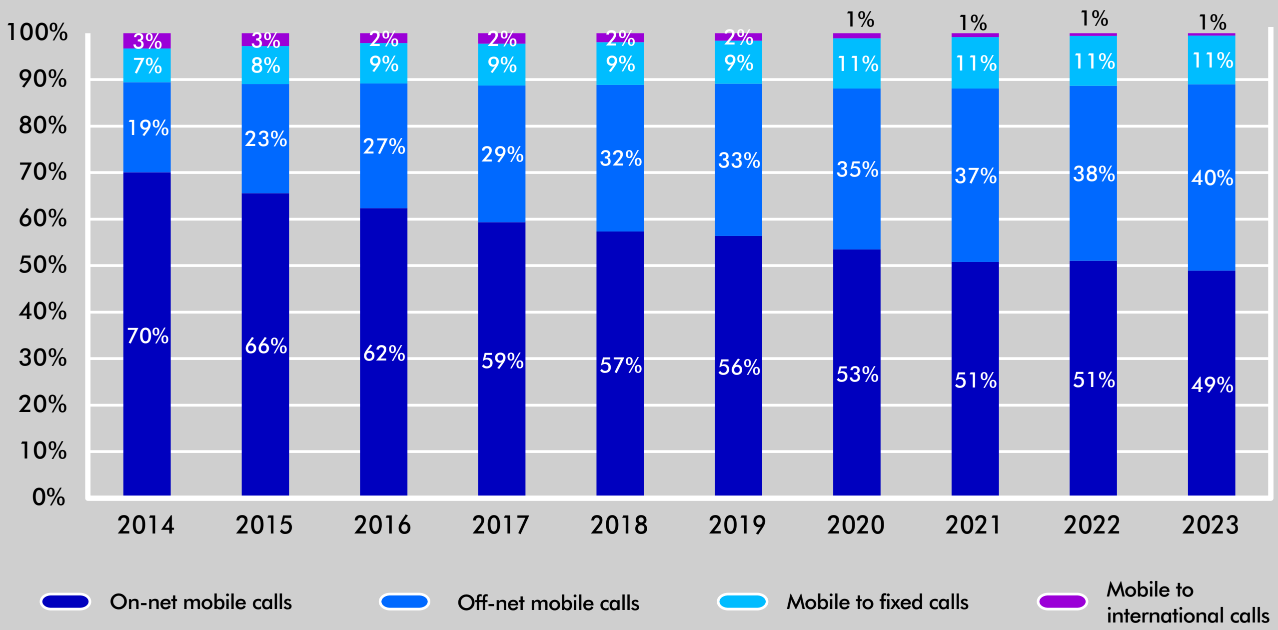
Source: EETT (based on data provided by the licensed operators)

Chart 1.49: Volume of voice calls per basic call type



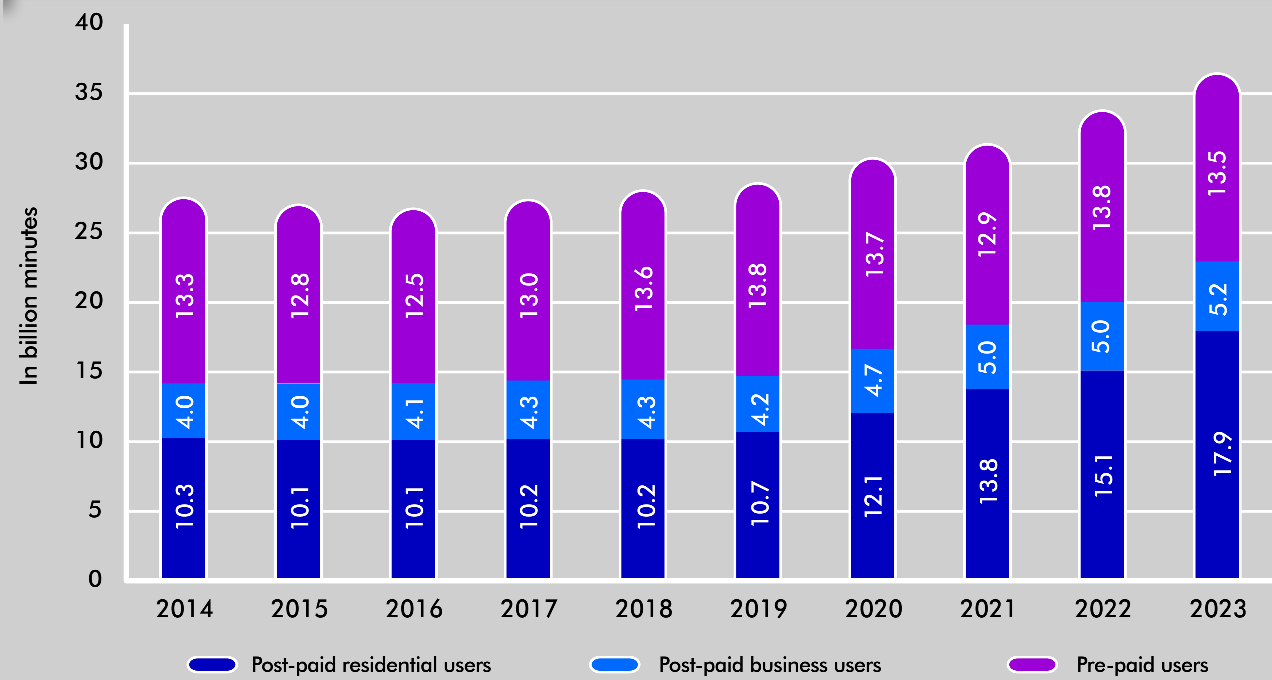
Source: EETT (based on data provided by the licensed operators)

Chart 1.50: Breakdown of the basic call types' volume



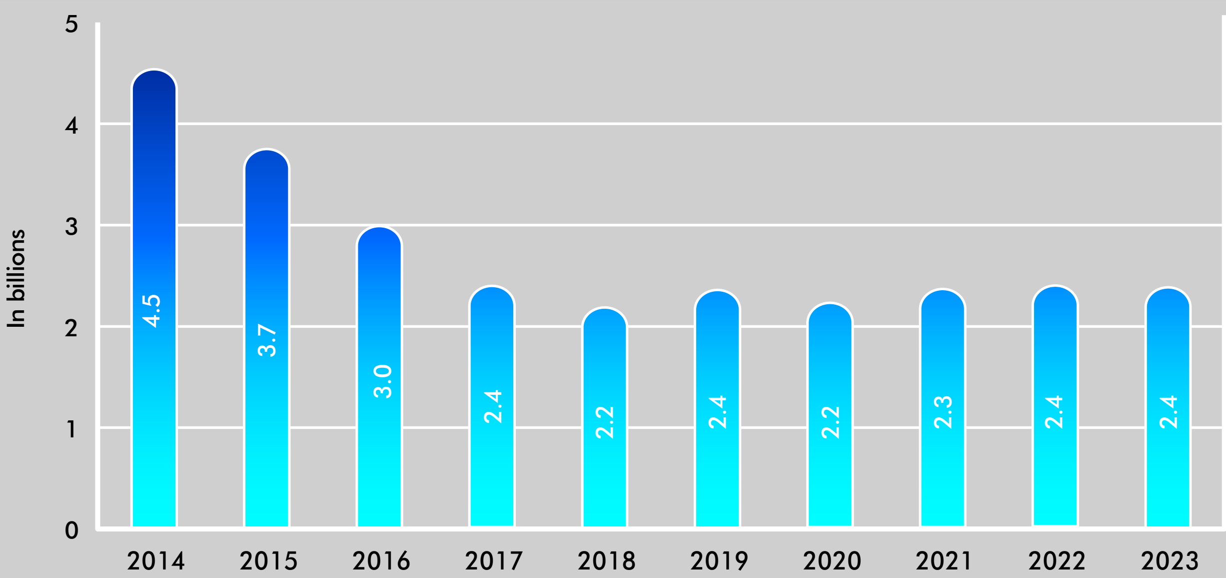
Source: EETT (based on data provided by the licensed operators)

Chart 1.51: Volume of voice calls per user category



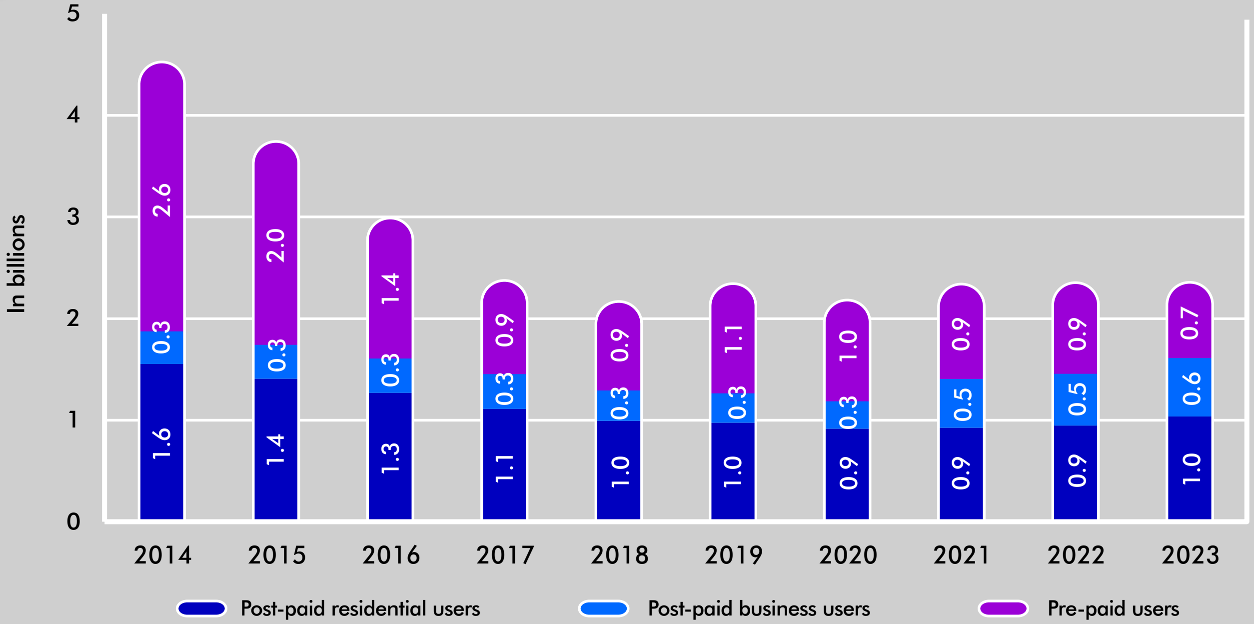
Source: EETT (based on data provided by the licensed operators)

Chart 1.52: Total number of SMS



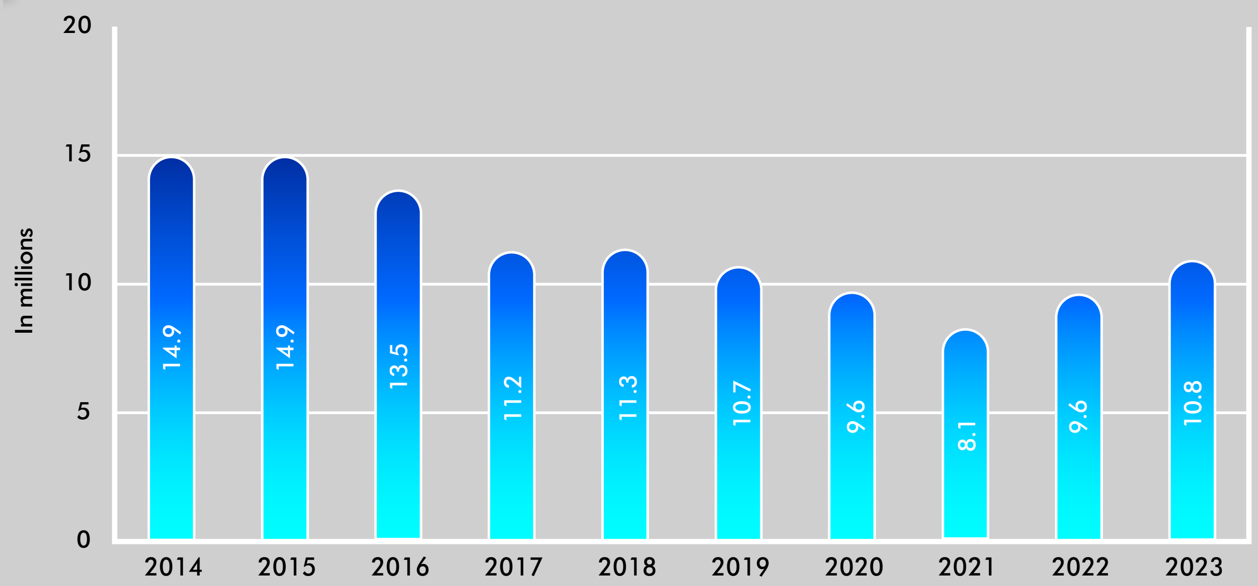
Source: EETT (based on data provided by the licensed operators)

Chart 1.53: Number of SMS per user category



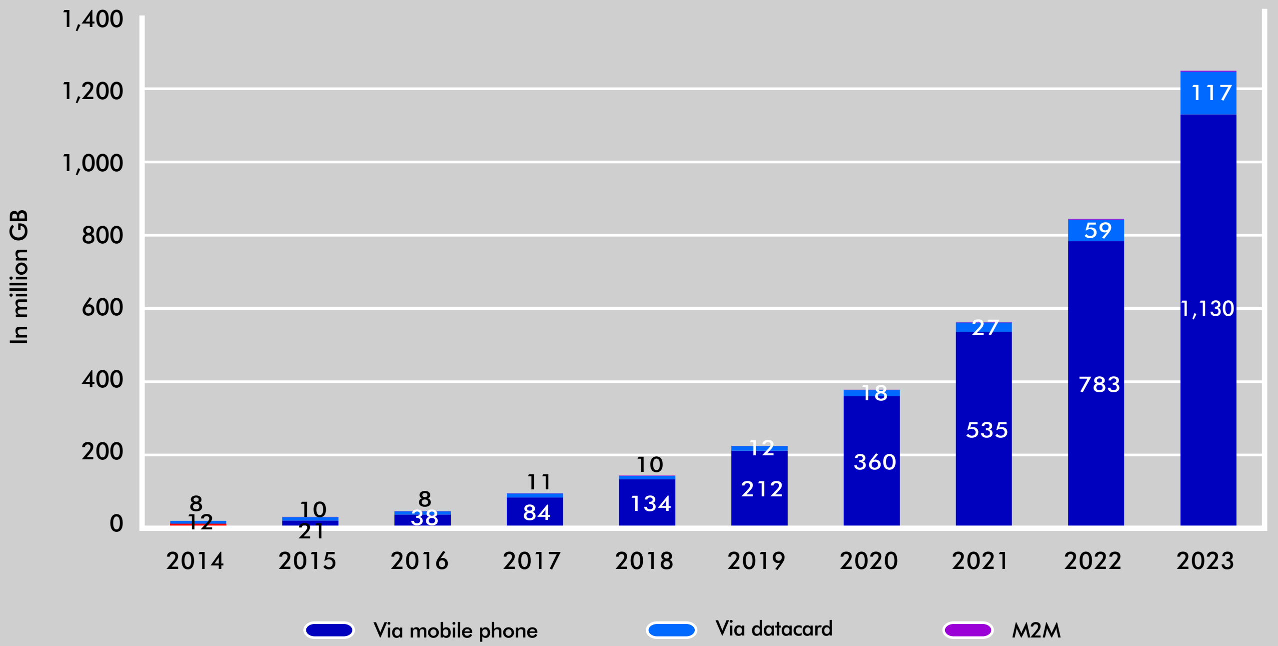
Source: EETT (based on data provided by the licensed operators)

Chart 1.54: Total number of MMS



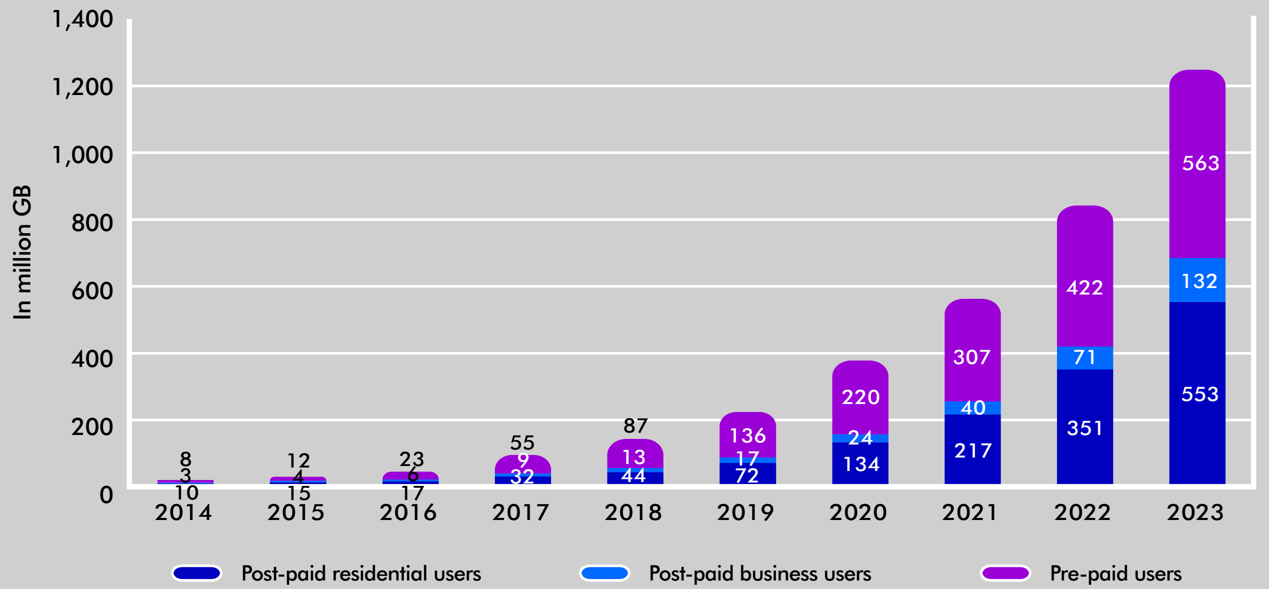
Source: EETT (based on data provided by the licensed operators)

Chart 1.55: Total volume of data services via mobile phones, datacards and M2M



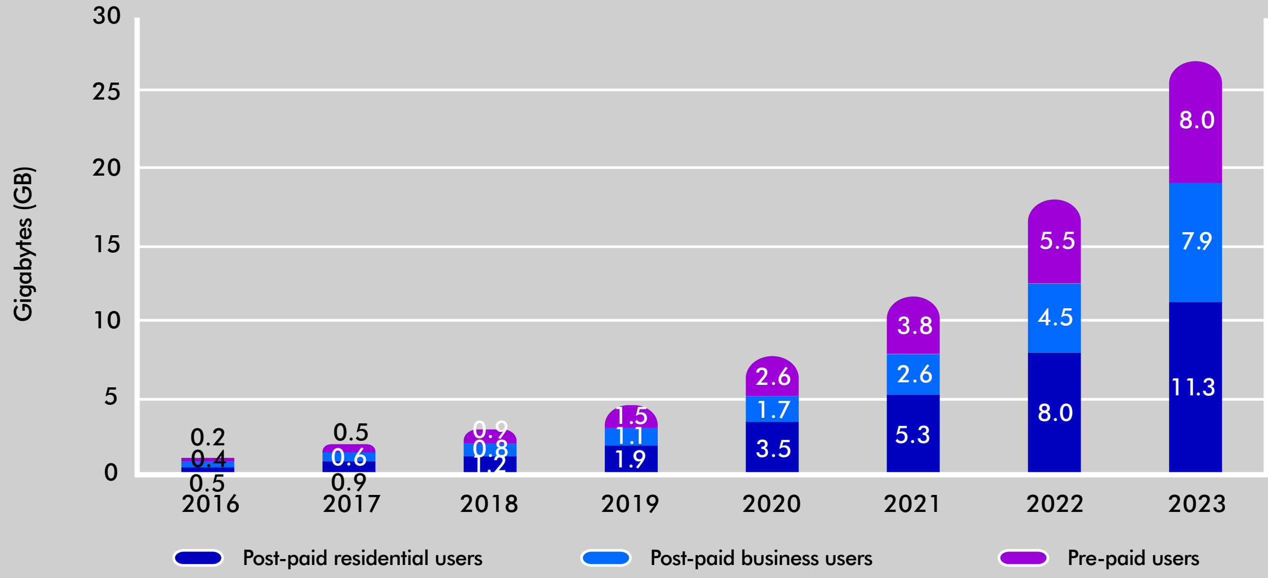
Source: EETT (based on data provided by the licensed operators)

Chart 1.56: Total volume of data (GB) per user category



Source: EETT (based on data provided by the licensed operators)

Chart 1.57: Average monthly data consumption (GB)



Source: EETT (based on data provided by the licensed operators)

Retail revenues from mobile services

In 2023, the retail revenues from voice and data services[23] (post-paid and pre-paid) increased by 2.1% amounting to 1.76 billion euros (compared to 1.73 billion euros in 2022) (Chart 1.58). Tables 1.12-1.14 present the market shares based on the MNOs' retail revenues, both aggregately and per subscriber category (post-paid and pre-paid)[24].

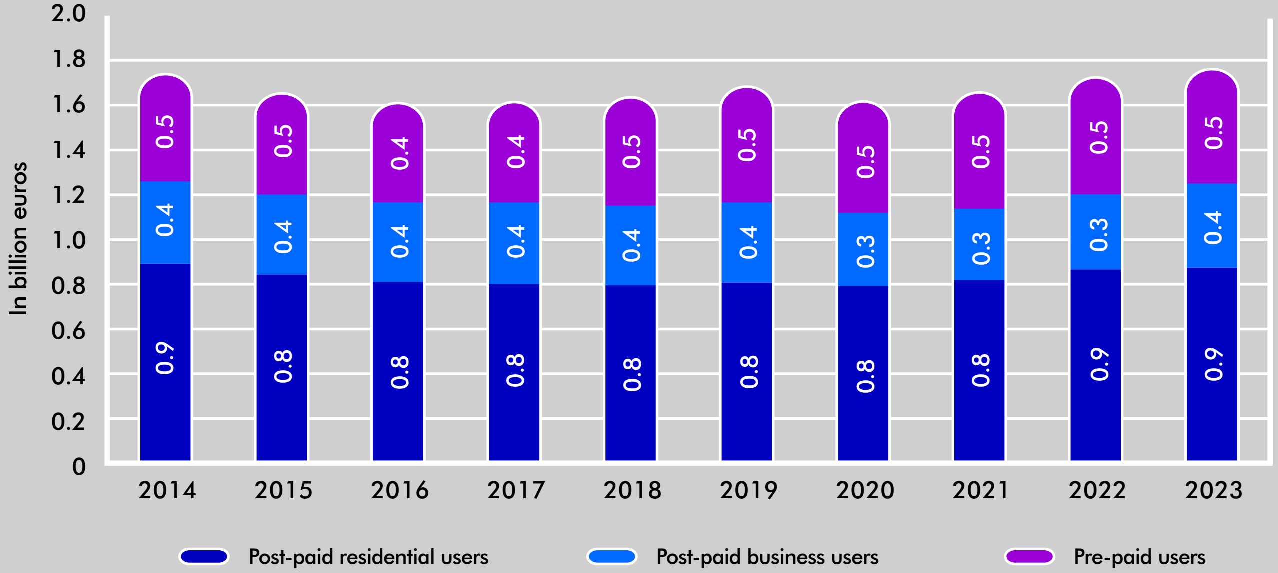
The revenues from business users registered the biggest increase by 11.1%, from post-paid residential users by 1%, whereas the revenues from pre-paid users decreased by 1.2%. In 2023, 68% of the voice and data retail revenues (1.2 billion euros) stemmed from voice calls versus 64.2% in 2022, whereas the revenues from the use of data dropped again to approximately 502 million euros, constituting 28.5% of the retail revenues compared to 31.1% in 2022 (Charts 1.59 and 1.60).

The average annual revenue per postpaid (connection) and pre-paid user was 240 and 83 euros respectively (Chart 1.61). Regarding the revenues from the use of data, residential users have consistently been the largest source of revenue, amounting to 45.4% in 2023, followed by the pre-paid users with 32.6% (Chart 1.62).

Chart 1.63 shows the downward trend of the average revenue per GB for the three user categories over time. In 2023, the average revenue per GB for the business users was 0.8 euros, for residential users amounted to 0.4 euros, while for pre-paid users was 0.3 euros.

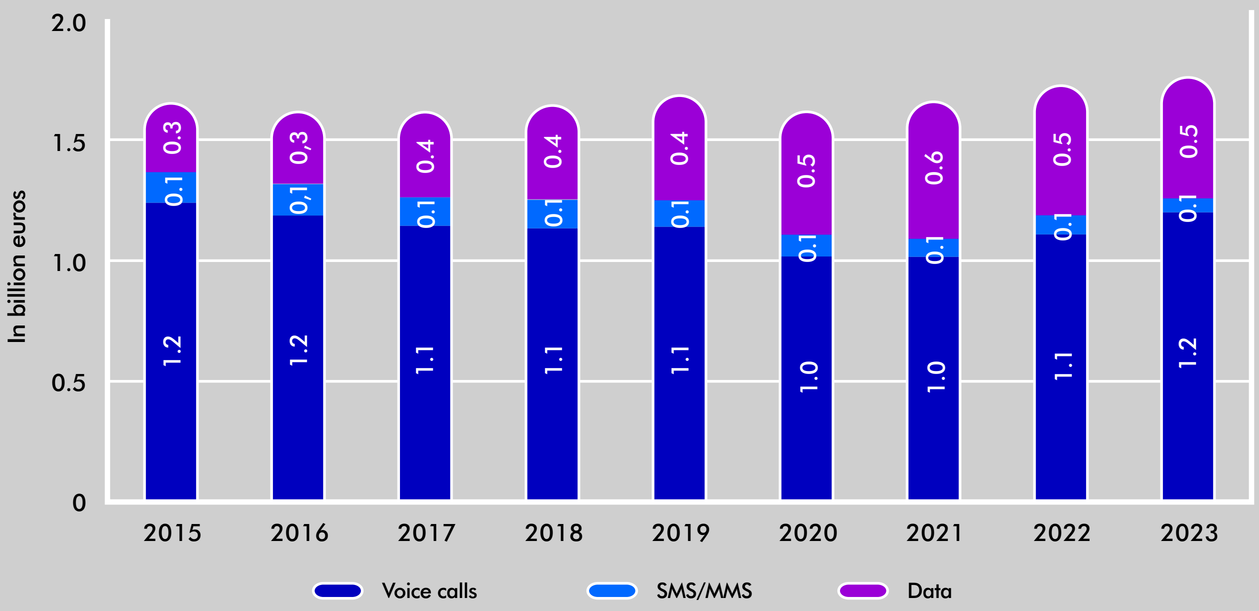
23. Revenues from the sale of handsets, wholesale or other services are not included.
24. Retail revenues and the resulting market shares are confidential data and for this reason the market shares are presented in the form of ranges.

Chart 1.58: Retail revenues from voice and data users of mobile communications networks



Source: EETT (based on data provided by the licensed operators)

Chart 1.59: Source of retail revenues from mobile services



Source: EETT (based on data provided by the licensed operators)

Table 1.12: MNOs' shares based on retail revenues

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
COSMOTE	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%
CYTA	0%-5%	0%-5%	0%-5%	0%-5%	0%-5%	0%-5%	-	-	-	-
VODAFONE	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%
NOVA	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%

Source: EETT (based on data provided by the licensed operators)

Table 1.13: MNOs' shares based on post-paid retail revenues

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
COSMOTE	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%
CYTA	0%-5%	0%-5%	0%-5%	0%-5%	0%-5%	0%-5%	-	-	-	-
VODAFONE	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%
NOVA	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%

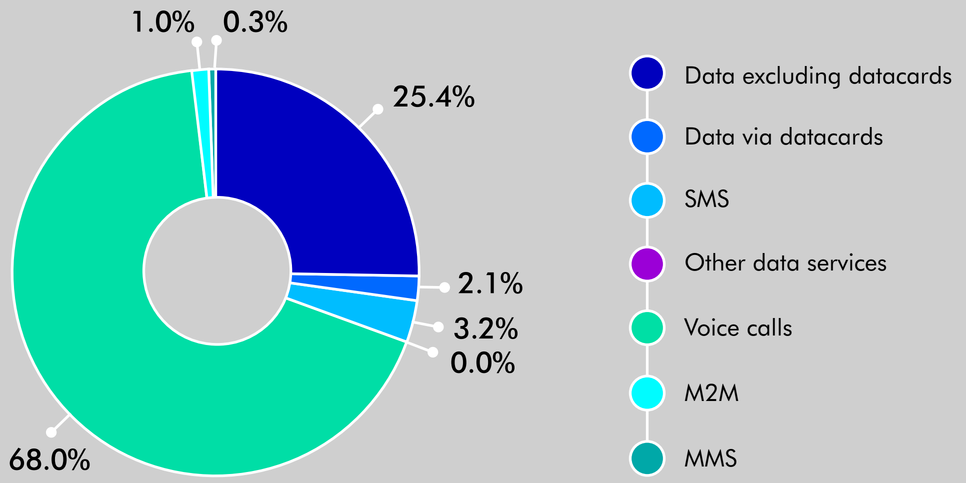
Source: EETT (based on data provided by the licensed operators)

Table 1.14: MNOs' shares based on pre-paid retail revenues

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
COSMOTE	55%-65%	55%-65%	55%-65%	45%-55%	45%-55%	55%-65%	55%-65%	55%-65%	55%-65%	55%-65%
CYTA	0%-5%	0%-5%	0%-5%	0%-5%	0%-5%	0%-5%	-	-	-	-
VODAFONE	15%-25%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%	15%-25%	25%-35%	25%-35%	25%-35%
NOVA	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	10%-15%

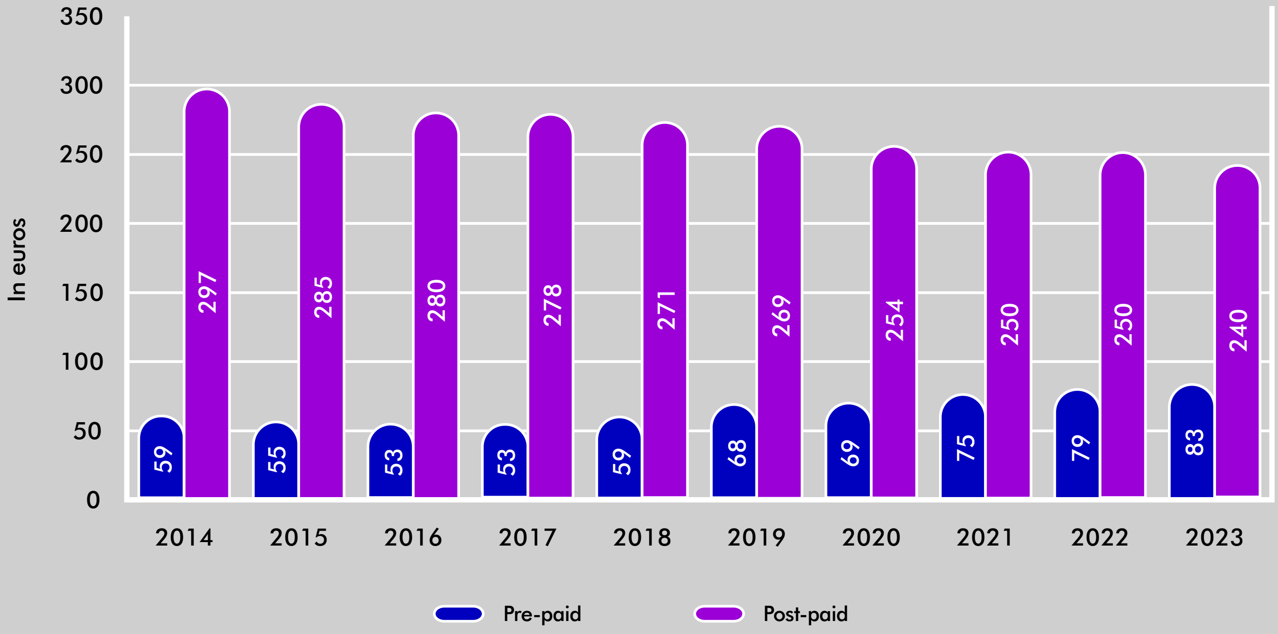
Source: EETT (based on data provided by the licensed operators)

Chart 1.60: Breakdown of retail revenues from voice and data services of mobile communications networks, 2023



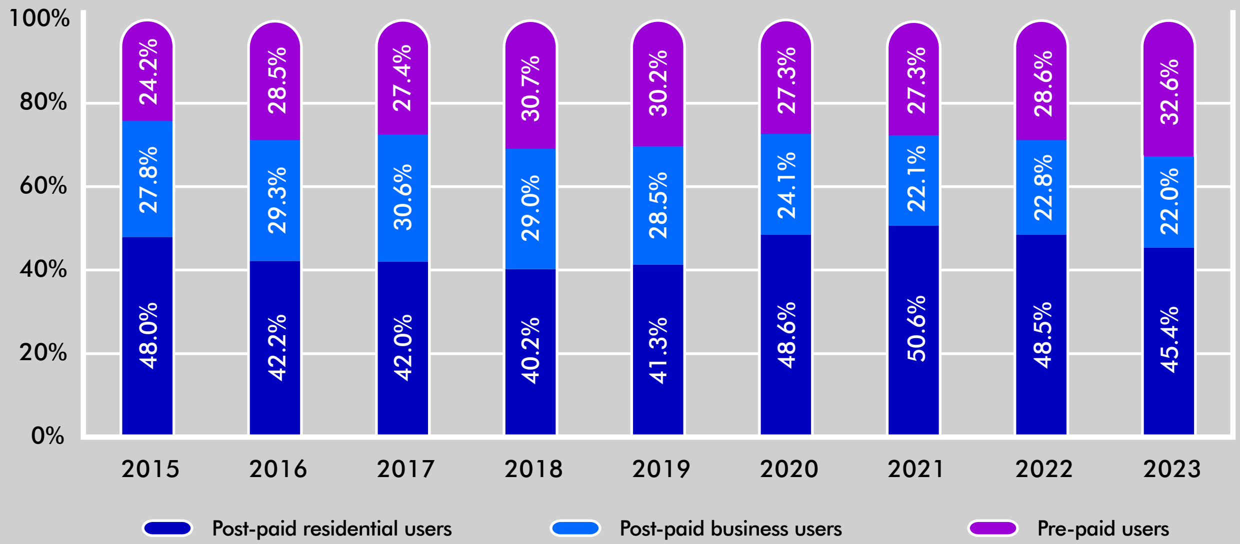
Source: EETT (based on data provided by the licensed operators)

Chart 1.61: Average annual revenue per mobile telephony connection



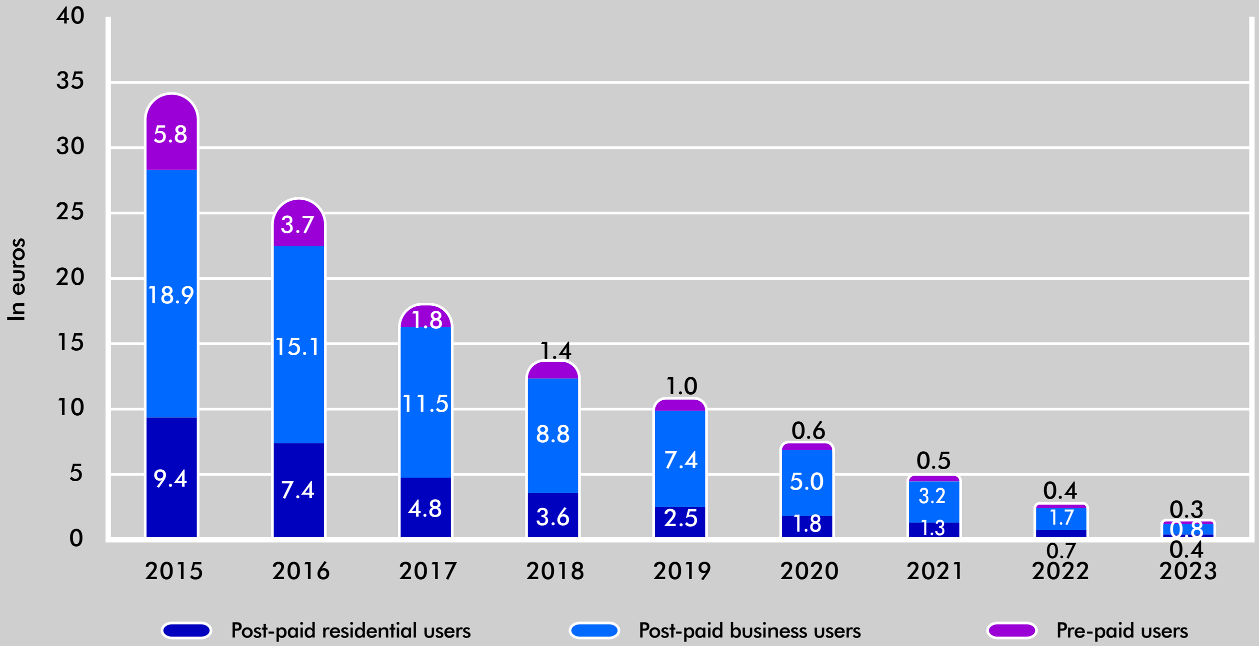
Source: EETT (based on data provided by the licensed operators)

Chart 1.62: Breakdown of retail revenues from the use of data per user category



Source: EETT (based on data provided by the licensed operators)

Chart 1.63: Average revenue per GB by user category



Source: EETT (based on data provided by the licensed operators)

Mobile telephony interconnection

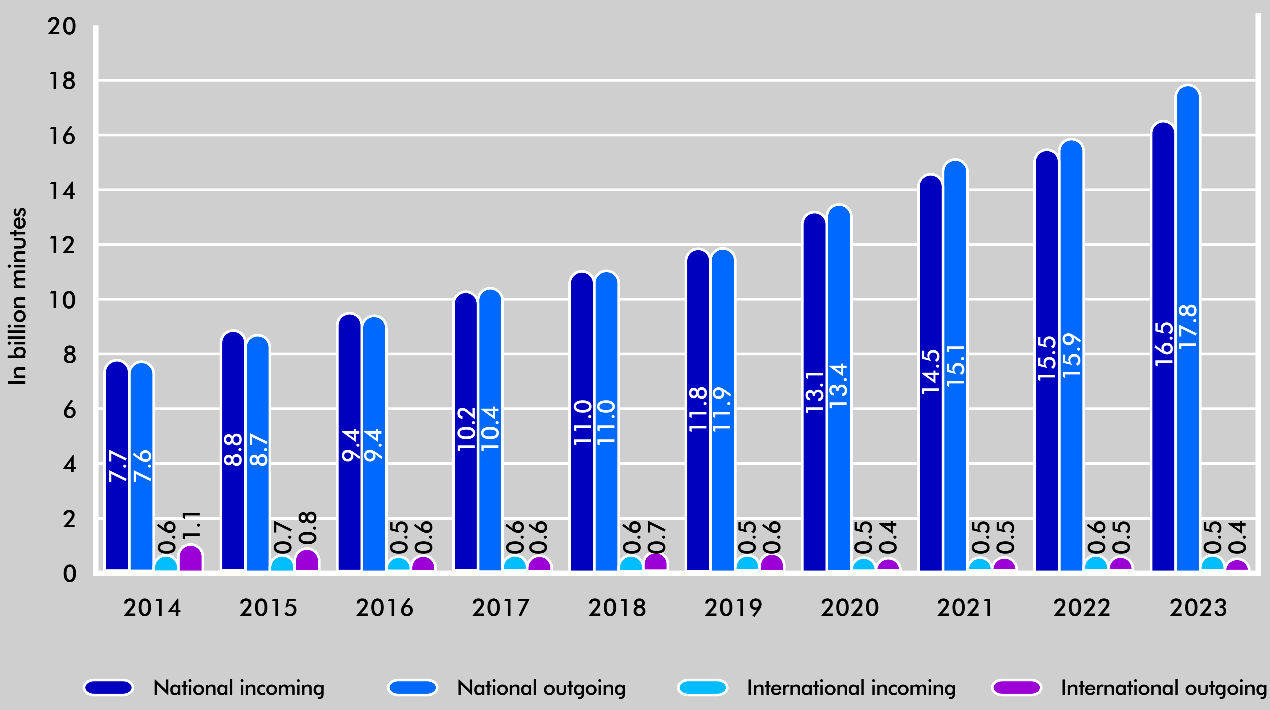
The interconnection traffic of the MNOs in 2023 increased by 9.1% compared to 2022, which constitutes an annual growth of approximately 2.9 billion minutes (Chart 1.64). Specifically, the national incoming traffic increased by 6.7%, and the national outgoing traffic rose by 12.4%, whereas the international incoming and outgoing traffic decreased by 0.7% and 12.2% respectively.

For the 2023, the MNOs' on-net traffic amounted to 15.8 billion minutes approximately, increased by 7.5% compared to 2022, thus accounting for 31% of the total interconnection traffic, which also includes the incoming and the outgoing traffic (Chart 1.65).

The national traffic terminating to mobile networks kept on rising, with national calls to mobile phones increased by 7.1%, amounting to 32.3 billion minutes versus 30.2 billion minutes in 2022 (Chart 1.66). On the contrary, the revenues from the national incoming traffic to mobile networks registered a 21.5% drop amounting to 67.3 million euros (Chart 1.67).

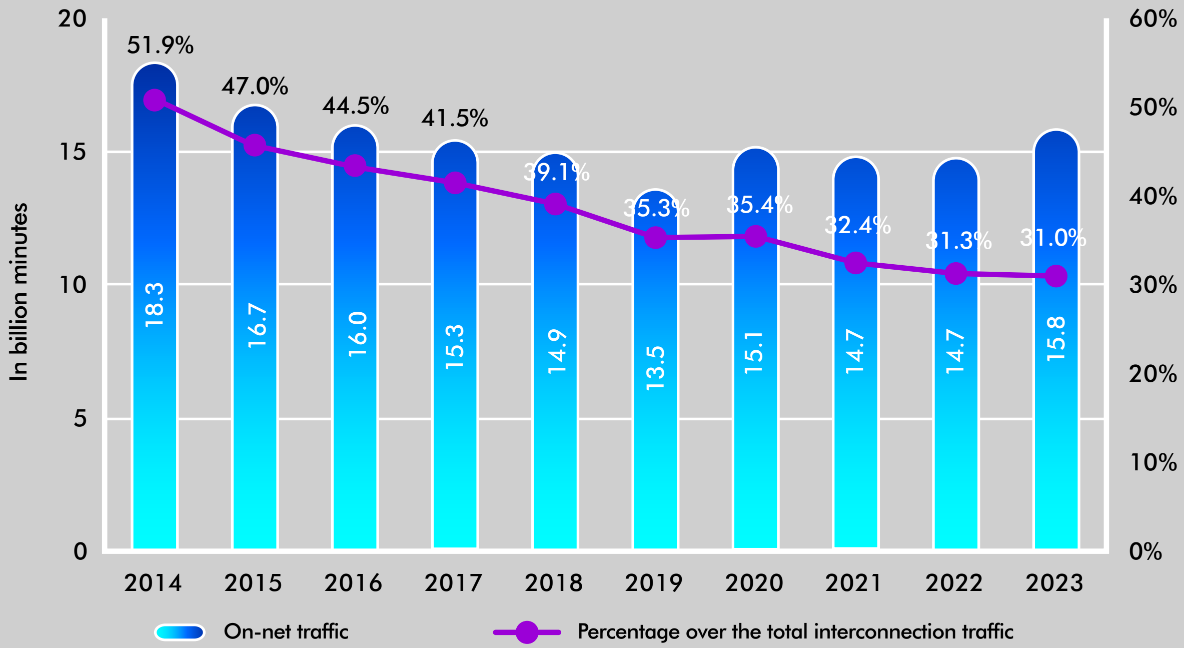
Lastly, as of January 1, 2024, the call termination rates to mobile networks were set at 0.20 eurocents per minute (Chart 1.68).

Chart 1.64: MNOs' interconnection traffic



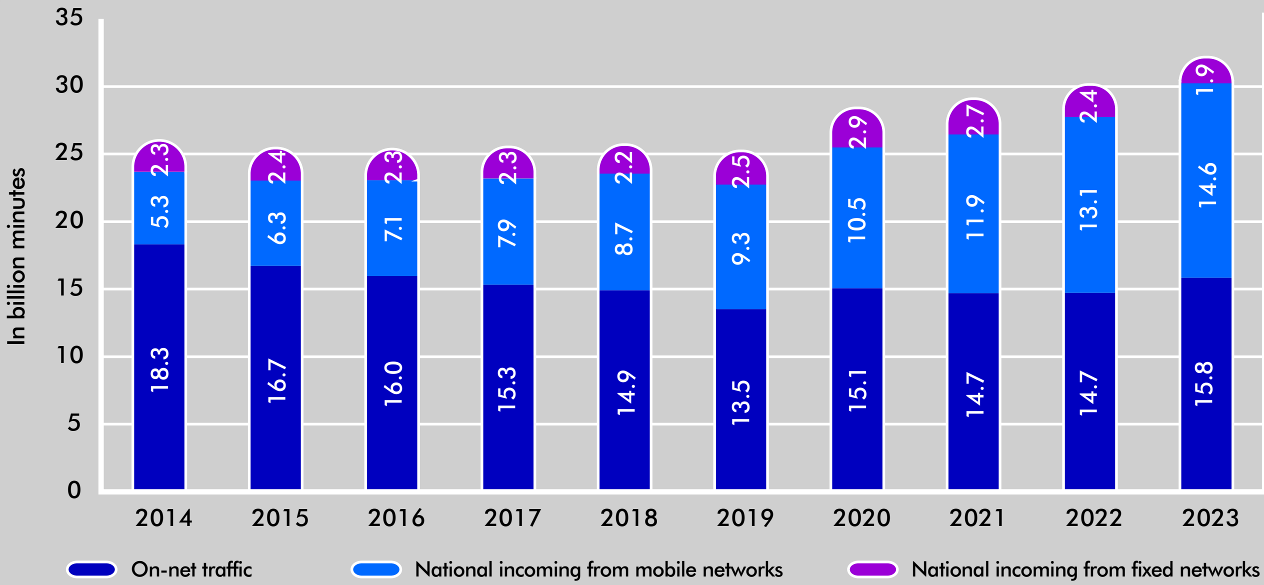
Source: EETT (based on data provided by the MNOs)

Chart 1.65: MNOs' on-net traffic



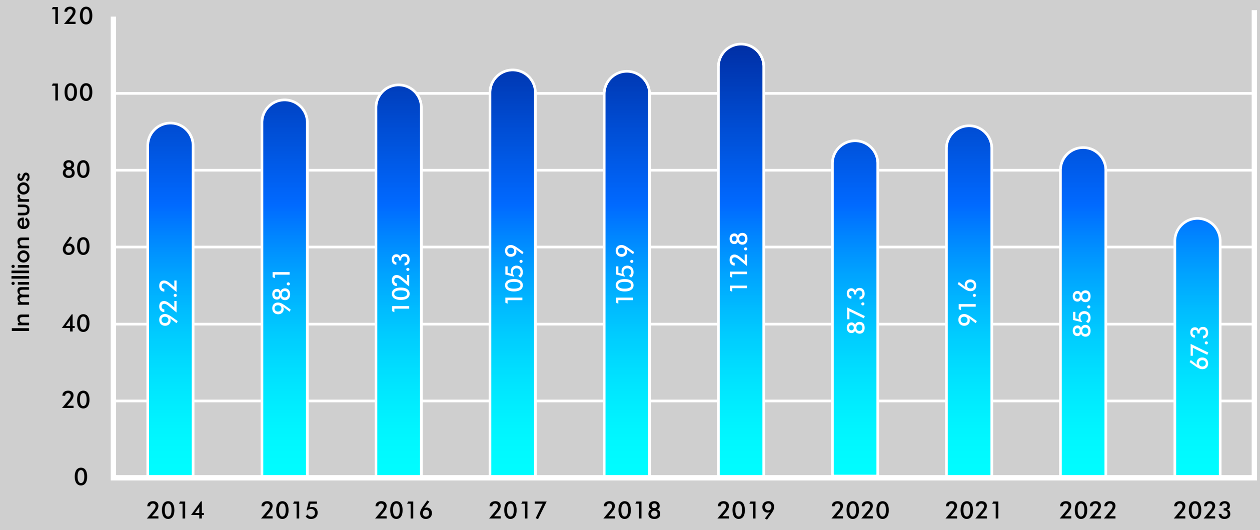
Source: EETT (based on data provided by the MNOs)

Chart 1.66: Voice calls terminating to mobiles in Greece



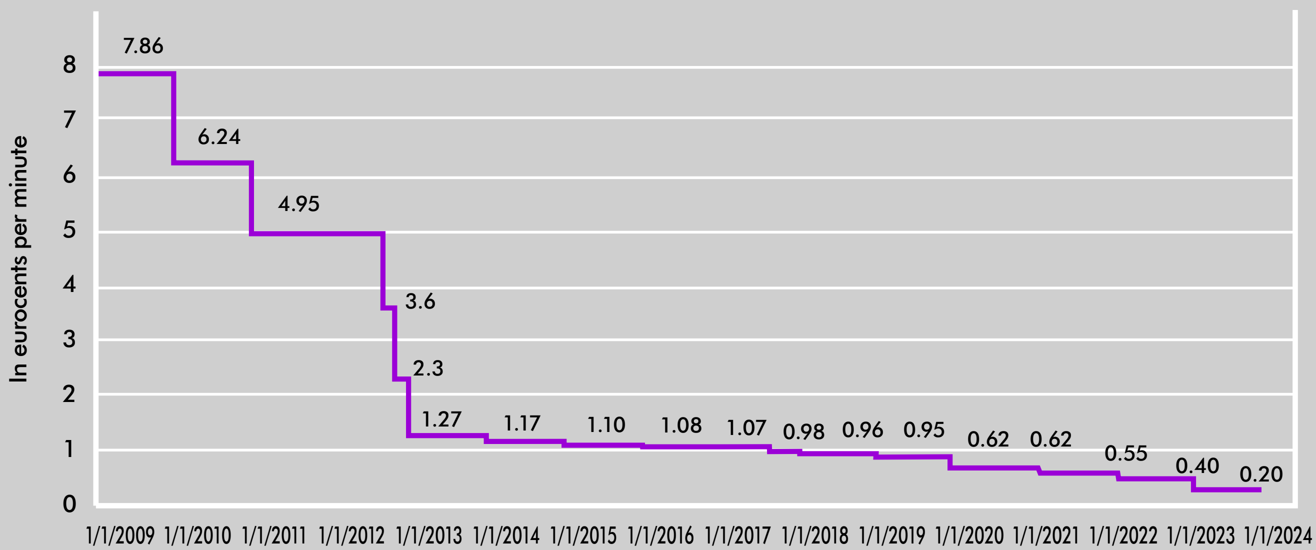
Source: EETT (based on data provided by the MNOs)

Chart 1.67: Revenues from fixed and mobile voice calls termination to mobiles in Greece



Source: EETT (based on data provided by the MNOs)

Chart 1.68: Evolution of call termination rates to mobile networks

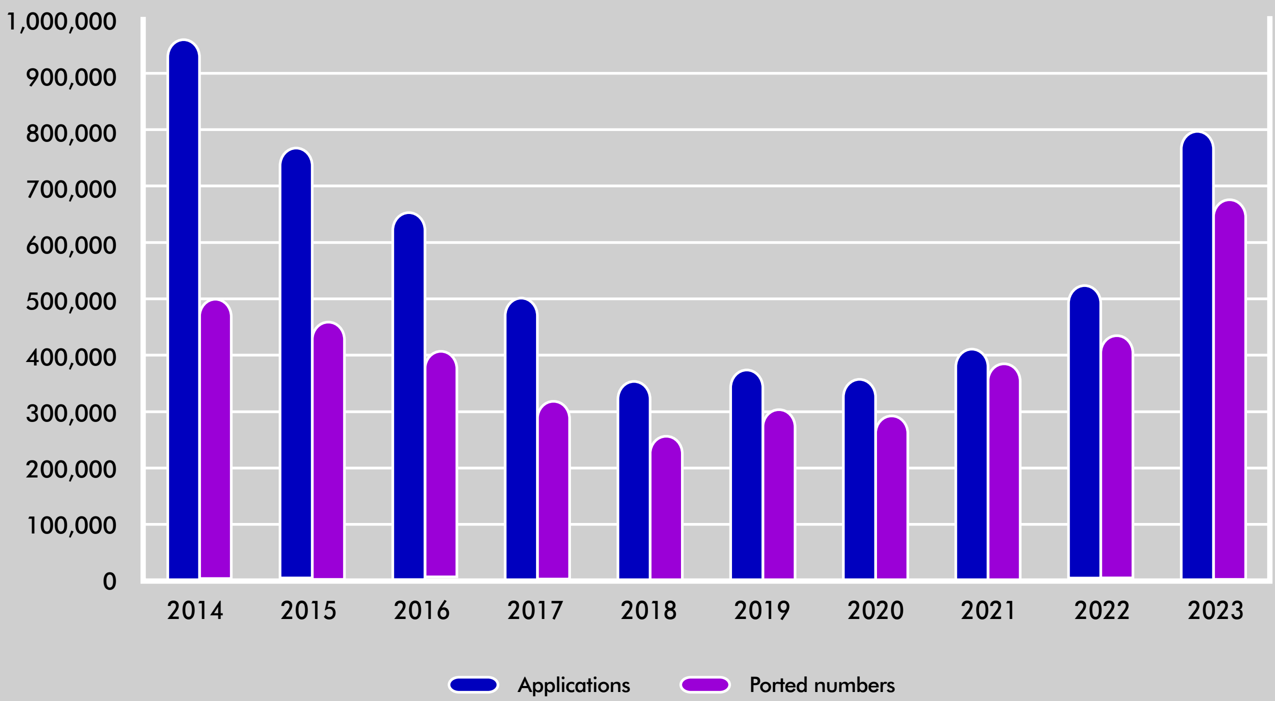


Source: EETT

Mobile number portability

In 2023, the applications submitted for porting mobile telephony numbers increased significantly by 53.5%, reaching 795,770 requests versus 518,480 requests in 2022. During the same period, 673,187 numbers were ported, marking a 56.9% increase compared to 2022 (Chart 1.69). In conclusion, approximately 85% of the initial portability requests was successfully completed.

Chart 1.69: Number portability in mobile telephony



Source: EETT

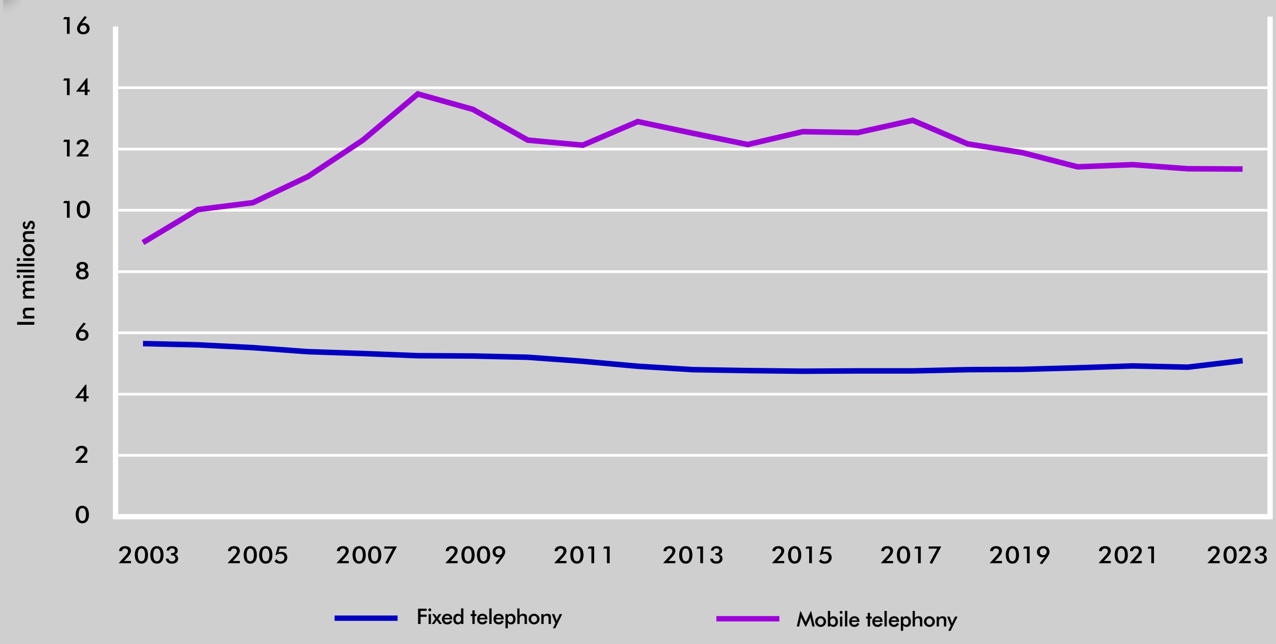
1.2.5. Comparison of fixed and mobile telephony

Fixed telephony connections (lines) increased by 4.4% reaching 5.1 million in 2023, whereas active mobile subscriptions/connections dropped marginally by 0.04%, amounting to 11.3 million (Chart 1.70).

Chart 1.71 presents the trend of the fixed telephony and Internet retail revenues compared to the retail voice and data (SMS, MMS, data) revenues of mobile communications networks[25] for the period 2014-2023. The mobile retail revenues grew by 2.1% compared to 2022, reaching 1.8 billion euros, while the fixed services' retail revenues decreased by 2% compared to 2022, amounting to 1.4 billion euros.

Chart 1.72 presents the evolution of the volume of calls from fixed and mobile phones, considering the basic call types, i.e. the national fixed calls, the calls to mobiles and the international calls[26]. The volume of calls from fixed phones dropped by 10% in 2023, amounting to 10.1 billion minutes versus 11.2 billion minutes in 2022, mainly due to the fall by 1.1 billion minutes of the national fixed calls. On the contrary, the volume of the basic call types made from mobiles increased by 8.3% compared to 2022 (off-net mobile calls increased by 1.9 billion minutes) and accounted for 78% of the respective total outgoing traffic (i.e. from fixed and mobile) (Chart 1.73).

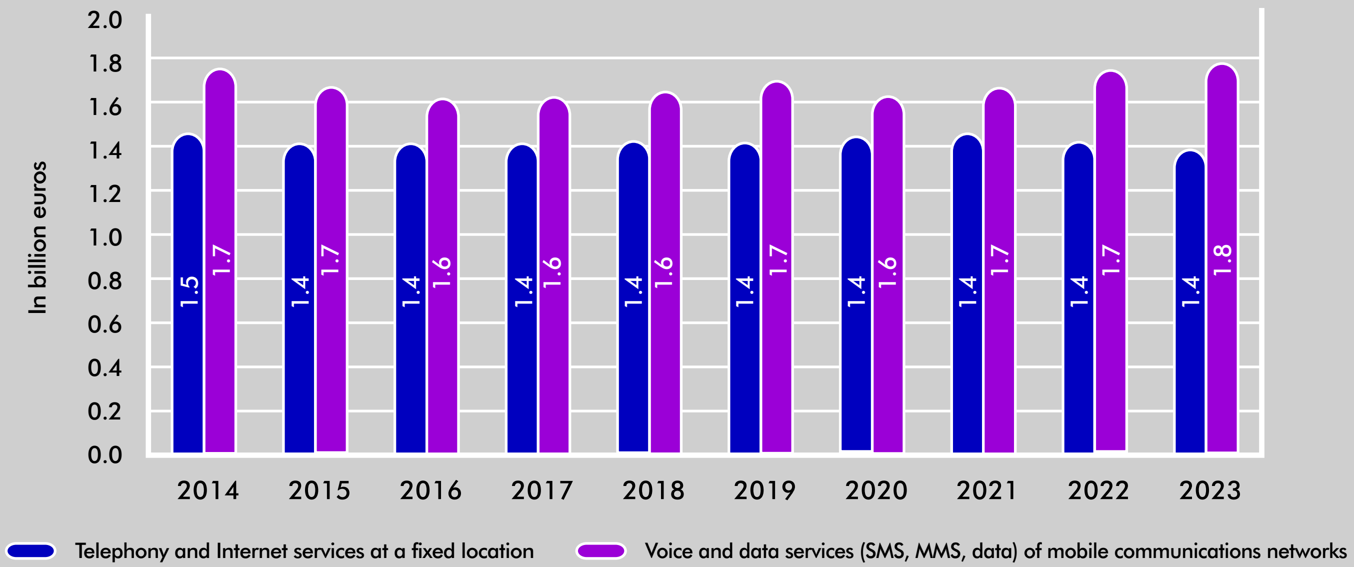
Chart 1.70: Evolution of fixed and mobile telephony connections



Source: EETT (based on data provided by the licensed operators)

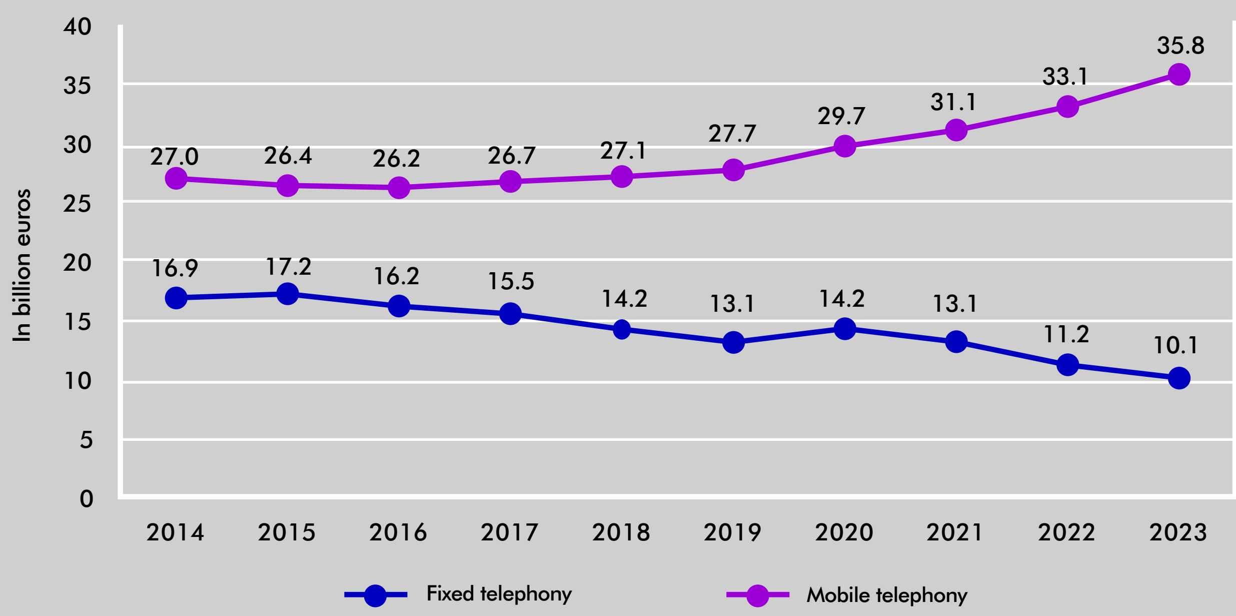
25. Revenues from handsets and other services are excluded.
26. Mobile calls entail on-net, off-net, mobile to fixed and mobile to international destinations calls.

Chart 1.71: Evolution of retail revenues



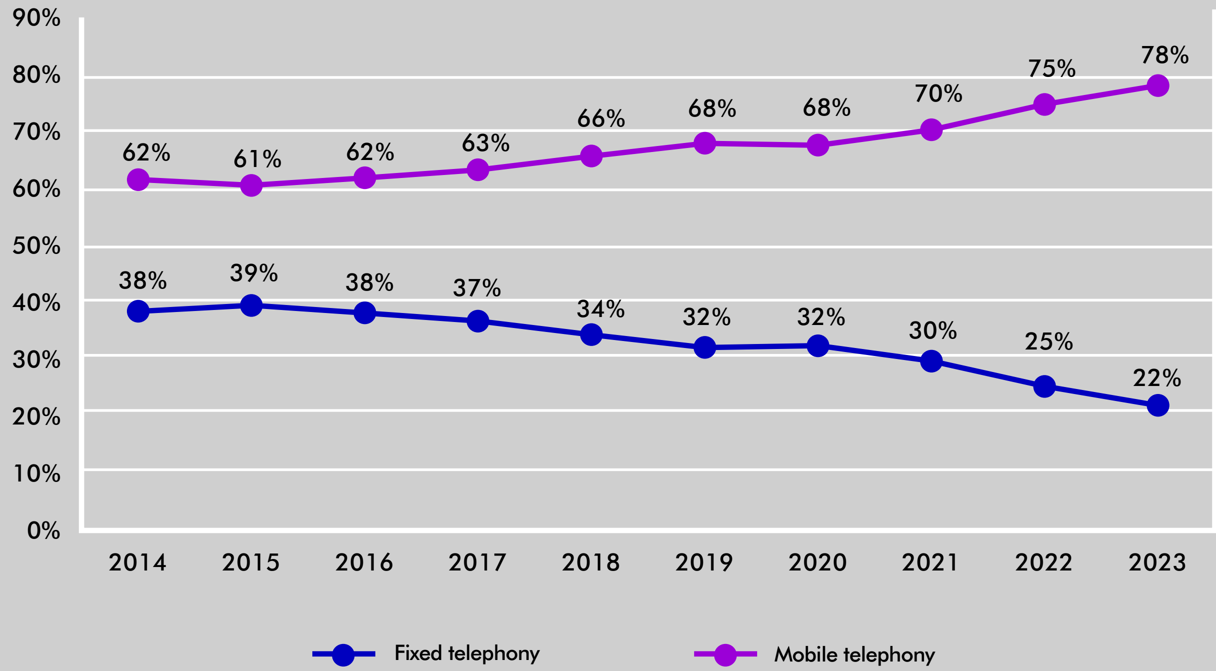
Source: EETT (based on data provided by the licensed operators)

Chart 1.72: Volume of the basic call types from fixed and mobile phones



Source: EETT (based on data provided by the licensed operators)

Chart 1.73: Fixed and mobile telephony shares (based on the outgoing volume of the basic call types)



Source: EETT (based on data provided by the licensed operators)

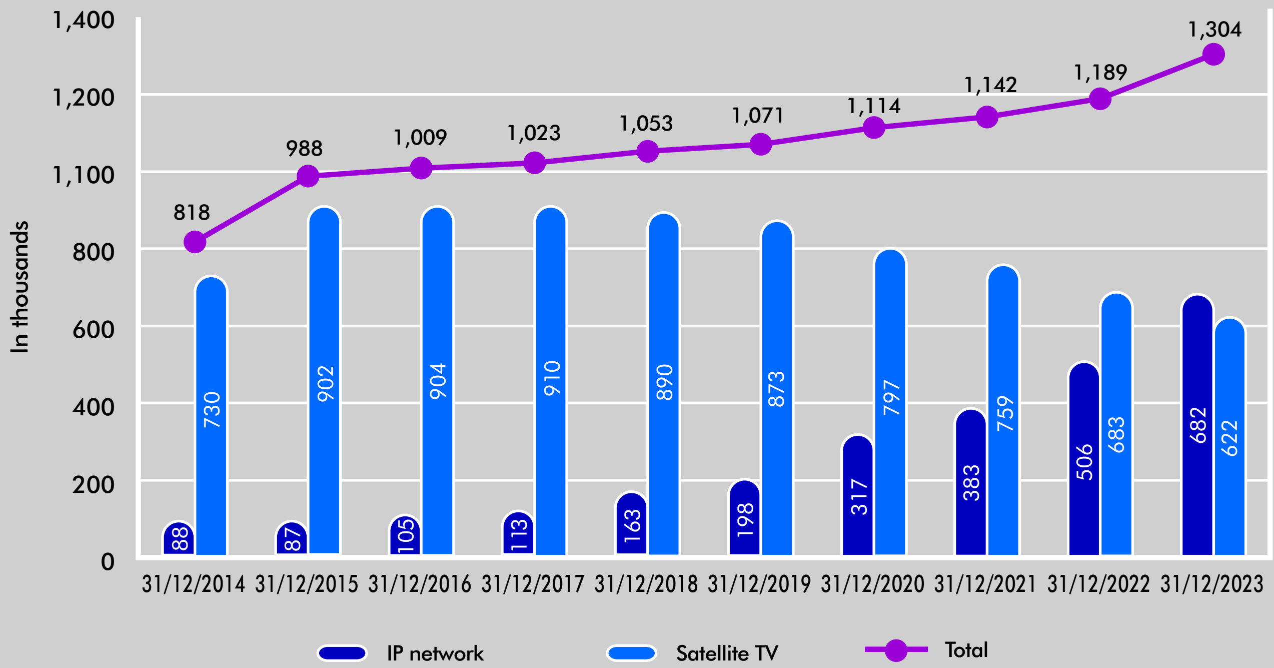
1.2.6. Pay-TV[27]

The Pay-TV subscriptions provided by the electronic communications operators amounted to 1.3 million at the end of 2023, having increased by 9.7% compared to 2022 (1.2 million). For the first time, the majority of these subscriptions (52%) was via IP, while the remaining 48% was satellite ones (Chart 1.74). The respective market shares are presented in Table 1.15.

During 2023 and excluding the Over the Top (OTT) providers (e.g. Netflix, Amazon, Cinobo, etc.), pay-audiovisual content services (i.e. Pay-TV) in Greece were being rendered by the major operators of electronic communications networks (or companies that belong to a group), namely OTE, NOVA, and VODAFONE.

27. It is noted that from 2020 and onwards, these subscriptions include all Pay-TV subscriptions via an IP network (i.e. both those where the Internet access is obligatory via a broadband connection of the same network operator and those via a broadband connection of any network operator).

Chart 1.74: Evolution of Pay-TV subscriptions



Source: EETT (based on data provided by the licensed operators)

Table 1.15: Shares of Pay-TV providers based on subscriptions

	31/12/2015	31/12/2016	31/12/2017	31/12/2018	31/12/2019	31/12/2020	31/12/2021	31/12/2022	31/12/2023
CYTA	0%-5%	0%-5%	0%-5%	0%-5%	-	-	-	-	-
NOVA	45%-55%	35%-45%	35%-45%	35%-45%	25%-35%	25%-35%	25%-35%	25%-35%	25%-35%(3)
HOL	0%-5%	-	-	-	-	-	-	-	-
OTE	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%
VODAFONE	-	5%-10%(1)	5%-10%(1)	5%-10%(1)	10%-15%(1)(2)	10%-15%(1)(2)	10%-15%(1)(2)	10%-15%(1)(2)	10%-15%(1)(2)
WIND	-	-	-	0%-5%	5%-10%	5%-10%	5%-10%	5%-10%	-

Note:
(1) Including HOL.
(2) Including CYTA.
(3) Including WIND.

Source: EETT (based on data provided by the licensed operators)

1.2.7. Bundled offers

According to the data submitted by the operators that provide bundled offers[28], the total residential and non-residential bundled offers at the end of the 2023, increased marginally by 0.04%, ranging at the same level as 2022 (4.5 million), while the percentage of the fixed telephony connections that were bundled was estimated at 94%.

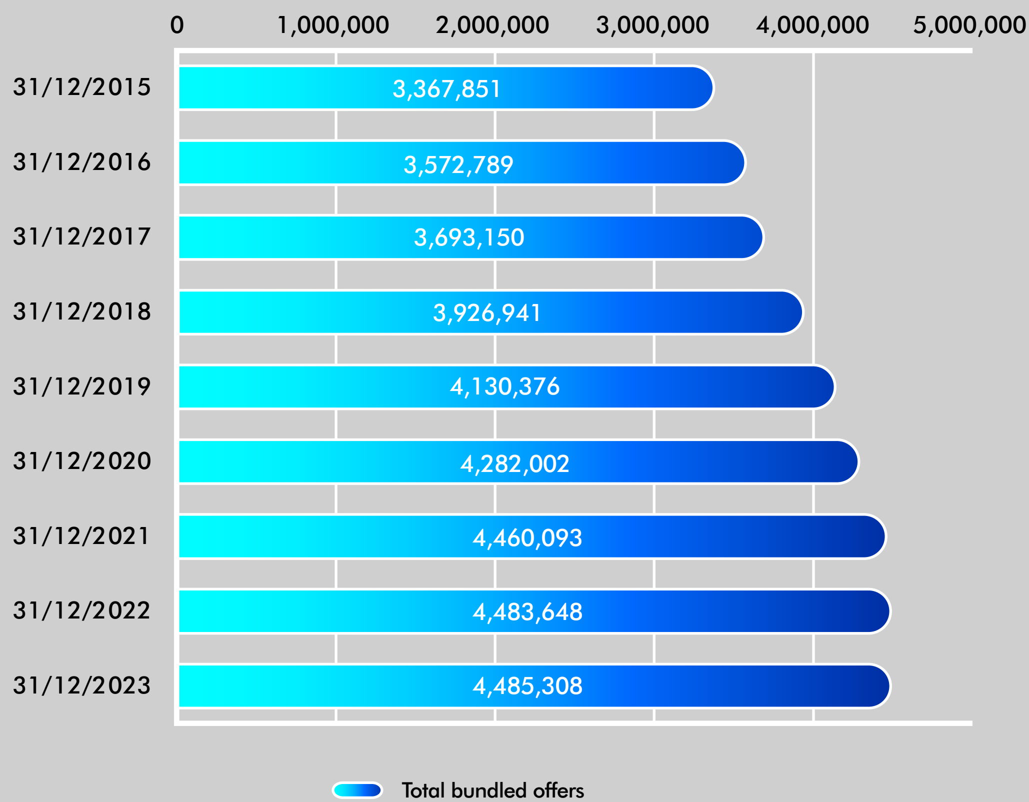
As far as the bundled offers with mobile services are concerned, it is clarified that, mobile-wise, all bundled offers, including either one at least post-paid connection or exclusively a pre-paid mobile(s)[29], have been counted and presented.

Hence, the main conclusions for 2023 are as follows:

- Over 99% of the bundled offers includes fixed- telephony and fixed broadband access (Table 1.16).
- Bundled offers amounted to 4,485,308 at the end of 2023, a marginal increase of approximately 1.7 thousand compared to 2022 (4,483,648) (Chart 1.75). It is also noted that the fixed telephony connections as a total (bundled and unbundled) decreased further by approximately 1% compared to 2022 (Table 1.16).
- OTE-COSMOTE's share based on the total bundled offers was estimated at the range of [45%-55%] at the end of 2023, followed by NOVA at the range of [25%-35%] and VODAFONE at the range of [15%-25%] (Table 1.17).
- For the first time, the triple play of fixed telephony, fixed broadband access, and mobile services was the most popular bundled offer, with approximately 1.89 million subscriptions, making up 42.2% of the total bundled offers. The second most popular combination was the double play of fixed telephony and fixed broadband access, with 1.88 million subscriptions (41.9% of the total bundled offers). Lastly and way below are the quadruple-play and the triple play of fixed telephony, fixed broadband access and Pay-TV, making up, at the end of 2023, 8.6% and 6.5% respectively of the total bundled offers (Charts 1.76 and 1.77).
- The Pay-TV subscriptions increased by about 162 thousand in 2023, amounting to 1.3 million at the end of 2023. About 48% of those concerned unbundled Pay-TV subscriptions, namely subscriptions that are not part of a bundled offer which are, for the first time, the majority with 52% (Chart 1.78). It is clarified that as unbundled Pay-TV subscriptions are also considered those that are bought jointly with other services (from the same operator or group of companies) but do not fall under the bundle offer's definition in order to be counted as such[30].
- Bundled offers with mobile services (post-paid and pre-paid) reached 2.3 million at the end of 2023, representing approximately 52% of the total bundled offers, compared to 46% at the end of 2022 (Chart 1.79). 81.7% of those (i.e. 1,892,397) concerned the triple play of fixed telephony, fixed broadband access and mobile services, 16.7% (386,398) concerned the quadruple play, and 1.6% (36,147) pertained to other bundled offers (Chart 1.80 and Table 1.16).
- At the end of 2023, OTE-COSMOTE's market share based on the bundled offers that include mobile services was, at the range of [55%-65%] whereas VODAFONE's and WIND's shares ranged between [15%-25%] (Table 1.18).
- In 2023, the fixed-mobile bundled offers[31] increased by about 246 thousand while the SIM cards that participate in them increased by roughly 575 thousand amounting to 3.9 million cards[32] (Chart 1.81). Finally, the estimated average number of SIM cards per bundled offer with mobile services was 1.7 cards at the end of 2023.

28. In 2023, OTE-COSMOTE, HCN (Hellenic Cable Networks), NOVA and VODAFONE provided bundled offers, while HCN is not currently active in providing bundled offers with mobile services.
29. Commercially available as of October 2018.
30. For example, and according to the definition used, buying jointly from the same operator of (a) a double play of fixed telephony and fixed broadband access and of (b) a Pay-TV subscription is not considered as triple play if the price that the user pays equals the sum of the prices of the individual (a) and (b) services.
31. It is clarified that fixed-mobile bundled offers are those that include (a) "Fixed telephony" and/or "Fixed broadband access" and (b) "Mobile service", whether or not they include "Pay-TV".
32. The bundled offer that includes mobile services may correspond, mobile-wise, to more than one SIM card, post-paid or/and pre-paid.

Chart 1.75: Evolution of bundled offers



Source: EETT (based on data provided by the licensed operators)

Table 1.16: Number of bundled offers, fixed connections and SIM cards

Bundled offers (residential and non-residential)	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
"Fixed telephony" and "Fixed broadband access" (2-Play)	1,896,454	2,092,681	2,405,296	2,393,190	2,326,067	2,197,956	2,193,117	2,075,634	1,878,426
"Fixed telephony" and "Fixed broadband access" and "Pay-TV"(3-Play)	715,289	630,690	411,542	355,642	327,913	324,826	327,099	339,248	291,940
"Fixed telephony" and "Fixed broadband access" and "Mobile services" (3-Play)	651,515	629,050	745,603	1,047,881	1,321,926	1,553,116	1,707,137	1,788,004	1,892,397
"Fixed telephony" and "Fixed broadband access" and "Pay-TV" and "Mobile services" (4-Play)	20,982	137,754	89,059	80,812	102,255	161,235	188,821	237,044	386,398
Other bundled offers	83,611	82,614	41,651	49,416	52,215	44,869	43,919	43,718	36,147
Total bundled offers	**3,367,851**	**3,572,789**	**3,693,150**	**3,926,941**	**4,130,376**	**4,282,002**	**4,460,093**	**4,483,648**	**4,485,308**
Fixed telephony connections (residential and non-residential)	**Connections**								
Fixed telephony connections that are part of bundled offers on the total fixed telephony connections	72%	76%	78%	83%	86%	90%	93%	93%	94%
Unbundled fixed telephony connections on the total fixed telephony connections	28%	24%	22%	17%	14%	10%	7%	7%	6%
Total fixed telephony connections	**4,725,256**	**4,733,425**	**4,737,871**	**4,766,317**	**4,781,472**	**4,830,844**	**4,921,056**	**4,865,242**	**4,822,130**
Mobile SIM cards (residential and non-residential)	**SIM cards**								
Number of SIM cards (for mobile telephony and/or mobile broadband) participating in fixed-mobile bundled offers	798,034	969,173	1,163,489	1,350,553	2,129,366	2,679,654	3,014,319	3,340,067	3,916,503

Source: EETT (based on data provided by the licensed operators)

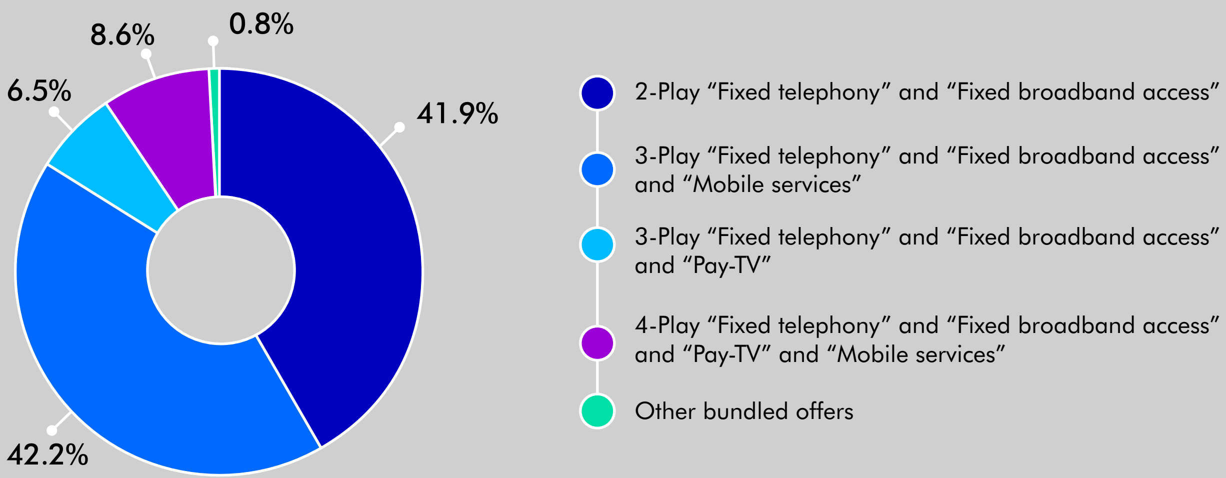
Table 1.17: Shares based on total number of bundled offers

	31/12/2015	31/12/2016	31/12/2017	31/12/2018	31/12/2019	31/12/2020	31/12/2021	31/12/2022	31/12/2023
CYTA	5%-10%	5%-10%	5%-10%	5%-10%	-	-	-	-	-
HCN	-	-	-	-	-	-	-	-	0%-5%
NOVA	15%-25%	15%-25%	10%-15%	10%-15%	10%-15%	10%-15%	10%-15%	10%-15%	25%-35%(3)
HOL-VODAFONE	15%-25%	-	-	-	-	-	-	-	-
OTE-COSMOTE	35%-45%	35%-45%	35%-45%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%	45%-55%
VODAFONE	0%-5%	15%-25%(1)	15%-25%(1)	15%-25%(1)	15%-25%(1)(2)	15%-25%(1)(2)	15%-25%(1)(2)	15%-25%(1)(2)	15%-25%(1)(2)
WIND	10%-15%	15%-25%	15%-25%	15%-25%	10%-15%	10%-15%	10%-15%	15%-25%	-

Note:
(1) Including HOL.
(2) Including CYTA.
(3) Including WIND.

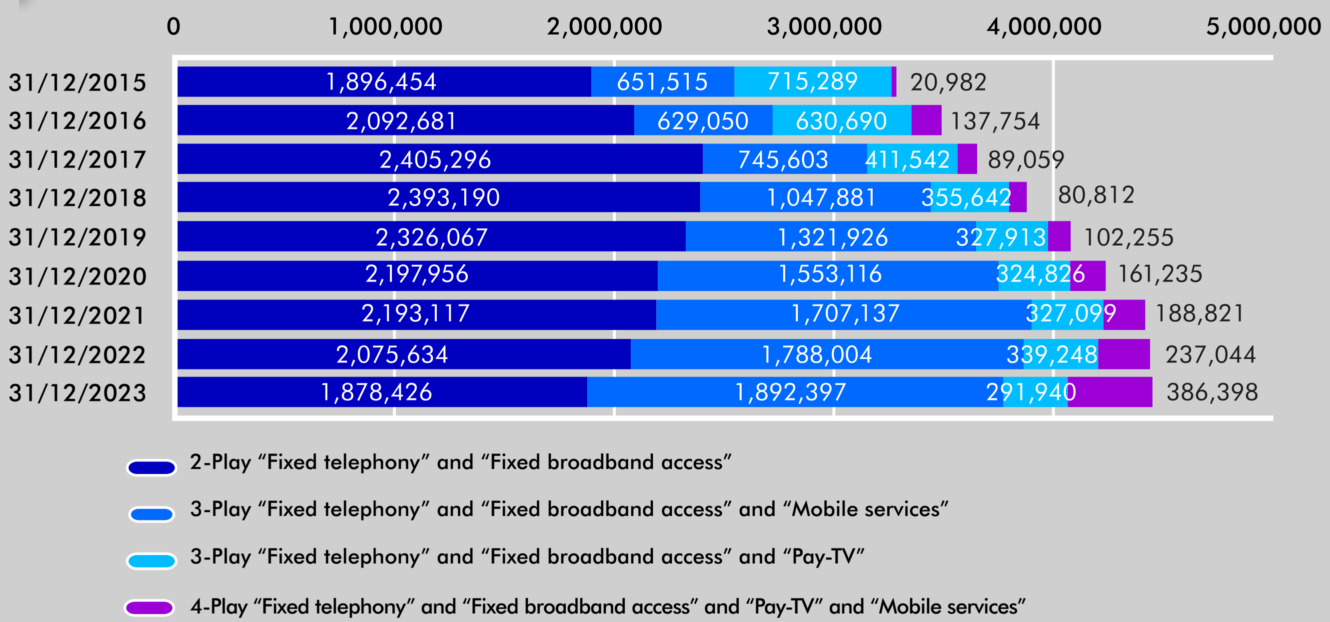
Source: EETT (based on data provided by the licensed operators)

Chart 1.76: Breakdown of bundled offers per specific type, December 2023



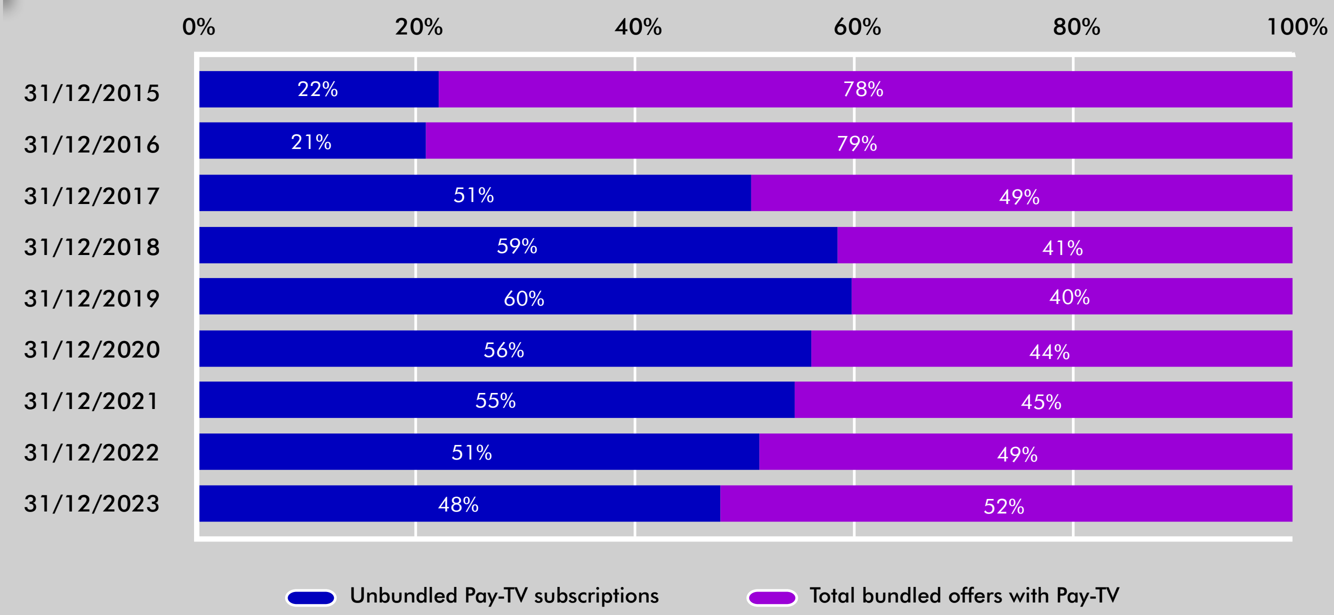
Source: EETT (based on data provided by the licensed operators)

Chart 1.77: Most popular bundled offers per specific type



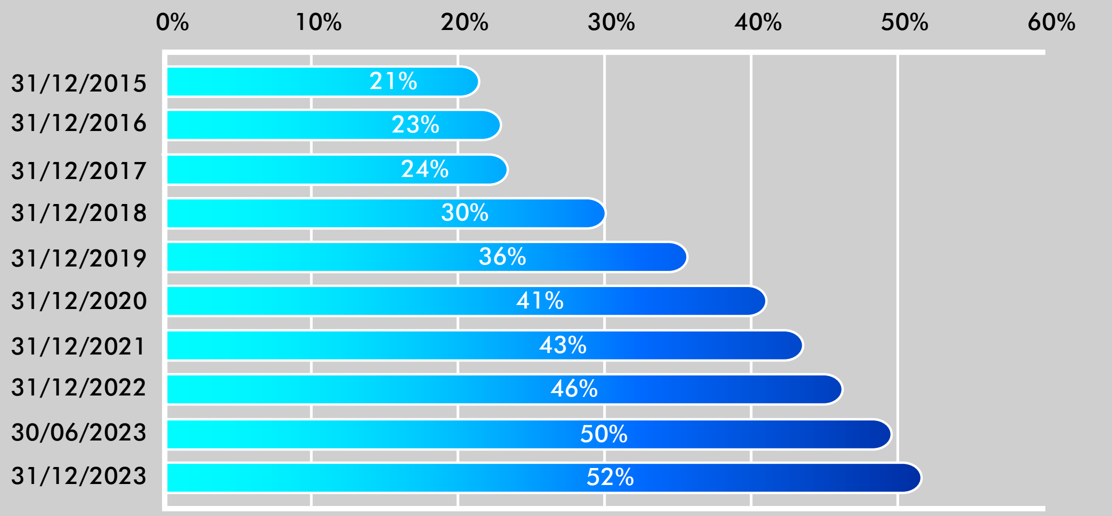
Source: EETT (based on data provided by the licensed operators)

Chart 1.78: Breakdown of bundled and unbundled Pay-TV subscriptions



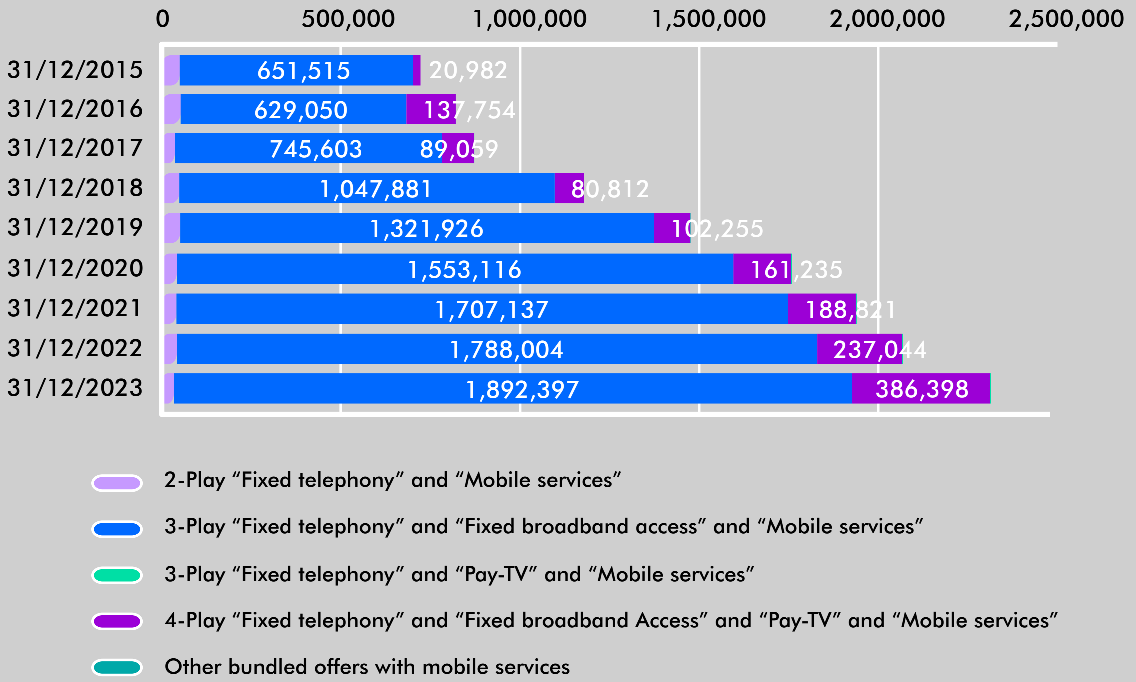
Source: EETT (based on data provided by the licensed operators)

Chart 1.79: Bundled offers with mobile services as a % on the total bundled offers



Source: EETT (based on data provided by the licensed operators)

Chart 1.80: Bundled offers with mobile services



Source: EETT (based on data provided by the licensed operators)

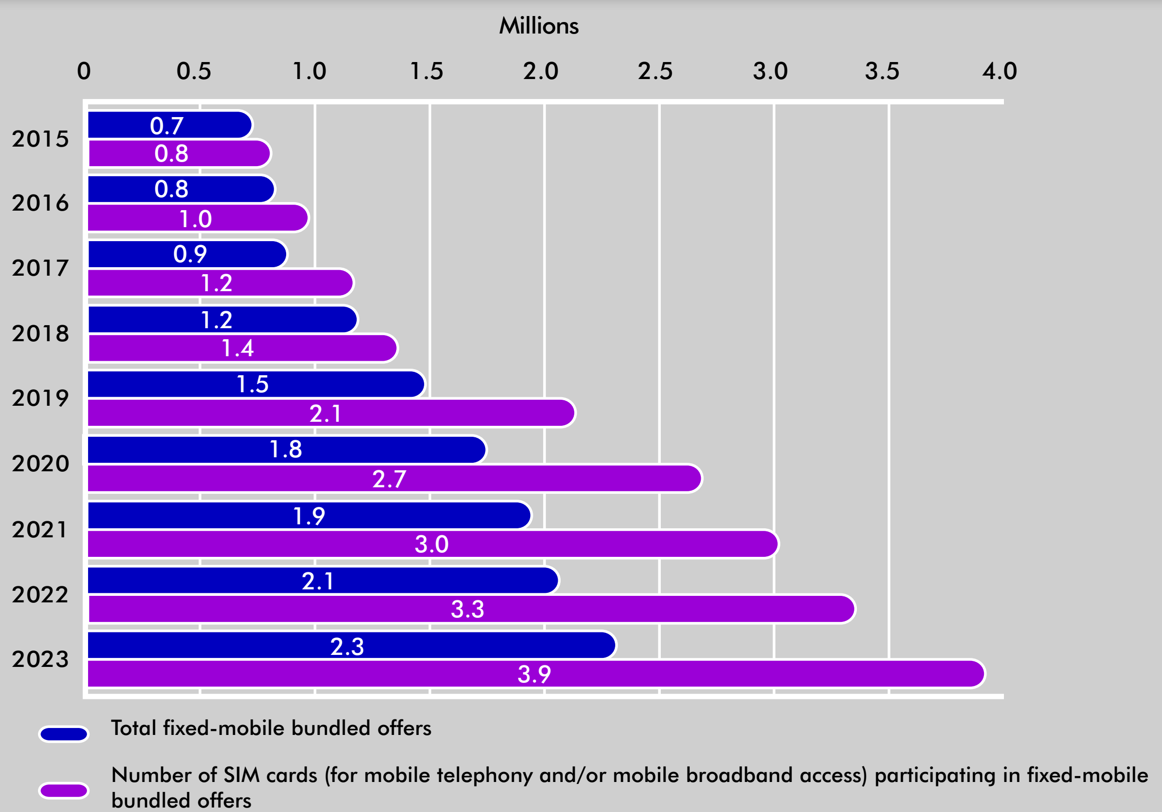
Table 1.18: Shares based on total number of bundled offers with mobile services

	31/12/2015	31/12/2016	31/12/2017	31/12/2018	31/12/2019	31/12/2020	31/12/2021	31/12/2022	31/12/2023
CYTA	0%-5%	0%-5%	0%-5%	0%-5%	-	-	-	-	-
HOL-VODAFONE	25%-35%	-	-	-	-	-	-	-	-
OTE-COSMOTE	35%-45%	35%-45%	35%-45%	45%-55%	55%-65%	55%-65%	55%-65%	55%-65%	55%-65%
VODAFONE	0%-5%	25%-35%(1)	25%-35%(1)	25%-35%(1)	15%-25%(1)(2)	15%-25%(1)(2)	15%-25%(1)(2)	15%-25%(1)(2)	15%-25%(1)(2)
NOVA	25%-35%	25%-35%	25%-35%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%	15%-25%(3)

Note:
(1) Including HOL, 2) Including CYTA, (3) Including WIND.

Source: EETT (based on data provided by the licensed operators)

Chart 1.81: Fixed-mobile bundled offers and respective number of SIM cards



Source: EETT (based on data provided by the licensed operators)

1.2.8. Premium Rate Services (PRS) and directory services

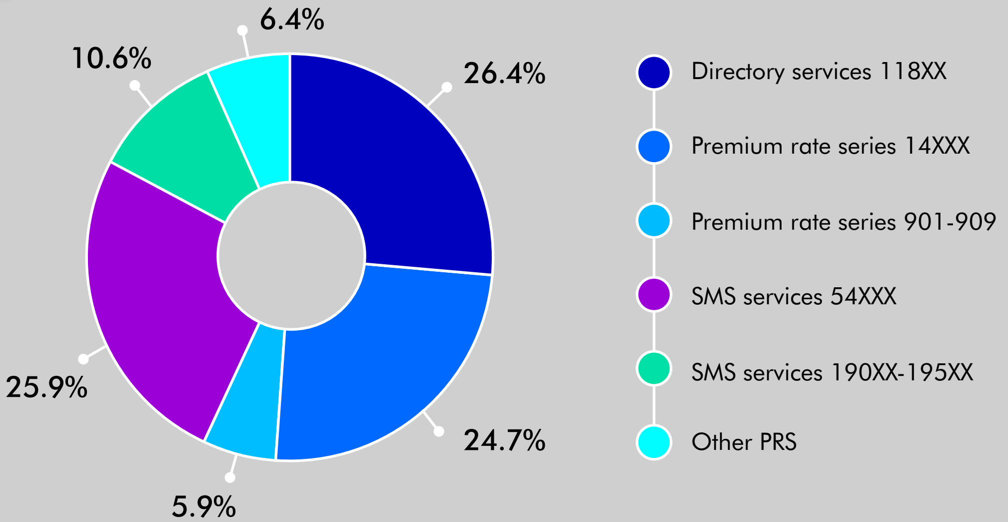
The total invoiced traffic from Premium Rate Services (PRS) and directory services in 2023 was 17.3 million minutes and 21.9 million calls/messages compared to 20.6 million minutes and 25.5 million calls/messages at the end of 2022, marking a decrease of 16% and 14%, respectively. The revenues amounted to 44.2 million euros, having dropped by 3.5% compared to 2022.

In 2023, the revenues from SMS services (SMS 54XXX and 190XX-195XX) accounted for 36.5% of the total market, amounting to 16.1 million euros and having increased by 17% compared to 2022.

The revenues from premium rate series (14XXX and 901-909) amounted to 13.5 million euros, accounting for 30.6% of the total market and having dropped by 9% compared to 2022. The revenues from directory services (118XX) decreased by 8.5% compared to 2022, reaching 11.7 million euros and making up 26.4% of the total market. The rest PRS, i.e. those that do not fall in the above categories, accounted for 6.4% of the total market, reaching 2.8 million euros and having decreased by 35.5% compared to the previous year (Charts 1.82 and 1.83).

Finally, and as shown in Chart 1.84, the providers who have been secondarily assigned numbers for the provision of PRS, generated over time about 66% of the total revenues from PRS[33].

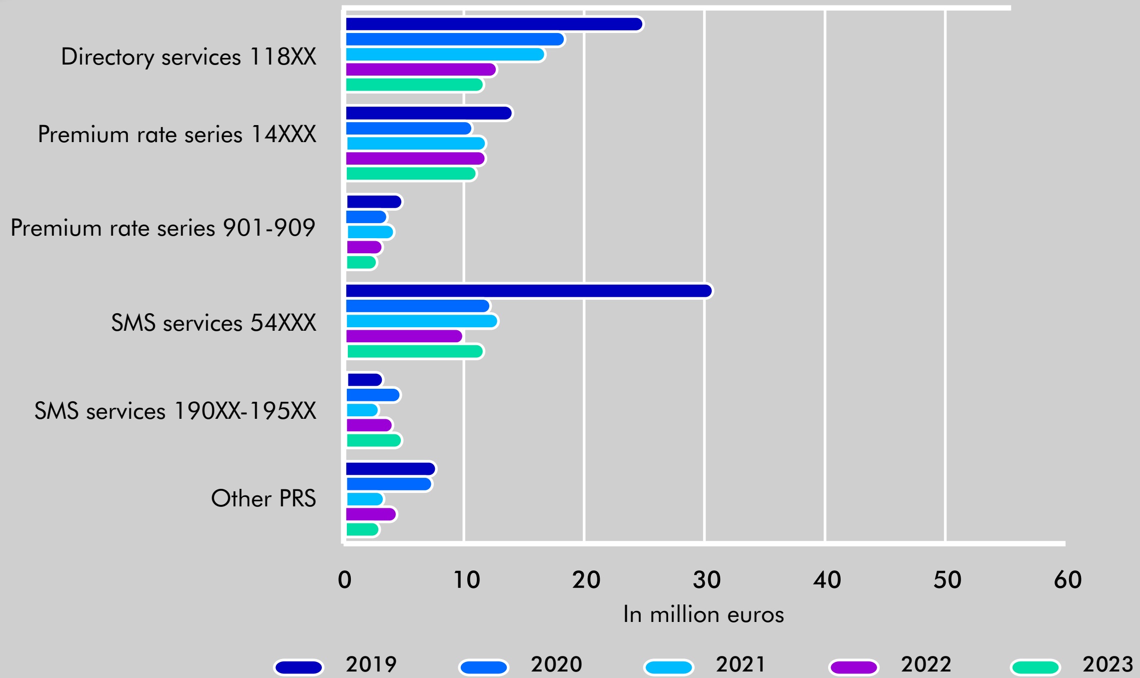
Chart 1.82: PRS and directory services' shares based on revenues, 2023



Source: EETT (based on data provided by the licensed operators)

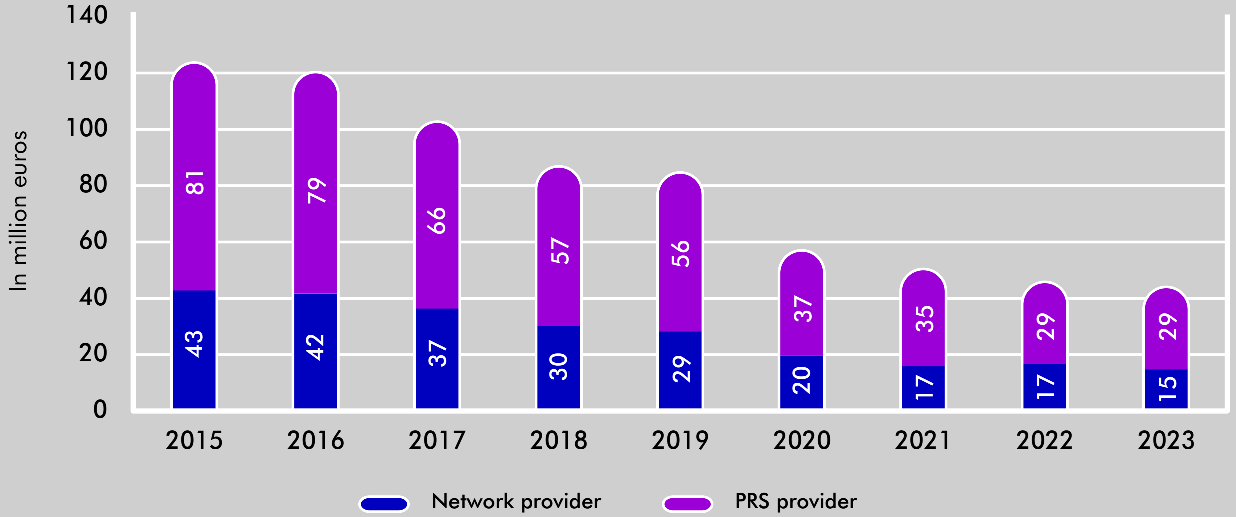
33. The companies, that have been primarily assigned by EETT the numbers for the provision of PRS, are called network providers and can secondarily assign the numbers in question to other companies that are the PRS providers. It is possible for the network provider the PRS provider to be the same.

Chart 1.83: Evolution of PRS and directory services' total revenues



Source: EETT (based on data provided by the licensed operators)

Chart 1.84: Evolution of total revenues for network and PRS providers

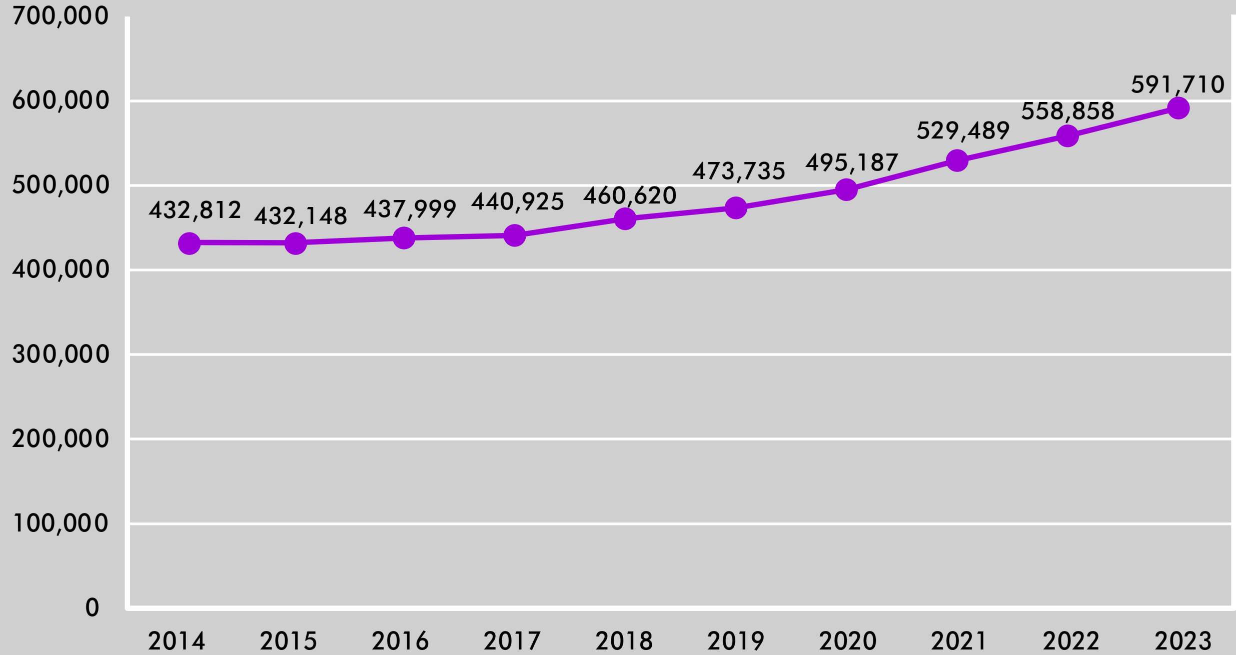


Source: EETT (based on data provided by the licensed operators)

1.2.9. Domain names [.gr] and [.ελ]

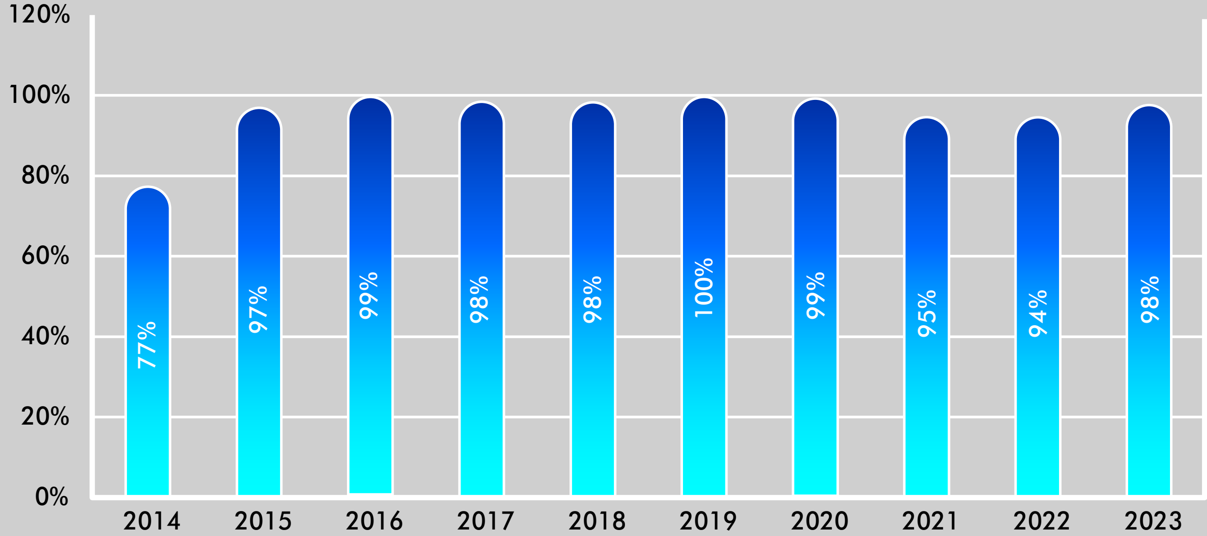
In 2023, the total number of [.gr] and [.ελ] domain names, including the sub-domains (.com. gr, .net.gr, .org.gr, .edu.gr, .gov.gr, .ελ), amounted to 591,710, registering a 5.9% increase compared to 2022. Chart 1.85 presents the evolution of the total domain names and Chart 1.86 depicts the annual evolution of the average assignment rate over the number of submitted applications, which was 98% for 2023.

Chart 1.85: Evolution of domain names



Source: EETT

Chart 1.86: Average assignment rate for domain names



Source: EETT

1.2.10. Price Observatory's comparison of retail prices (Pricescope)[34]

Based on the data registered by the telecommunications operators in the Price Observatory (Pricescope), by the end of 2023, the companies NOVA, OTE-COSMOTE and VODAFONE were offering approximately 1,200 products/programs in the domestic market[35] (Chart 1.87), recording a decrease by 9% compared to the 2022. These products entailed about 90,000 possible and dynamically produced combinations (product solutions) of basic products[36], add-ons[37] and offers[38]. The main conclusions drawn from Pricescope are summarized as follows:

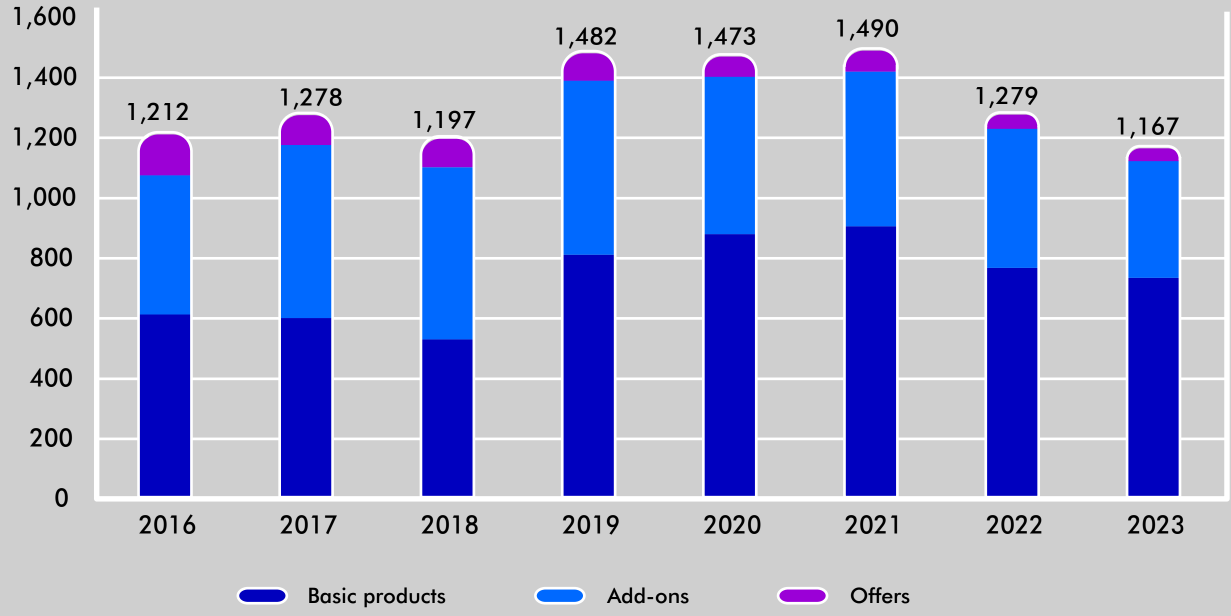
- VODAFONE led the market in terms of the total number of available products, followed by COSMOTE and OTE. Compared to the previous year, the number of products offered by these operators showed no significant change, while NOVA almost doubled its number of products due to its merger with WIND (Chart 1.88).
- The products offered by COSMOTE and NOVA were primarily addressed to residential customers, whereas a large proportion of OTE's and VODAFONE's products aimed at business customers (Chart 1.89).
- 97% of the mobile post-paid telephony products with a minimum of voice service offered unlimited

34. This section lists the most important points of the report «Δείκτες Τηλεπικοινωνιακών Προγραμμάτων Παρατηρητηρίου Τιμών 2023».
35. Setting aside commercially available products, there are also additional products registered that, even though they are not commercially active, customers favor them and still use them. In addition, product differentiation does not solely depend on a different brand name but also on other specific features, such as the binding duration attached to a telecommunications service contract.
36. A basic product is a product that can be commercially available by itself i.e. a consumer can buy only that in order to meet his/her telecommunication needs.
37. An add-on is a product that is not commercially available by itself but must be combined with a basic product.
38. An offer is a basic or an add-on product, which is available under certain restrictive terms.

call minutes to all, increased by 13% compared to 2022 (Chart 1.90).

- 23% of the mobile post-paid telephony products with voice and data services provided unlimited data, increased by 11% compared to 2022 (Chart 1.91).
- 48% of of the fixed telephony products with a minimum of a voice service[39] offered unlimited call minutes to mobiles, registering a 66% increase compared to 2022 (Chart 1.92).

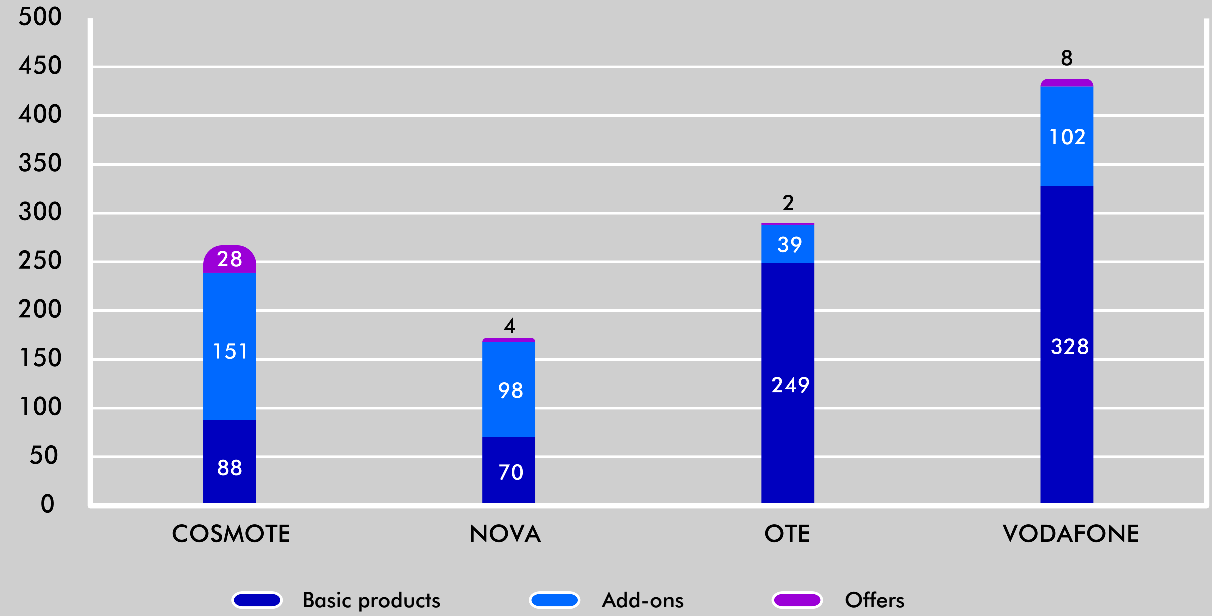
Chart 1.87: Number of products in the domestic market



Source: EETT

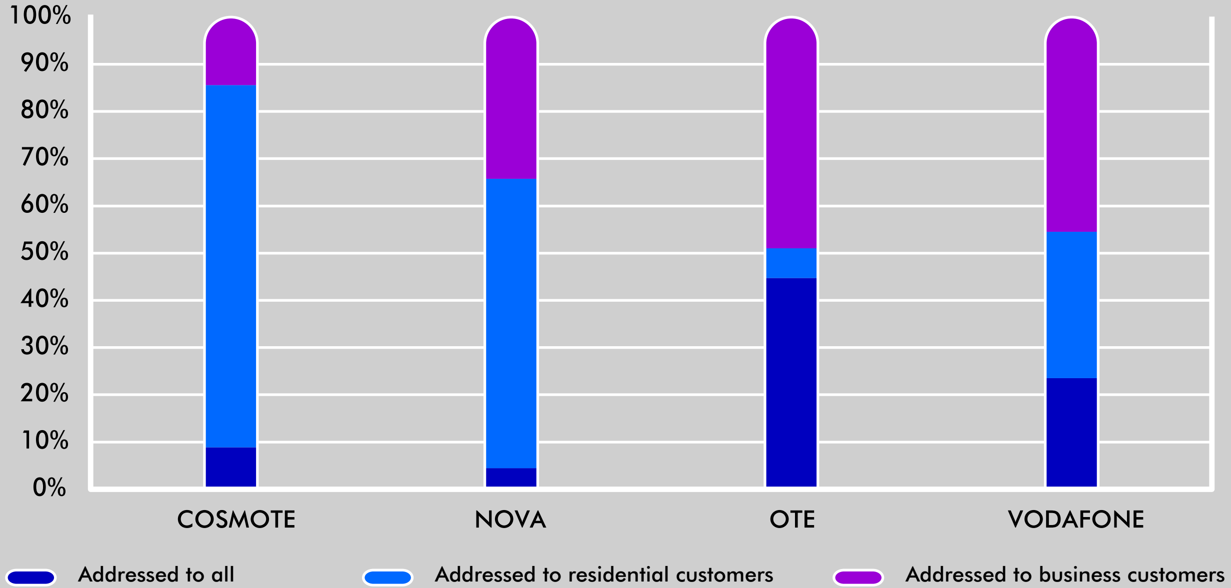
39. It is noted that the majority (96%) of the fixed telephony programs (1-play, 2-play, 3-play) provides unlimited call minutes to fixed phones.

Chart 1.88: Commercially available products per operator, 2023



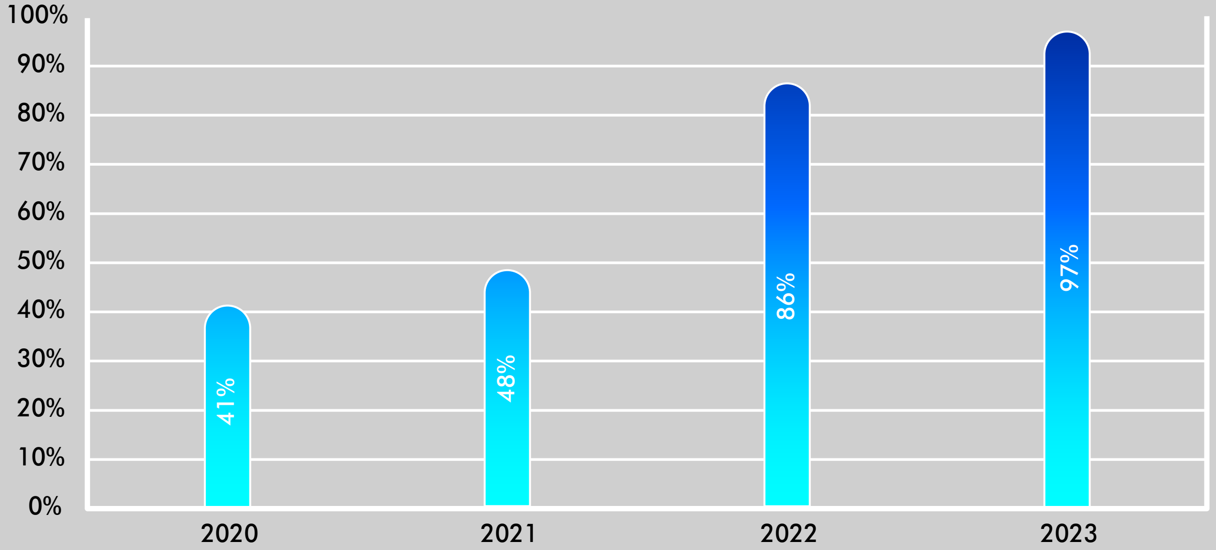
Source: EETT

Chart 1.89: Breakdown of products per operator in the target-markets, 2023



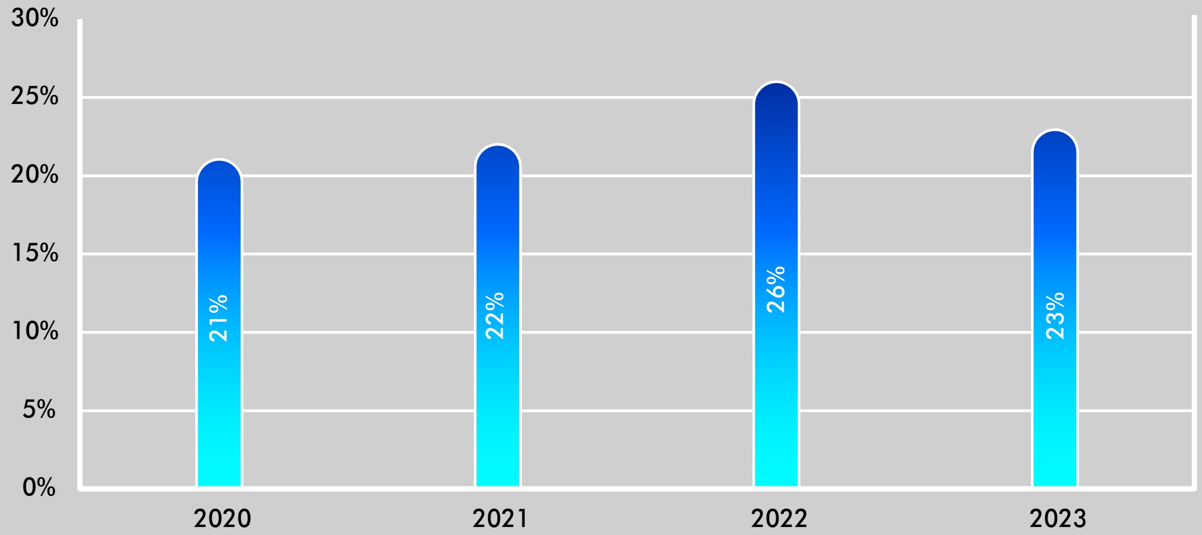
Source: EETT

Chart 1.90: Mobile post-paid products with unlimited call minutes to all



Source: EETT

Chart 1.91: Mobile post-paid products with unlimited data



Source: EETT

Chart 1.92: Fixed telephony products with unlimited call minutes to mobiles

Source: EETT

Over time evolution of prices in the fixed and mobile telephony

This section presents the lowest prices in fixed and mobile telephony, according to the data registered by the telecommunications operators in the Price-scope for the period 2018-2023, based on the following two main service categories:

- Double play (fixed telephony and fixed broadband access) programs (24/50/100/200/300 /500/1000 Mbps), with unlimited call allowance to fixed phones.
- Post-paid mobile telephony (1/2/4/8/10/15/20/ Unlimited GB), with a call allowance to all.

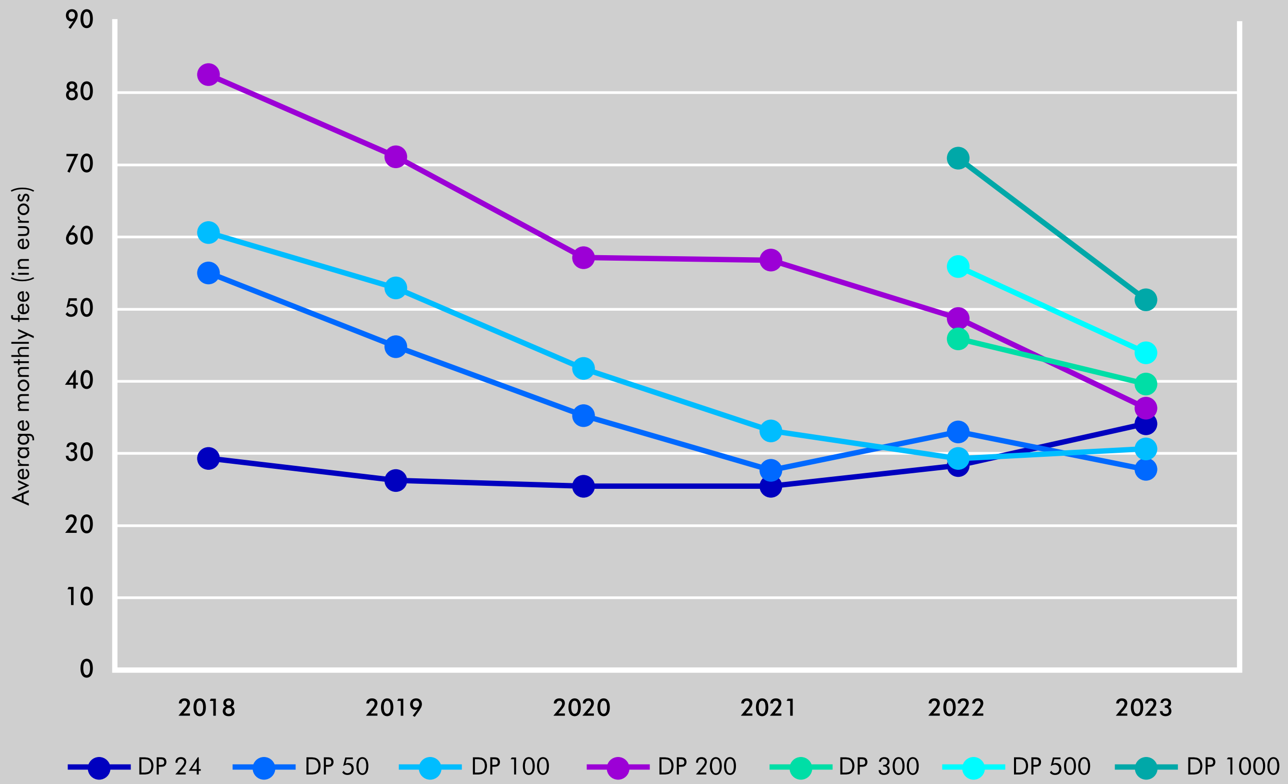
Fixed telephony

Based on the commercially available double play programs (fixed telephony and fixed broadband access) for 24/50/100/200/300/500/1000 Mbps, with unlimited call allowance to fixed phones (residential clients), the average monthly fee for the 2018-2023 period was calculated based on the cheapest program offered by the fixed telephony operators for the aforementioned types of services (Chart 1.93).

It should be mentioned that the changes in the operators' ownership structure (VODAFONE-CYTA, NOVA-WIND), as well as their commercial policies regarding the availability of programs[40], have been considered.

40. For example, no company offered a plan during the 2018-2021 period for the categories DP300/DP500/DP1000. OTE was the only company offering a program in 2022, while in 2023, for the first time, all companies offered such plans.

Chart 1.93: Evolution of the average double play (24/50/100/200/300/500/1000 Mbps) monthly fee based on the cheapest product per operator



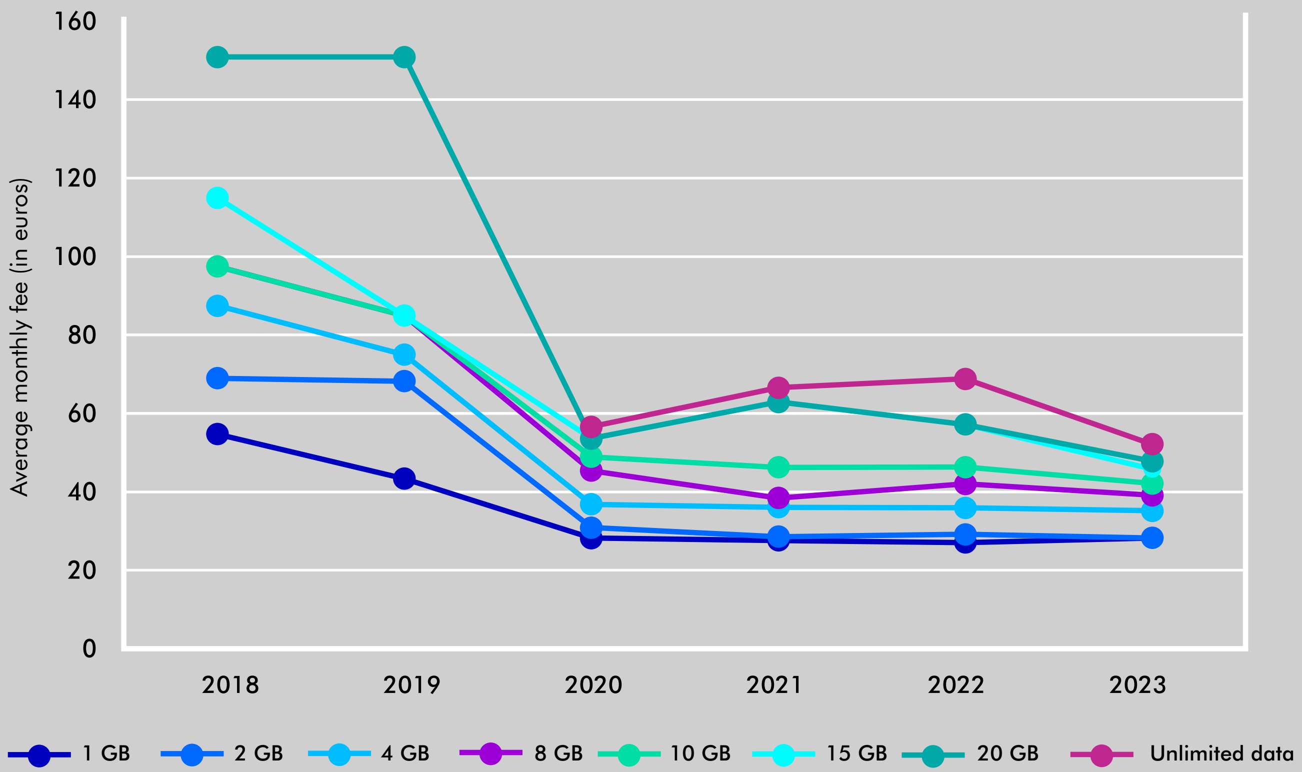
Source: EETT

Post-paid mobile telephony

Based on the commercially available post-paid mobile telephony programs for 1/2/4/8/10/15/20/Unlimited GB, with a call allowance to all (residential clients), the average monthly fee for the 2018-2023 period was calculated based on the cheapest program offered by the mobile telephony operators for the aforementioned types of services (Chart 1.94).

It is important to note that between 2018 and 2019, COSMOTE was the only operator that offered a program in the 20 GB category, whereas post-paid mobile telephony offers with unlimited data and a data usage limit over 20 GB, beyond which the speed significantly reduces, were recorded for the first time in 2020.

Chart 1.94: Evolution of the average monthly fee for post-paid mobile products (1/2/4/8/10/15/20/ Unlimited GB) based on the cheapest product per operator



Source: EETT

Over time evolution of prices for baskets of services

In order to monitor prices over time for specific use of services' profiles, this analysis was based on a subset of services' "baskets", as those are defined and used in the study "Mobile and fixed broadband prices in Europe", prepared by the European Commission in cooperation with the National Regulatory Authorities (NRA) for the years 2019[41], 2020[42], 2021[43], 2022[44] και 2023[45]. The baskets follow the guidelines issued by the Body of European Regulators for Electronic Communications (BEREC). The selection of the baskets' subset from the complete set was done based on maintaining comparability for the period 2019-2023. It should be noted that the prices in this section were calculated with the appro-

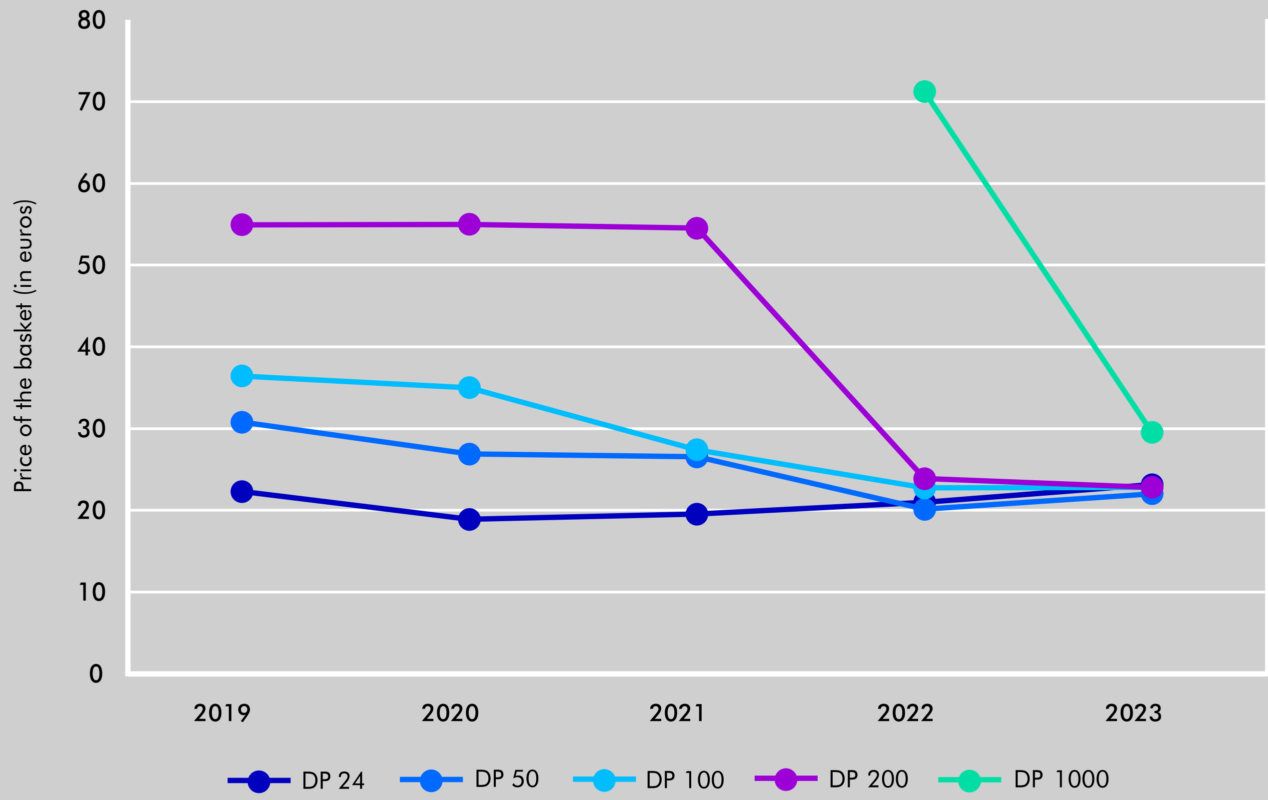
41. https://digital-strategy.ec.europa.eu/en/library/mobile-and-fixed-broadband-prices-europe-end-2019.
42. https://digital-strategy.ec.europa.eu/en/library/mobile-and-fixed-broadband-prices-europe-2020.
43. https://digital-strategy.ec.europa.eu/en/library/mobile-and-fixed-broadband-prices-europe-2021.
44. https://digital-strategy.ec.europa.eu/en/library/mobile-and-fixed-broadband-prices-europe-2022.
45. The 2023 study has not been published yet.

priate combination of programs with add-ons or/and offers, with the aim of satisfying the requested use per case at the lowest price, as well as the use of prepaid telephony programs.

Fixed telephony

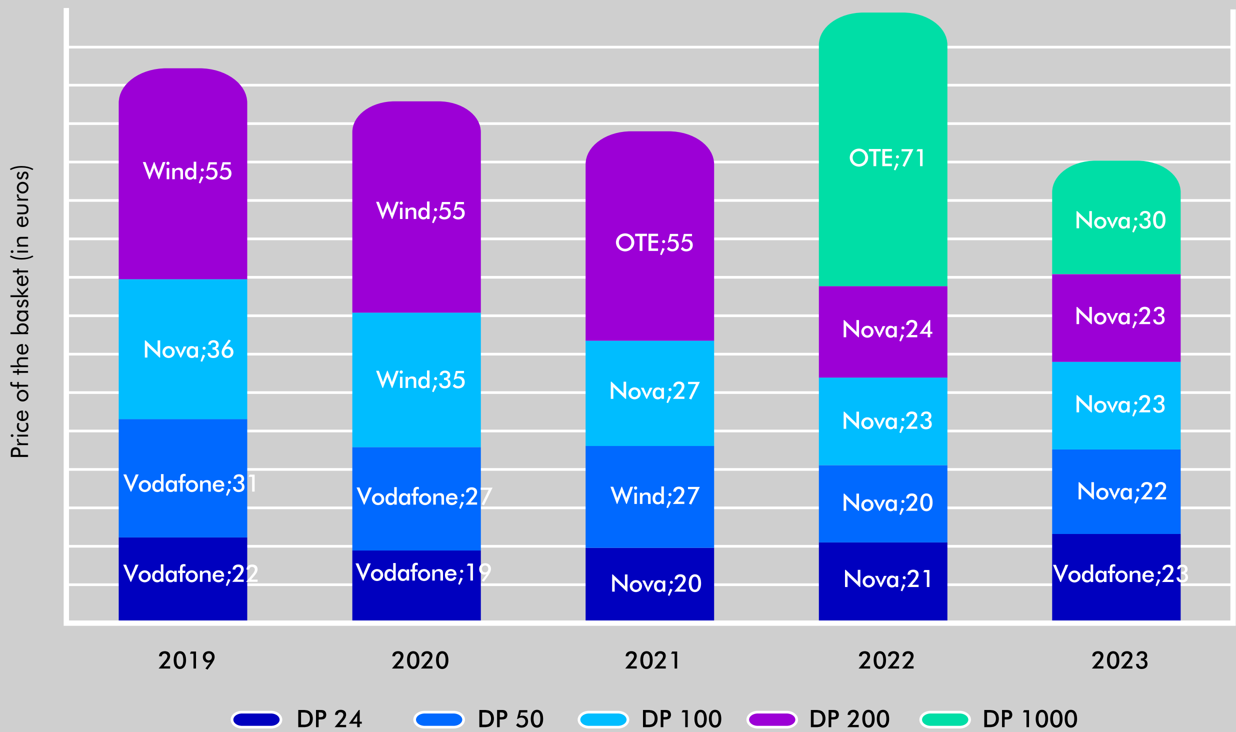
The comparative assessment was based on fixed telephony baskets that pertain to double play (fixed telephony-fixed broadband access) offers (24/50/100/200/1000 Mbps) with at least 70 minutes to fixed phones and 30 minutes to mobile phones. Charts 1.95 and 1.96 present the evolution of the lowest price for fixed telephony baskets from 2019-2023, as well as the cheapest operator. It should be noted that all the programs in these solutions offer unlimited minutes to fixed phones and over 30 minutes or even unlimited minutes to mobile phones.

Chart 1.95: Price evolution for fixed telephony baskets



Source: EETT and European Commission

Chart 1.96: Price evolution for fixed telephony baskets and the cheapest operator

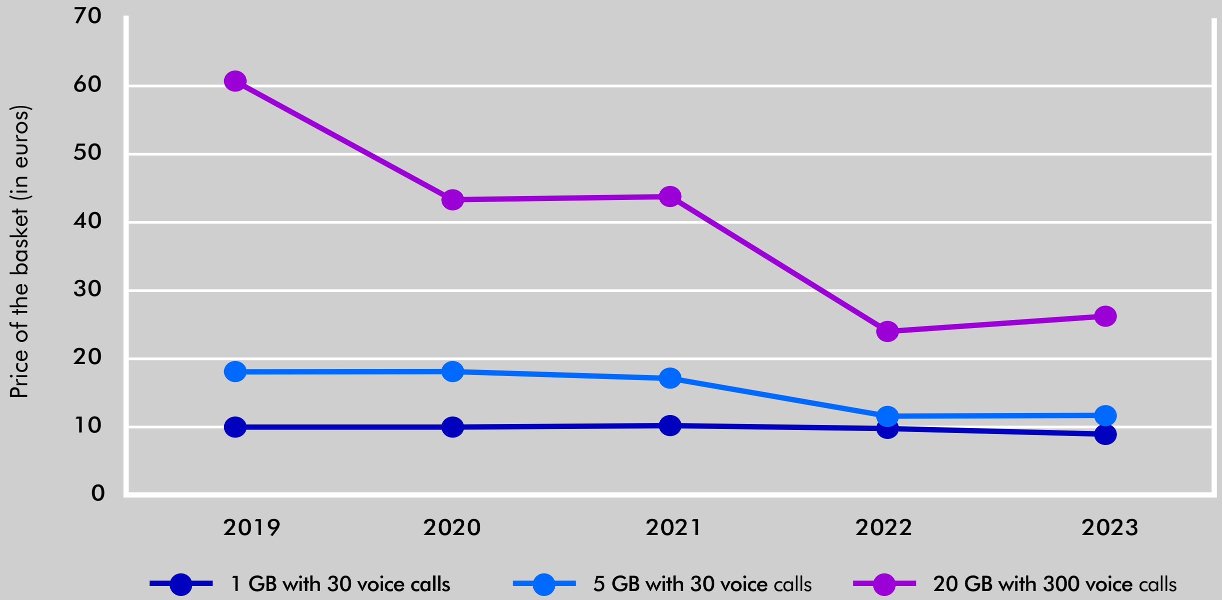


Source: EETT and European Commission

Mobile telephony

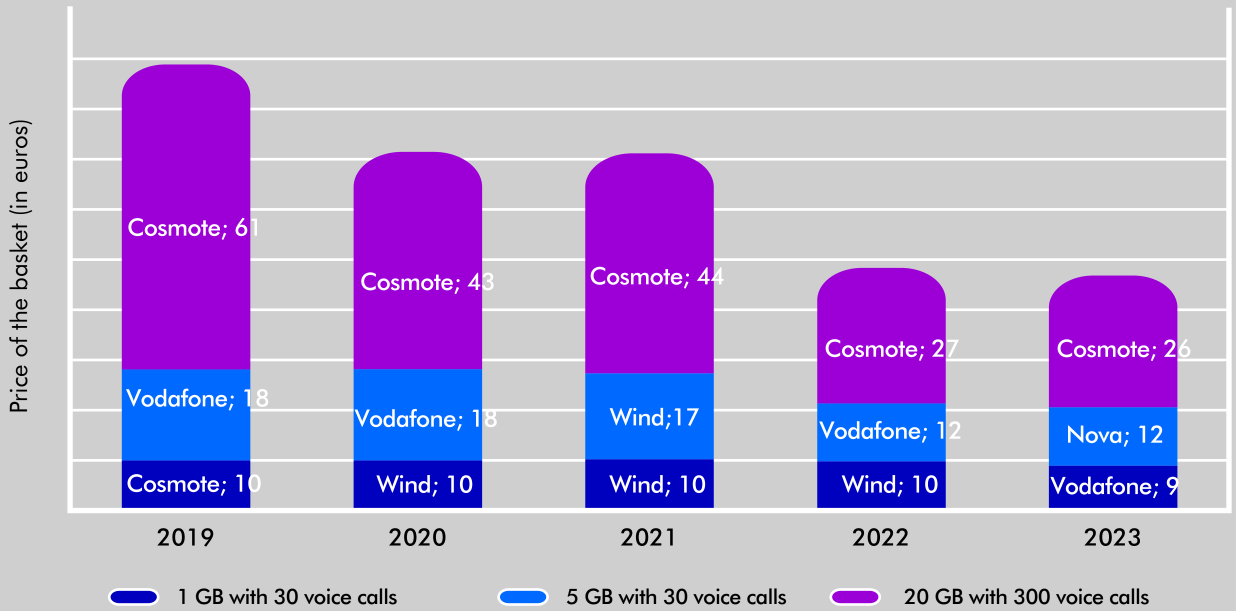
The comparative assessment was based on the following mobile telephony baskets; 1 GB with 30 calls, 5 GB with 30 calls and 20 GB with 300 calls. Charts 1.97 and 1.98 present the evolution of the lowest price for mobile telephony baskets from 2019-2023, as well as the cheapest operator. It is important to note that prepaid mobile telephony programs are also included in the solutions.

Chart 1.97: Price evolution for fixed telephony baskets



Source: EETT and European Commission

Chart 1.98: Price evolution for mobile telephony baskets and the cheapest operator



Source: EETT and European Commission

1.2.11 Comparison of Greek and European market indicators[46]

Broadband technology coverage at the national level

Fiber-to-the-Premises (FTTP) coverage significantly increased in Greece, rising by 10.6 percentage points from 27.8% to 38.4%. However, DSL remained the most widespread fixed broadband technology, with 96.0% of households covered by the end of June 2023. Regarding the Next Generation Access (NGA) networks, VDSL and VDSL2 Vectoring with coverage rates of 77.1% and 54.9%, respectively, remained the most widely accessible services in Greece, having increased slightly by 0.8 and 0.4 percentage points, respectively, considering that operators primarily focused on FTTP network development. Finally, the total 5G coverage increased by 12.4 percentage points, reaching 98.1% by June 2023 (Chart 1.99).

At a combined technology level, Greece, due to the lack of cable infrastructure and its reliance primarily on FTTP network development, recorded the lowest coverage among EU member states for Very High Capacity Networks (VHCN[47]). Despite the increase in VHCN coverage to 38.4% in 2023 (from 27.8% in 2022), Greece still lags 40.4 percentage points behind the EU average, which stands at 78.8% compared to 73.4% in June 2022. Similarly, and as far as the total fixed broadband coverage is concerned, Greece (97.3%) trailed behind the EU average (97.7%), while specifically for NGA, 88.9% of Greek households had access to high-speed broadband services by mid-2023, compared to the European average of 92.9% (Charts 1.100 and 1.101).

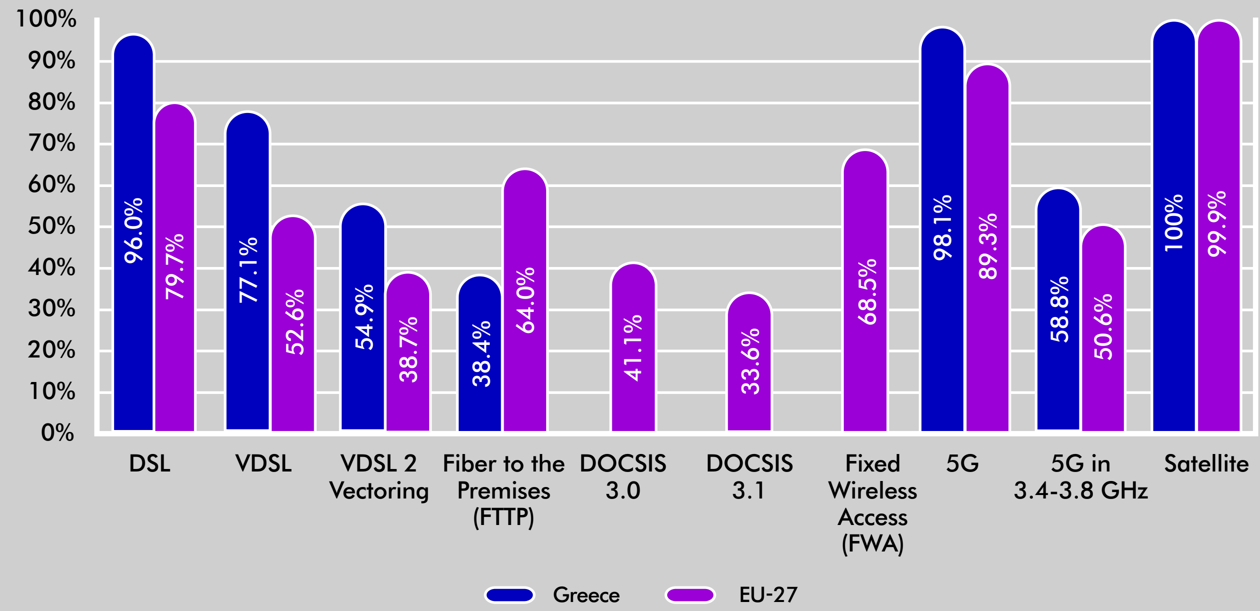
More specifically, the demand for high-speed broadband access kept on growing, and as a result, the EU broadband connections with advertised download access speeds greater than or equal to 100 Mbps in June 2023 accounted for 65.9% of total connections, versus 59.6% in June 2022. In Greece, however, this percentage stood at 29.5% compared to 23.8% in June 2022 (Chart 1.102).

At the same time, the total 5G coverage significantly increased by 12.4 percentage points, reaching 98.1% in June 2023, versus 85.7% in June 2022, surpassing the EU average (89.3%) (Chart 1.103). It is noted that, particularly for the 3.4-3.8 GHz band, the increase was 22 percentage points, with coverage reaching 58.8% of households, also exceeding the EU average (50.6%).

Finally, the mobile broadband penetration rate in the EU for individuals aged 16 to 74[48] years in June 2023 stood at 89.9%, while Greece, with a penetration rate of 83.5%, remained among the lowest-ranking member states, 6.4 percentage points behind the EU average (Chart 1.104).

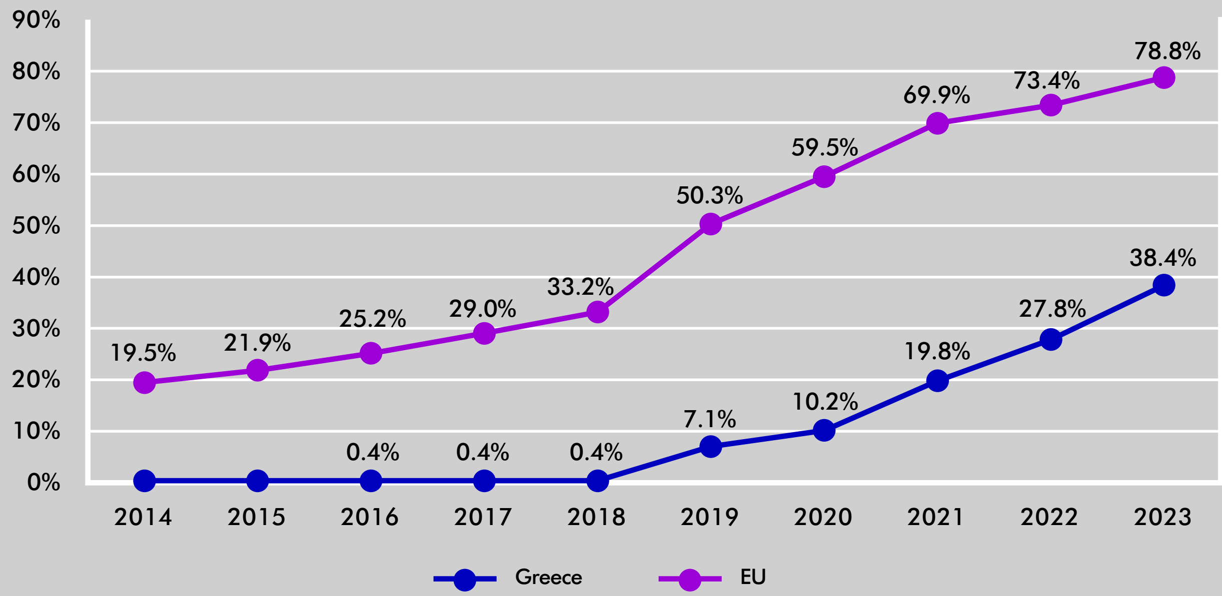
46. Based on the data provided by the "DESI Dashboard for the Digital Decade" of the European Commission and "Broadband Coverage in Europe 2023" study.
47. A combination of Fiber to the Premises (FTTP) and Data Over Cable Service Interface Specification (DOCSIS).
48. It should be mentioned that up till 2022, mobile broadband penetration referred to connections per 100 inhabitants, whereas now it refers to the percentage of individuals aged 16-74 who use the Internet on a mobile device.

Chart1.99: Total broadband coverage by technology in Greece and the EU, 2023



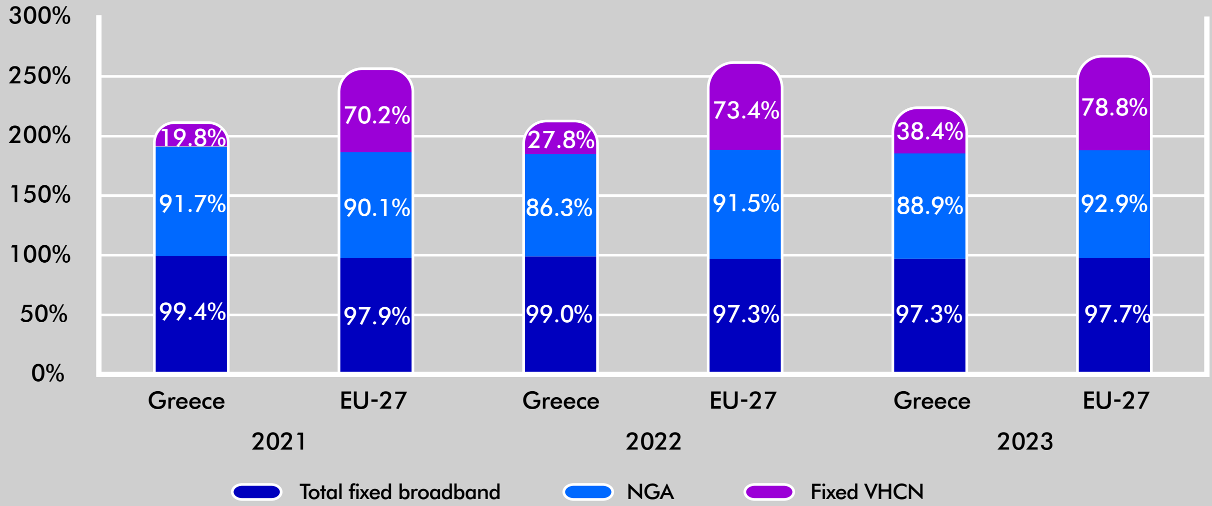
Source: EETT (based on the European Commission's Broadband Coverage in Europe 2023 study)

Chart 1.100: VHCN broadband coverage in Greece and the EU



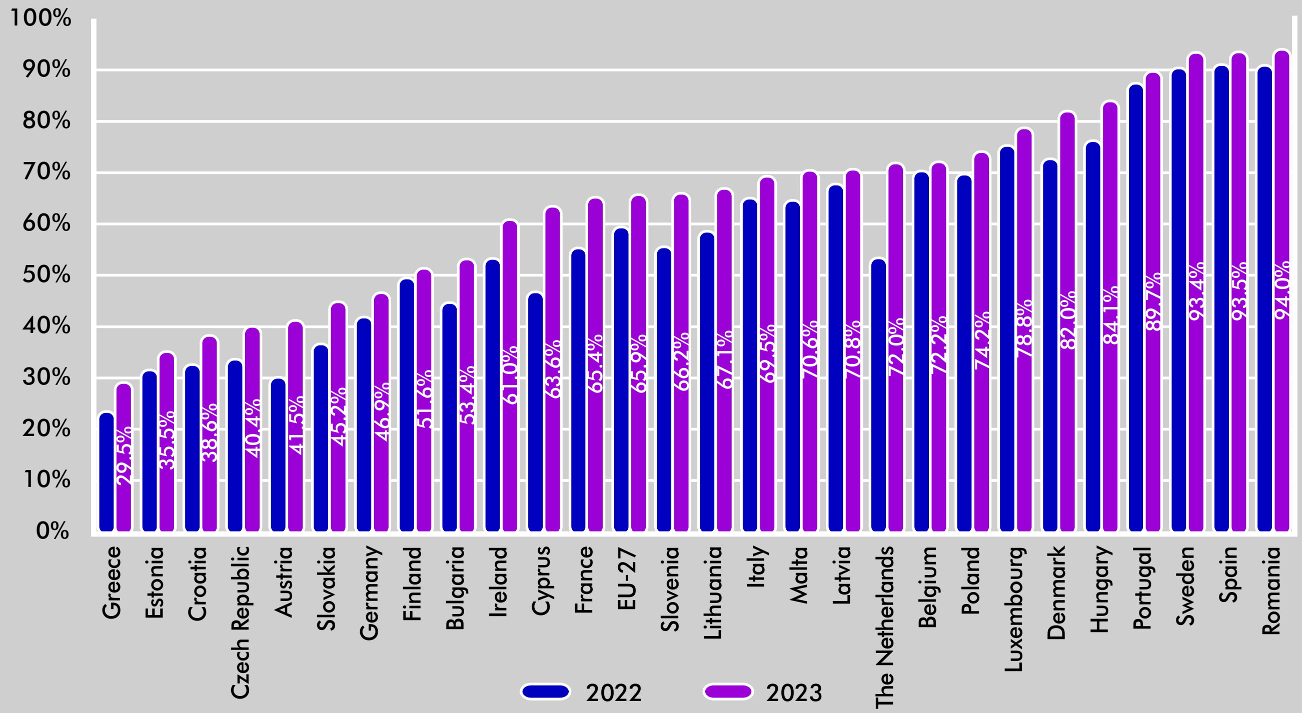
Source: EETT (based on the European Commission's Digital Decade DESI Report)

Chart 1.101: Broadband coverage by technology combination in Greece and the EU



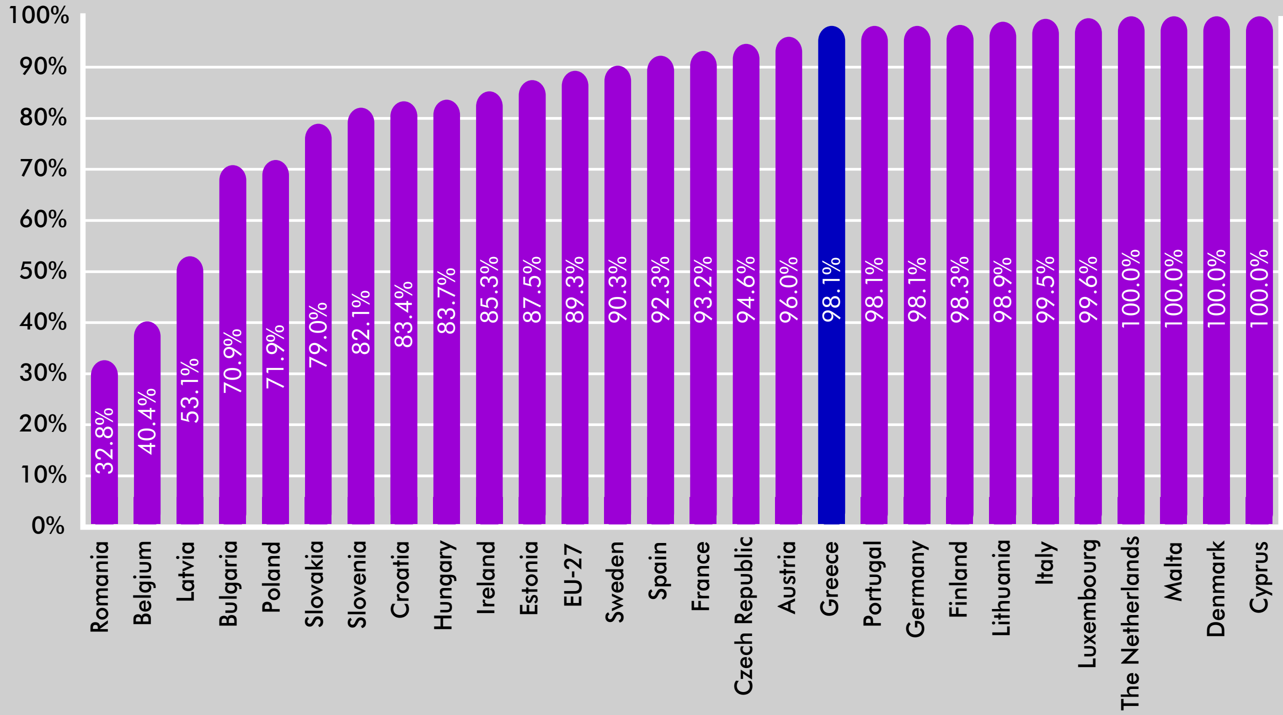
Source: EETT (based on the European Commission's Broadband Coverage in Europe 2023 study)

Chart 1.102: Percentage of lines with advertised download access speeds ≥ 100 Mbps in the EU, June 2023



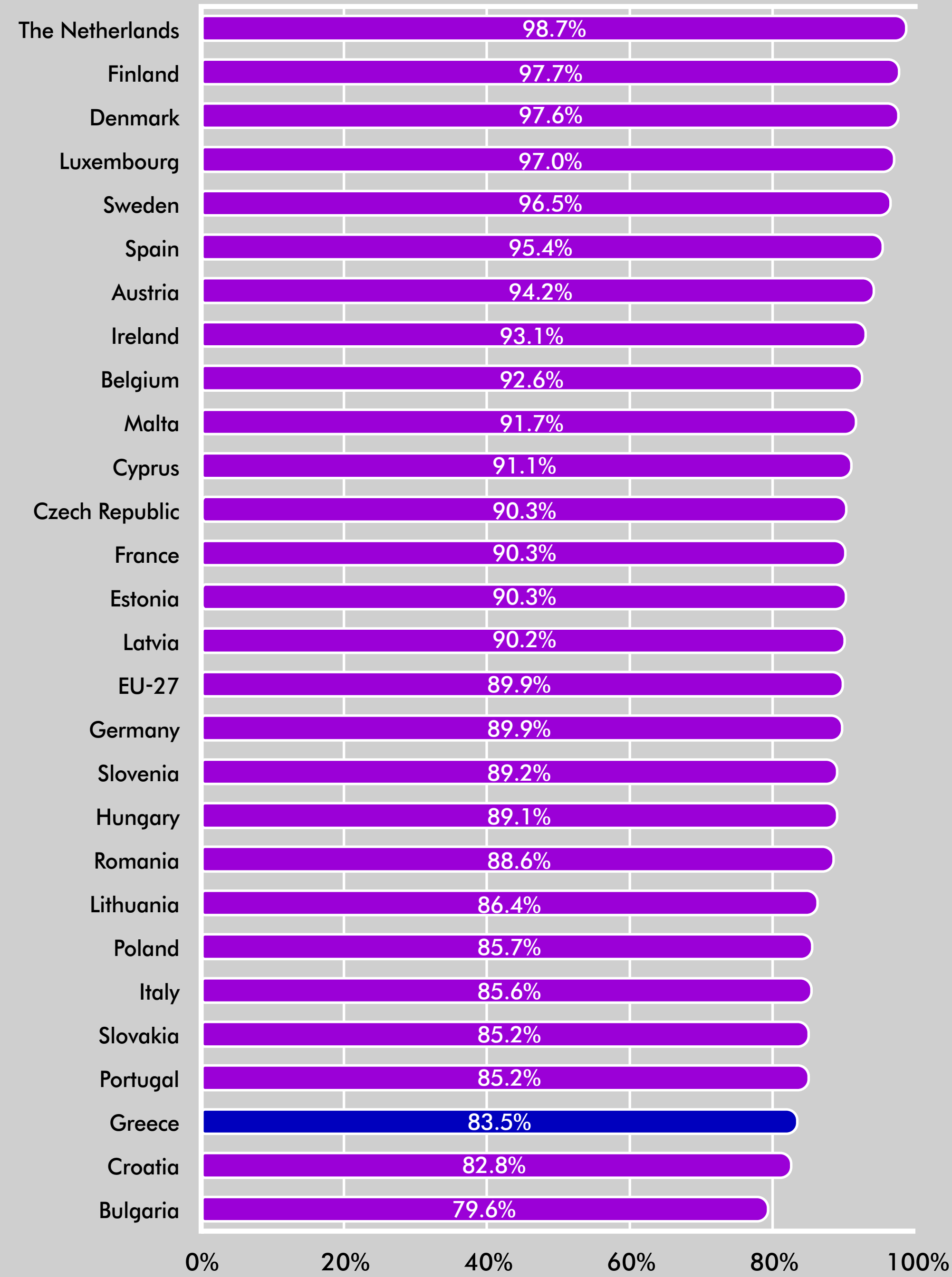
Source: EETT (based on the European Commission's Digital Decade DESI Report)

Chart 1.103: Total 5G coverage by country in the EU, June 2023



Source: EETT (based on the European Commission's Digital Decade DESI Report)

Chart 1.104: Mobile broadband penetration in the EU (individuals aged 16-74), June 2023



Source: EETT (based on the European Commission's Digital Decade DESI Report)

3

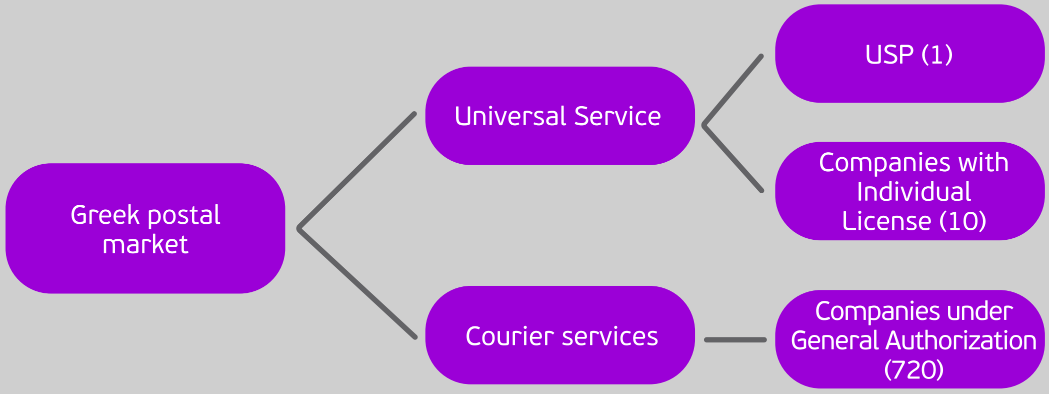
POSTAL SERVICES

2. Postal services

2.1. The Greek postal market

The number of companies that operated in the Greek market in 2023 amounted to 731[49], compared to 724 in 2022 (Graph 2.1.) Specifically, a) the Universal Service Provider (USP-ELTA) and ten private companies with an Individual License were active in the universal services sector (Chart 2.1) and b) 720 companies under General Authorization were active in the courier services sector. In 2023, 76 new companies under General Authorization entered the courier services sector (Chart 2.2).

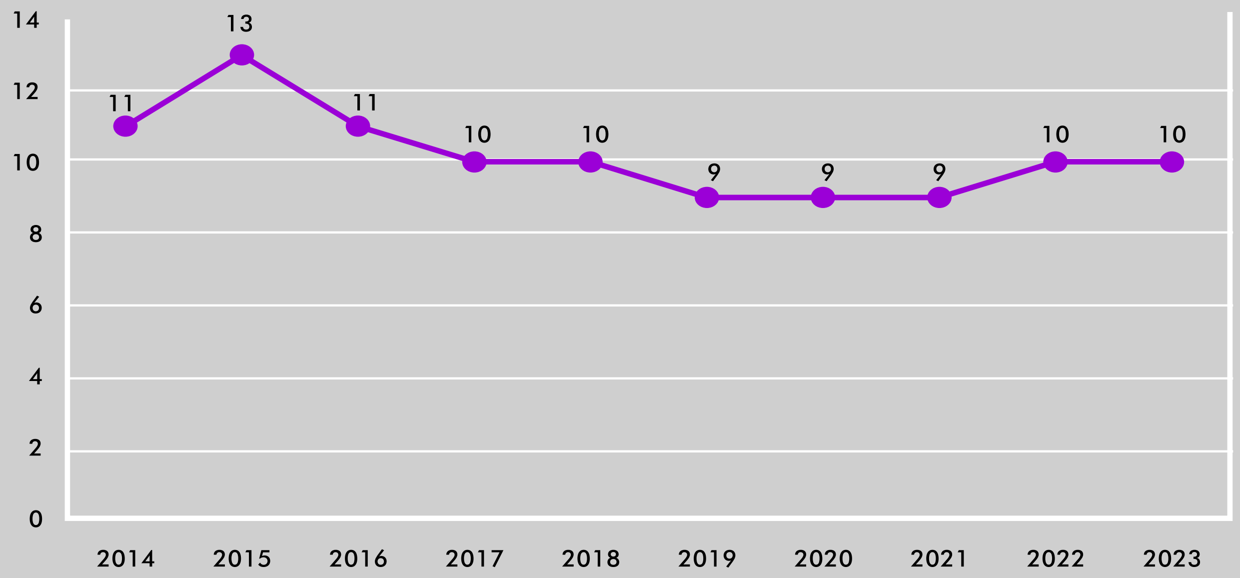
Graph 2.1: Number of companies in the Greek postal market



Source: EETT (register of postal services providers)

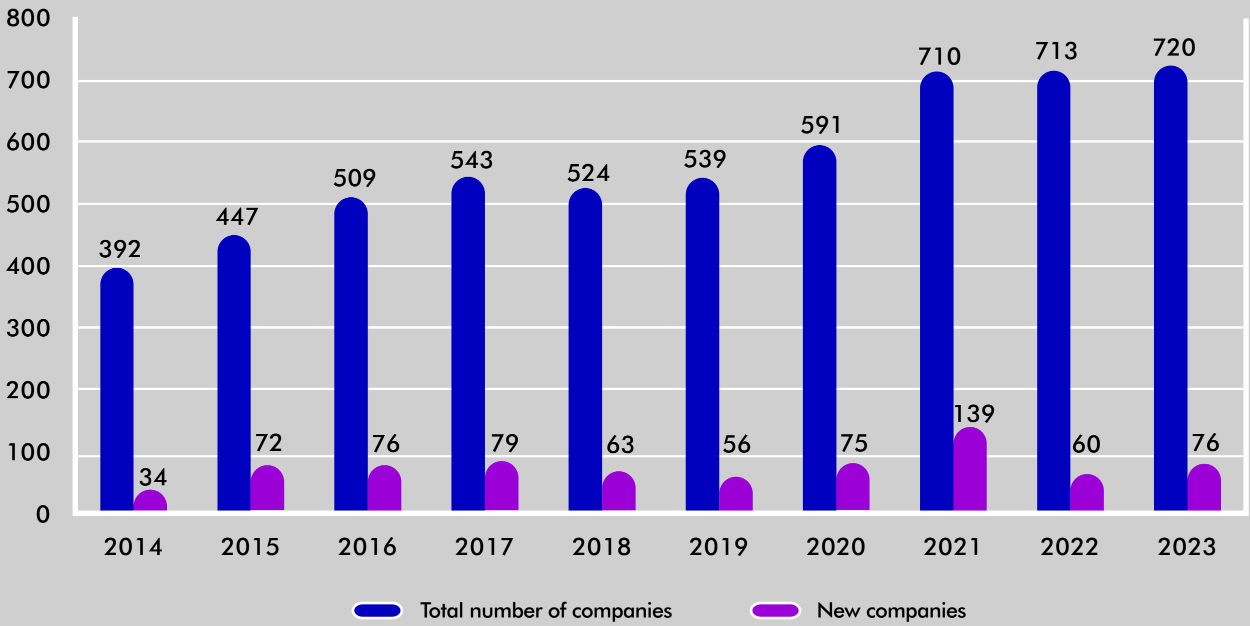
49. There are some companies that hold both an Individual License and a General Authorization License.

Chart 2.1: Number of companies with Individual License



Source: EETT (register of postal services providers)

Chart 2.2: Number of companies under General Authorization



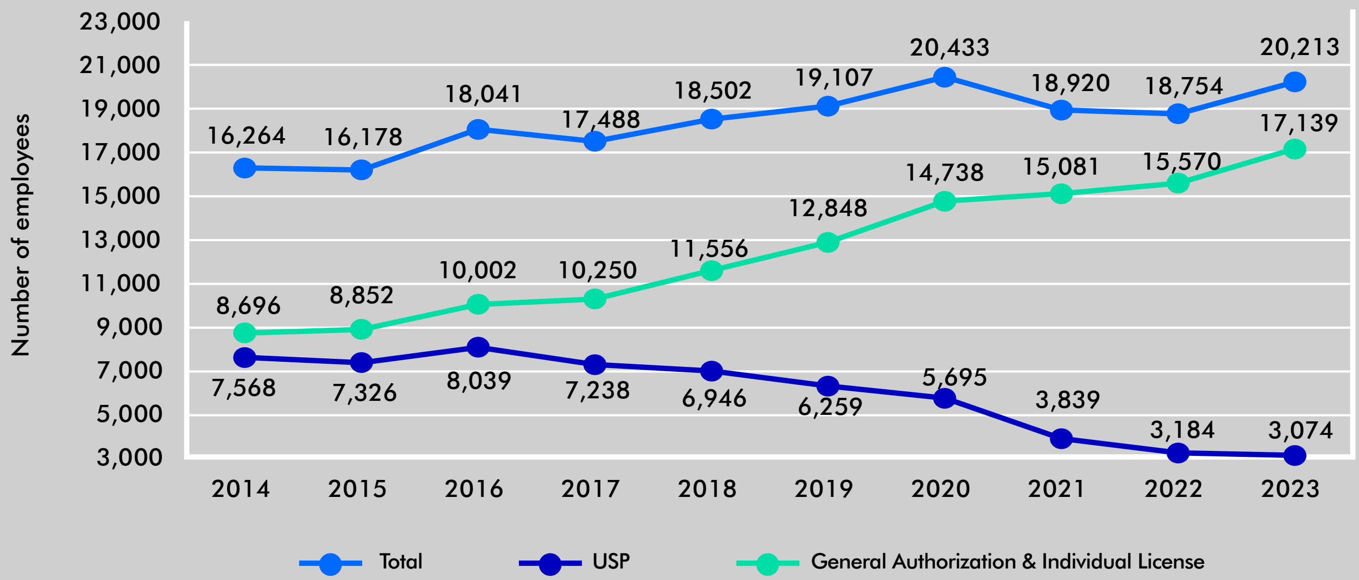
Source: EETT (register of postal services providers)

The number of people employed in the Greek postal market in 2023 amounted to 20,213, marking an increase of 7.8% compared to 2022 (18,754 people). Specifically, 15% of the employees (3,074 people) worked for the USP, while the remaining 85% (17,139 people) worked for other providers with Individual License or under General Authorization (Chart 2.3).

Regarding the infrastructure of postal services providers, in 2023, the USP owned 947 post offices and 1,916 vehicles, while other providers with Individual License or under General Authorization owned 1,489 post offices (proprietary and network offices) and 9,316 vehicles respectively, 419 of which were new low-emission technology vehicles, either electric or eco-friendly.

In 2023, three postal services providers under General Authorization provided the service of parcel lockers[50], having installed facilities in a total[51] of 5,570 points compared to 1,947 points in 2022, registering an increase of 186% (Chart 2.4). It is noted that the USP also installed and operated 18 parcel lockers at its post offices and other points of interest for the first time in 2023.

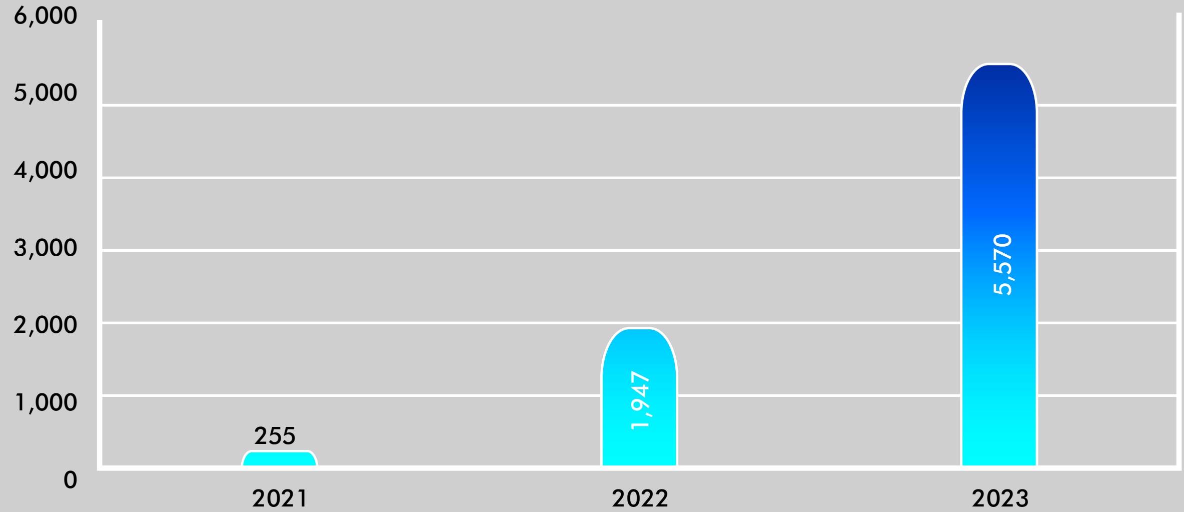
Chart 2.3: Employment in the Greek postal market



Source: EETT (based on data provided by postal services providers)

50. These are special machines, placed in outdoor or indoor spaces, with lockers of various sizes, which lock and unlock using software. They typically feature a touch screen or keyboard and a barcode scanner. Additionally, they offer the option for payment via an installed POS system, as well as the issue of the corresponding receipt through the installed printer.
51. Mainly in the broader area of Attica and Thessaloniki, as well as in other major cities of the country.

Chart 2.4: Parcel lockers in the Greek postal market



Source: EETT (based on data provided by postal services providers)

2.2. Evolution of key figures of the postal market in Greece

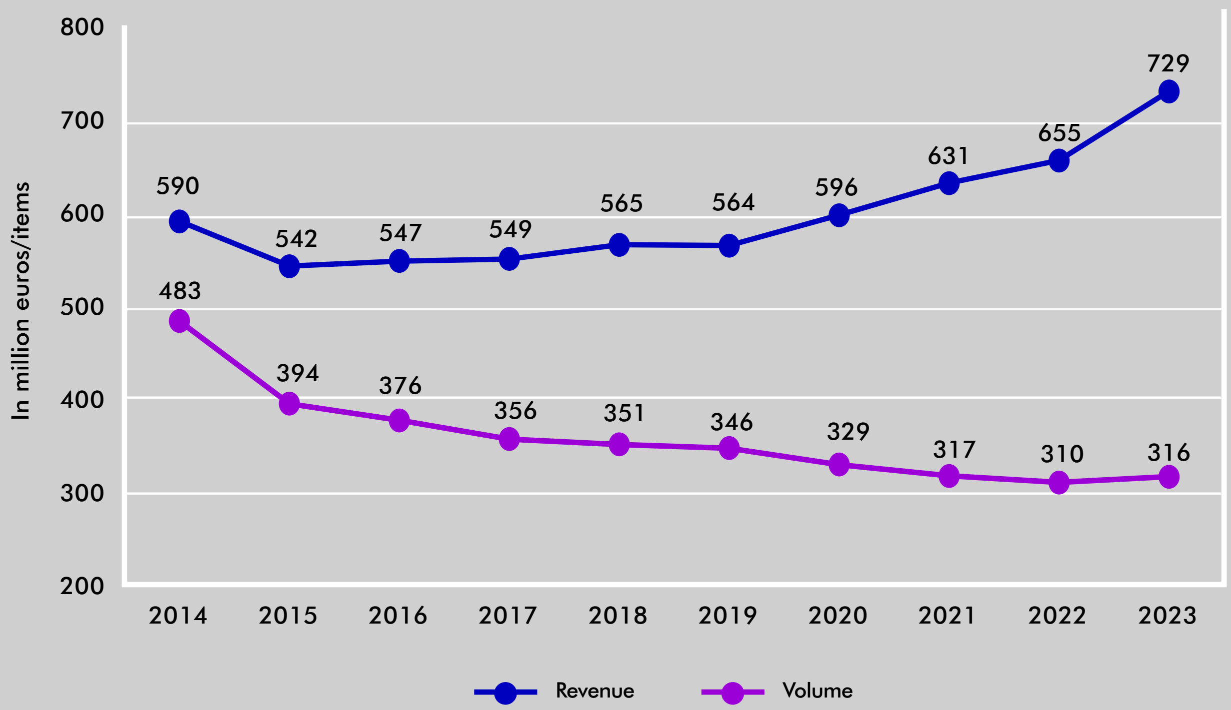
The analysis of the key figures of the Greek postal market is based on the data provided by the USP as well as the postal companies under General Authorization or with an Individual License, whose turnover from postal activities exceeded 100 thousand euros for 2023.

2.2.1. Postal items revenues and volume

Total postal market

In 2023, the Greek postal market was characterized by the upward trend in both revenues and the volume of the handled postal items, which increased for the first time since 2014, due to the rise in the handling of parcels-small packages. Specifically, 316 million postal items were handled, generating a revenue of 729 million euros, as shown in Chart 2.5.

Chart 2.5: Revenue and postal items volume of the Greek postal market



Source: EETT (based on data provided by postal services providers)

Per market sector

In 2023, the total revenues of the postal market grew considerably by 11.3%, due to a 16% rise in the revenues of companies under General Authorization. At the same time, the total volume of handled postal items increased by 2%, due to a 10.7% rise of the postal items handled by companies under General Authorization. The USP experienced a significant decrease in both revenues (6.6%) and the volume of handled postal items (3.2%). The historical trends of the Universal Service (US), Individual License and General Authorization sectors are presented in Tables 2.1 and 2.2.

Table 2.1: Postal market revenues (in thousand euros)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2023/22
USP	272,658	227,417	207,313	195,059	185,273	174,307	149,895	129,574	116,021	108,394	-6.6%
Companies with Individual License	14,496	14,309	15,865	18,251	19,220	20,852	18,409	19,121	16,115	14,252	-11.6%
Companies under General Authorization	302,753	299,954	324,086	336,110	360,274	368,575	428,195	482,172	523,106	606,596	16.0%
Total	**589,907**	**541,680**	**547,265**	**549,421**	**564,768**	**563,734**	**596,499**	**630,867**	**655,242**	**729,242**	**11.3%**
Annual change	4.8%	-8.2%	1.0%	0.4%	2.8%	-0.2%	5.8%	5.8%	3.9%	11.3%	-

Source: EETT (based on data provided by postal services providers)

Table 2.2: Postal market volume (in thousand items)

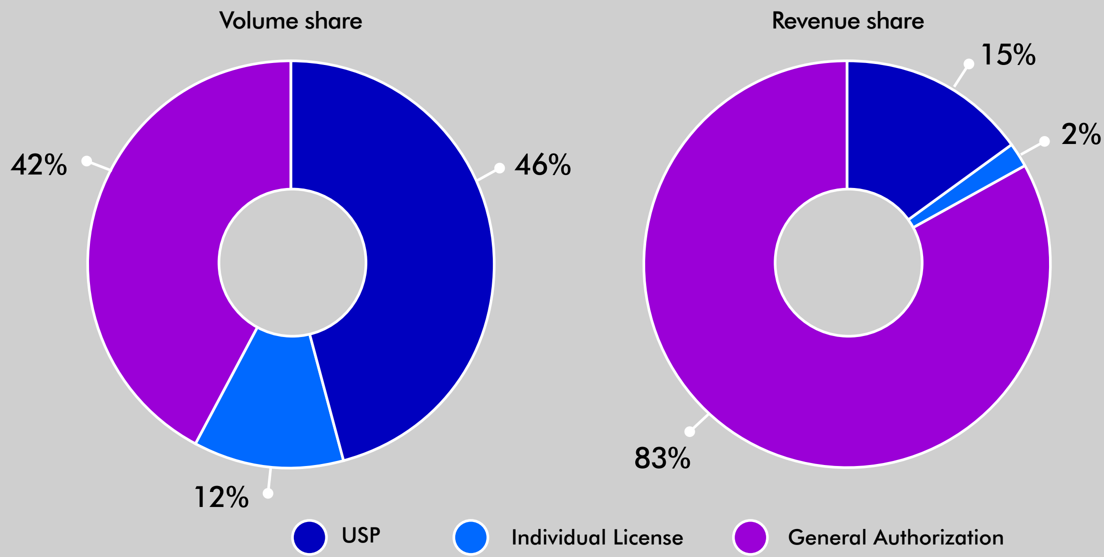
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2023/22
USP	398,325	308,300	278,523	248,452	231,607	213,496	176,694	151,054	148,108	143,386	-3.2%
Companies with Individual License	26,854	27,251	32,060	37,136	42,312	48,681	46,049	46,249	40,930	38,895	-5.0%
Companies under General Authorization	57,563	58,578	65,752	70,613	76,624	84,199	106,000	119,288	120,618	133,552	10.7%
Total	**482,742**	**394,129**	**376,334**	**356,201**	**350,543**	**346,376**	**328,744**	**316,590**	**309,656**	**315,833**	**2.0%**
Annual change	4.8%	18.4%	-4.5%	-5.3%	-1.6%	-1.2%	-5.1%	-3.7%	-2.2%	2.0%	-

Source: EETT (based on data provided by postal services providers)

In 2023, the USP accounted for 46% of the postal items' volume, while companies with Individual License and under General Authorization accounted for 12% and 42% respectively (Chart 2.6).

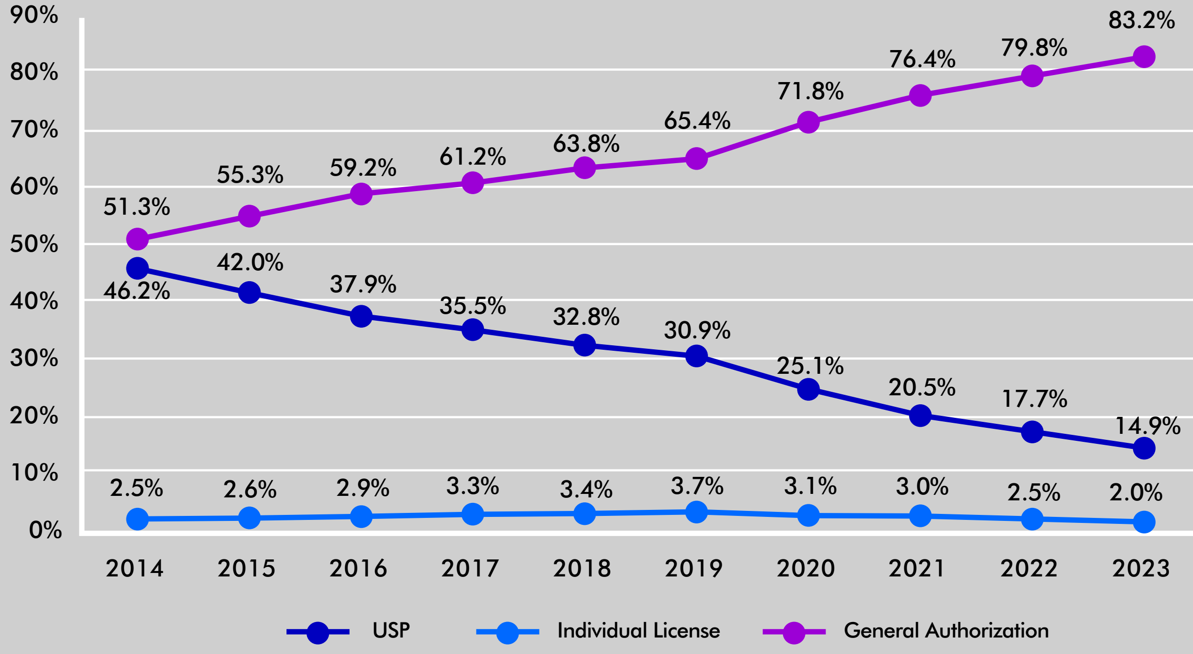
The USP's market share in terms of revenues kept on falling to 15% in 2023 compared to 18% in 2022, while the respective market share of companies under General Authorization steadily increased, reaching 83% compared to 80% in 2022. Finally, the market share of companies with an Individual License remained roughly the same, amounting to 2%, as shown in Chart 2.7.

Chart 2.6: Postal items volume and revenue shares per postal sector, 2023



Source: EETT (based on data provided by postal services providers)

Chart 2.7: Revenue shares per postal sector



Source: EETT (based on data provided by postal services providers)

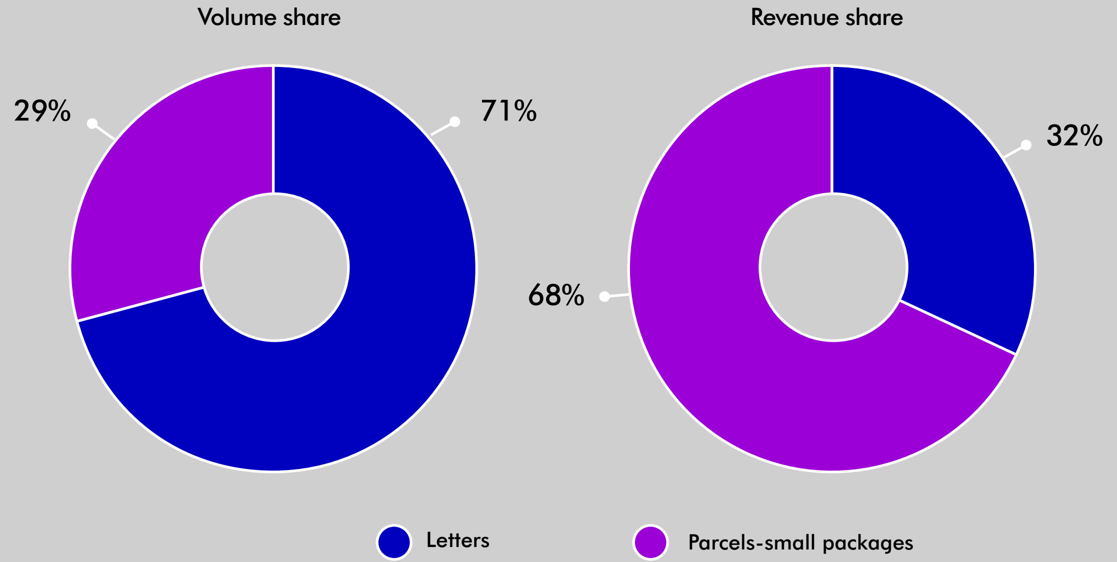
Per postal service

Postal items are classified into letters (including direct mail, newspapers, magazines) and parcels (including small packages). In 2023, the parcel sector generated 68% of the total postal market revenues, having handled 29% of the total postal items (Chart 2.8). Specifically, revenues from the handling of 91 million parcels increased by 16.5% compared to 2022, reaching 494 million euros.

In 2023 there was a 1.6% decrease in the number of handled letters, although they accounted for 71% of the handled postal items' volume. More specifically, 225 million letters were handled, generating revenues of 236 million euros, marking a 1.8% increase compared to 2022.

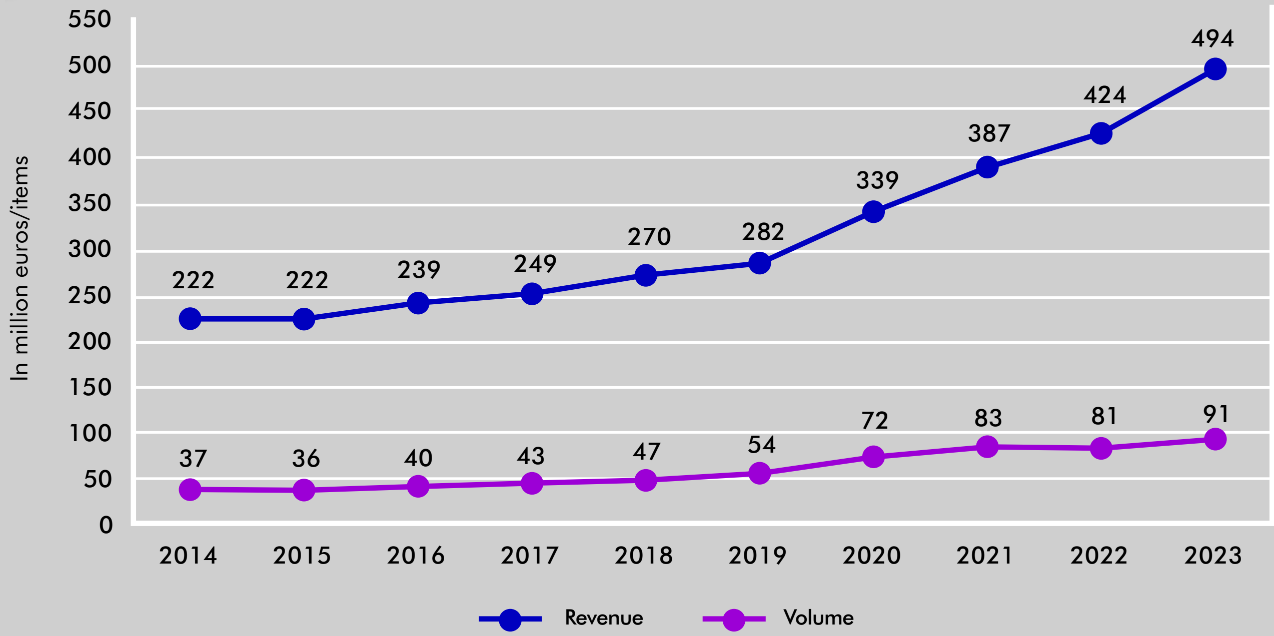
It is important to note that the ever-increasing e-substitution of letter mail is the main reason for the decline in the number of handled letters in recent years. The trends in revenue and volume of the two postal services over the last decade are presented in Charts 2.9. and 2.10 respectively.

Chart 2.8: Postal items volume and revenue shares per postal service, 2023



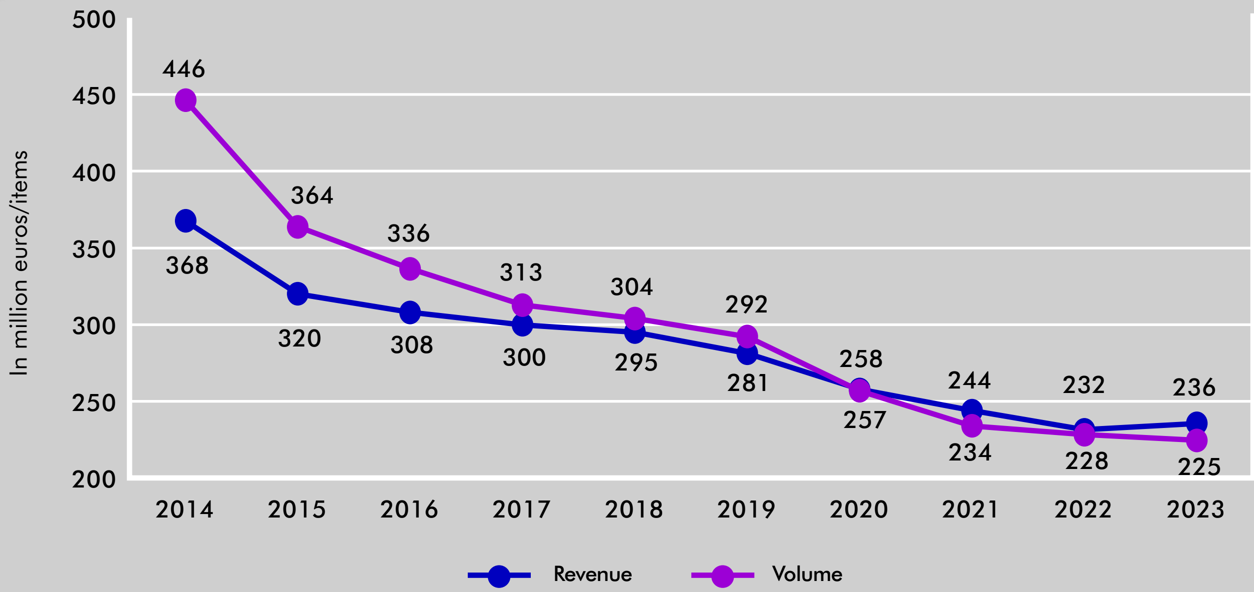
Source: EETT (based on data provided by postal services providers)

Chart 2.9: Volume and revenue of parcels-small packages



Source: EETT (based on data provided by postal services providers)

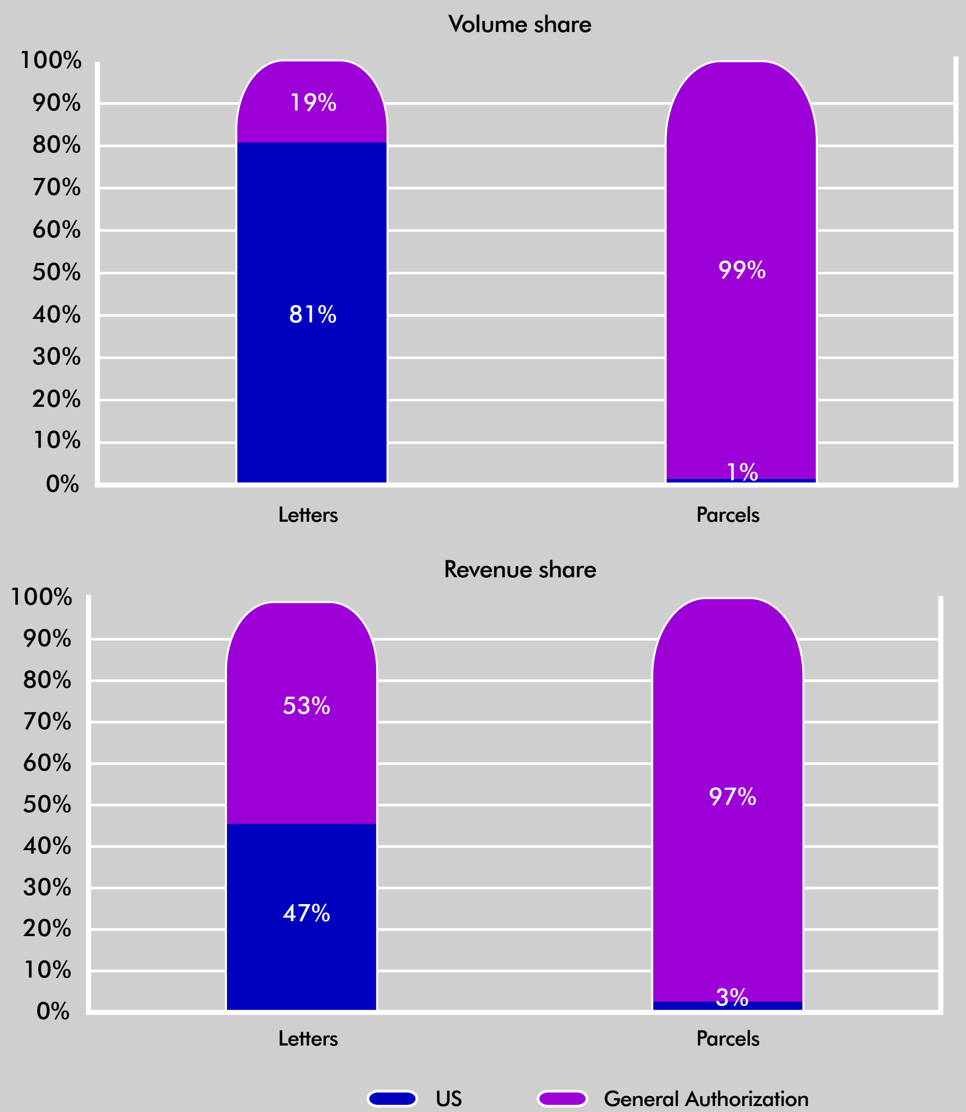
Chart 2.10: Volume and revenue of letters



Source: EETT (based on data provided by postal services providers)

Regarding the services provided in 2023, the US dominated in the letter mail sector[52], accounting for 81% of the volume and 47% of the revenue. In the sector of parcels-small packages, courier companies dominated, handling 99% of the volume and generating 97% of the revenue (Chart 2.11).

Chart 2.11: Volume and revenue shares of letters and parcels per postal sector, 2023



Source: EETT (based on data provided by postal services providers)

52. Including direct mail, books, newspapers and magazines.

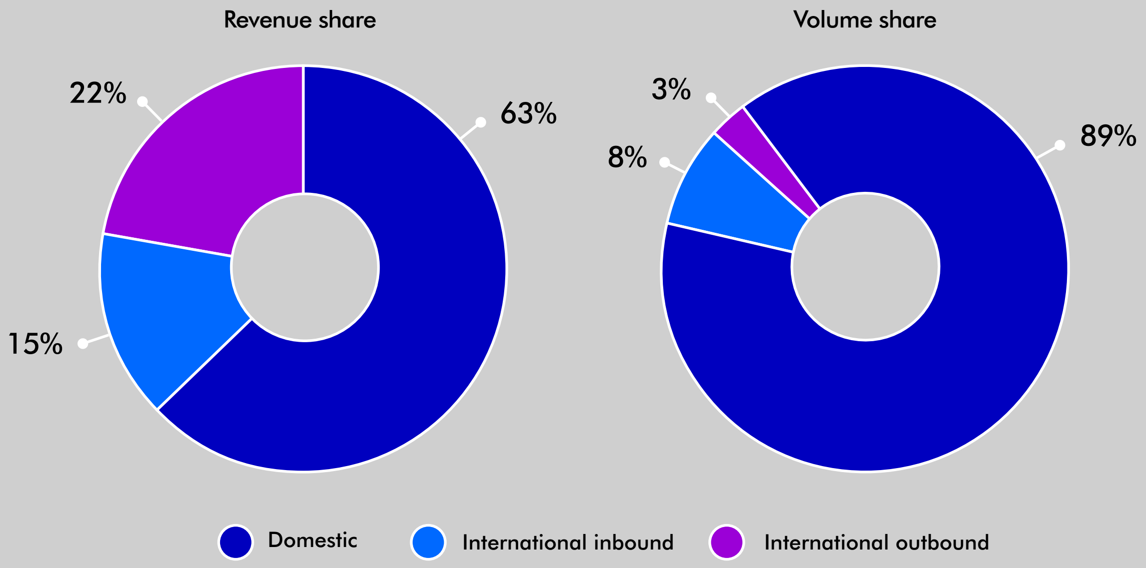
Per destination and origin of shipments

In 2023, 63% of the revenues in the Greek postal market stemmed from domestic traffic (89%). The breakdown of revenues and the volume of domestic, international inbound and international outbound items is shown in Chart 2.12.

The majority of postal items was shipped from Attica (74%) and Macedonia (12%) to both domestic and international destinations. These two regions were also the most popular destinations for items handled domestically and from abroad. More specifically, 42% of postal items was shipped to Attica and 17% to Macedonia (Chart 2.13).

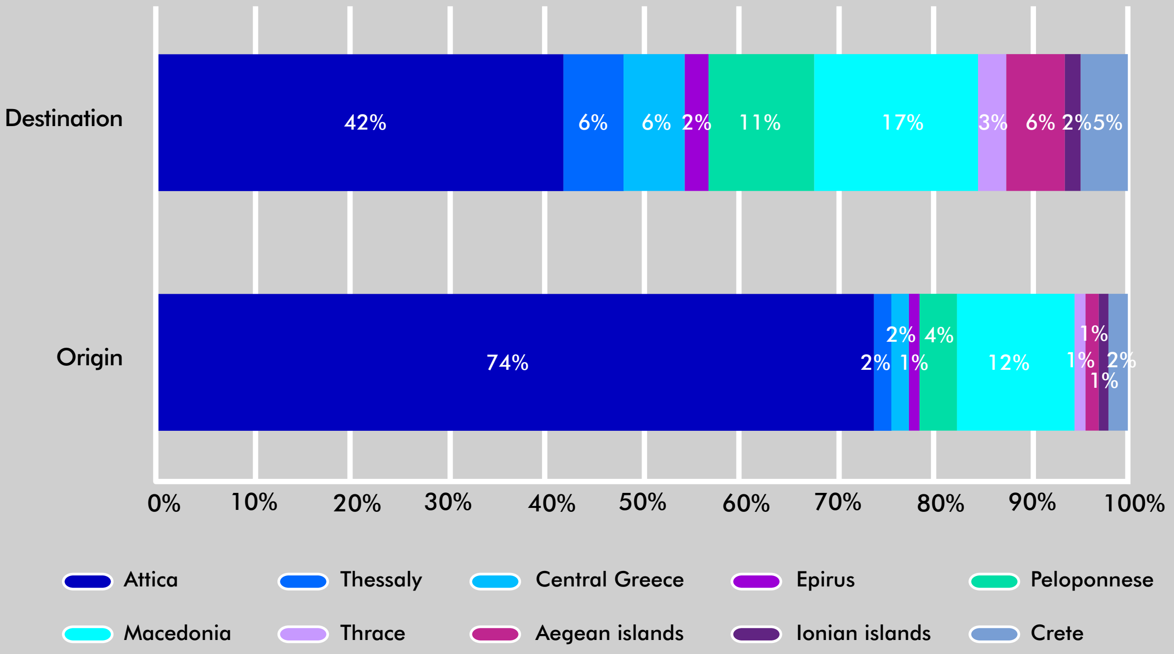
Moreover, the largest volume of postal items delivered to Greece from international destinations originated mainly from the European Union (EU) (86%), the rest of Europe (6%), the USA-Canada (4%) and Asia (4%). Postal items' shipments to international destinations were primarily destined to the EU (66%), the USA-Canada (14%) and the rest of Europe (11%) (Chart 2.14).

Chart 2.12: Postal items volume and revenue shares per domestic-international service, 2023



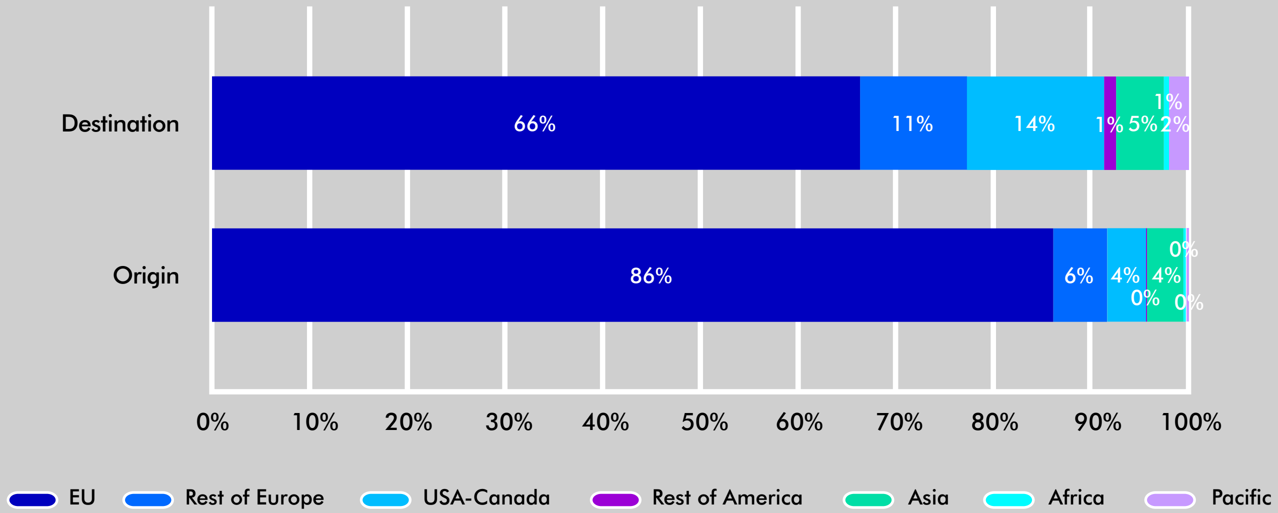
Source: EETT (based on data provided by postal services providers)

Chart 2.13: Origin and destination of domestic postal items shipments per geographic region, 2023



Source: EETT (based on data provided by postal services providers)

Chart 2.14: Origin and destination of international postal items shipments, 2023



Source: EETT (based on data provided by postal services providers)

2.2.2. The Universal Service sector[53]

The provision of the US covers letters, direct mail, newspapers, books, catalogues and magazines weighing up to 2 kg, as well as parcels up to 20 kg. As shown in Table 2.3 below, letters continued to be the dominant postal item in the US sector, accounting for 91% of the handled items and generating 82.7% of the sector's annual revenues in 2023.

In 2023, the USP continued to dominate the US sector, generating 79% of the postal items' volume versus 78% in 2022 and 88% of the revenue, the same as in 2022 (Chart 2.15).

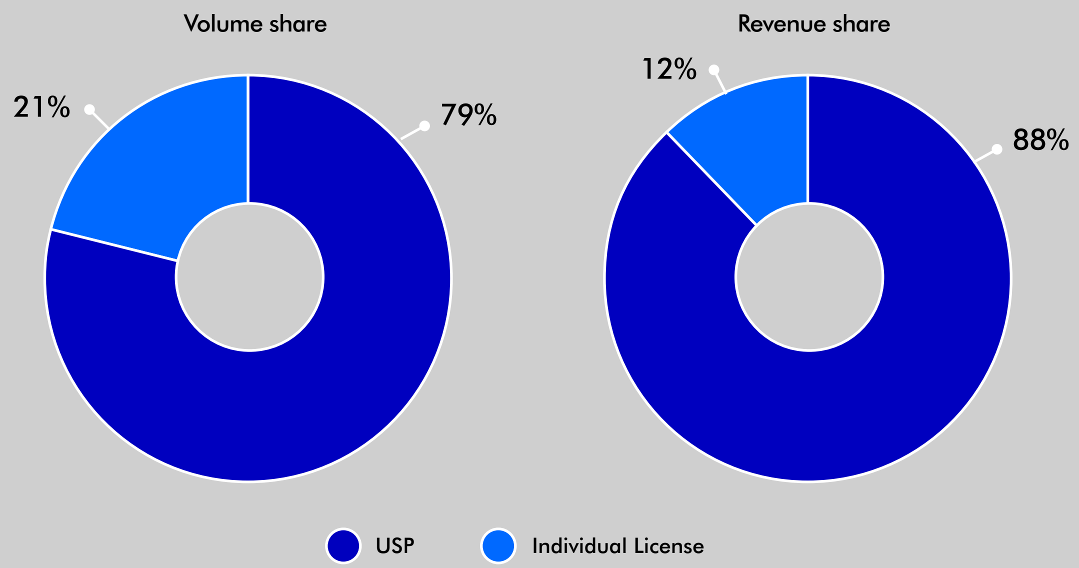
Table 2.3: Volume and revenue shares of postal items within the US sector, 2023

	Volume	Revenue
Letters	91.0%	82.7%
Direct mail	3.7%	2.1%
Newspapers	4.5%	4.5%
Books-catalogues-magazines	0.1%	0.1%
Parcels and small packages	0.7%	10.6%
US total	**100%**	**100%**

Source: EETT (based on data provided by postal services providers)

53. The USP and the companies with Individual License are the two types of providers operating in the US sector. According to Law 4053/2012 "Regulation of the operation of the postal market, electronic communications issues and other provisions", Government Gazette 44/A/07-03-2012, ELTA (Hellenic Post) is the USP in Greece and has undertaken the provision of the US for a period of 15 years, since the beginning of the postal market liberalization until 31/12/2028.

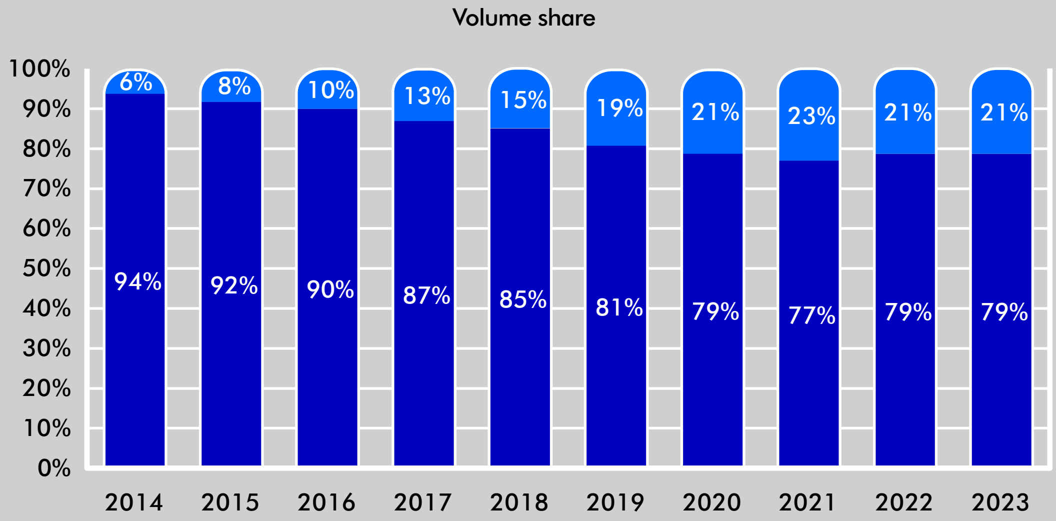
Chart 2.15: Postal items volume and revenue shares of postal services providers within the US sector, 2023

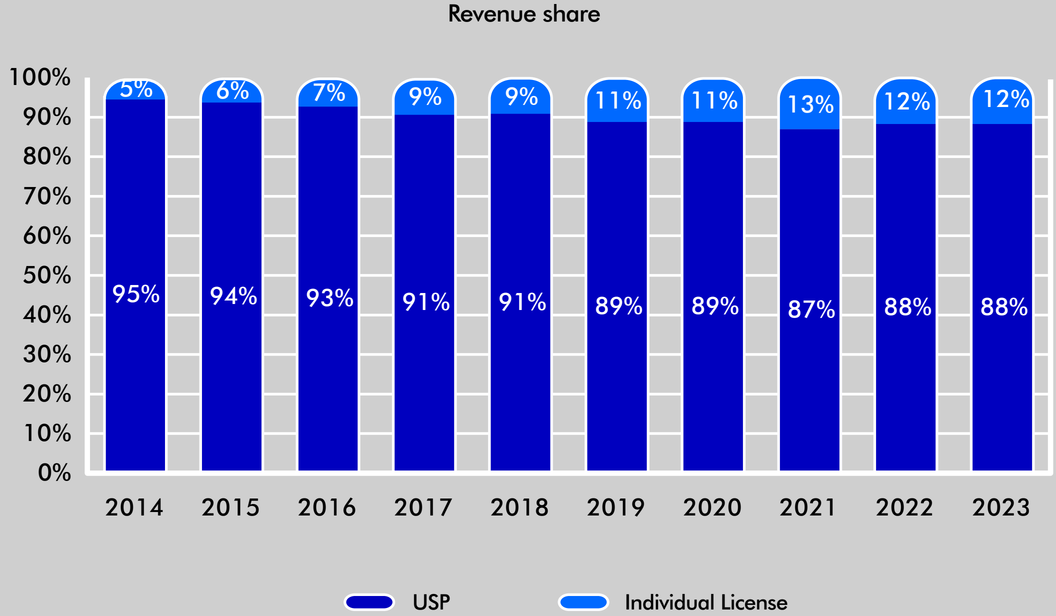


Source: EETT (based on data provided by postal services providers)

The over time trend of the US sector shares over the last decade shows the gradual increase in the market share of companies with an Individual License, which was interrupted the last two years, as there was a slight increase in the USP' s market share (Chart 2.16). More specifically, in 2023, the companies with an Individual License held a 21% share in terms of the volume of handled items, generating 12% of total revenues. The market shares of all universal services for 2023 are presented in Chart 2.17.

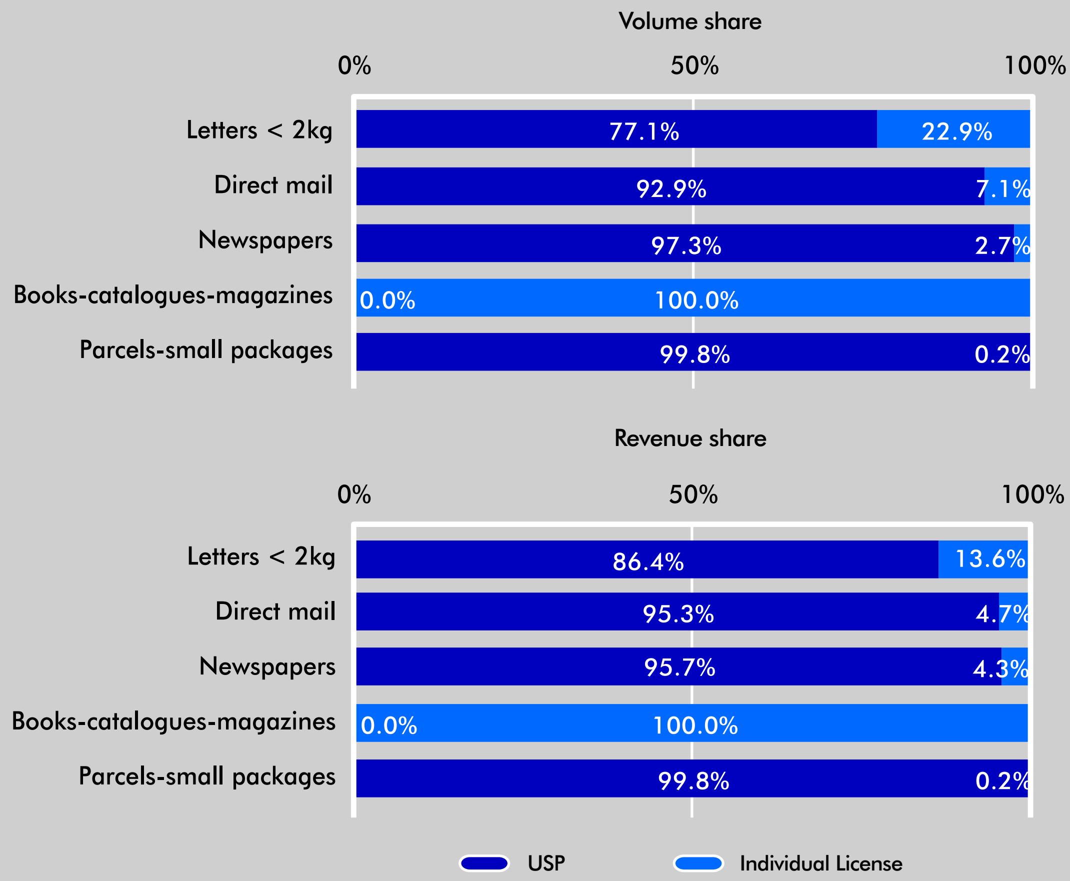
Chart 2.16: Evolution of postal services providers market shares within the US sector





Source: EETT (based on data provided by postal services providers)

Chart 2.17: Market shares of postal services by postal items type within the US sector, 2023



Source: EETT (based on data provided by postal services providers)

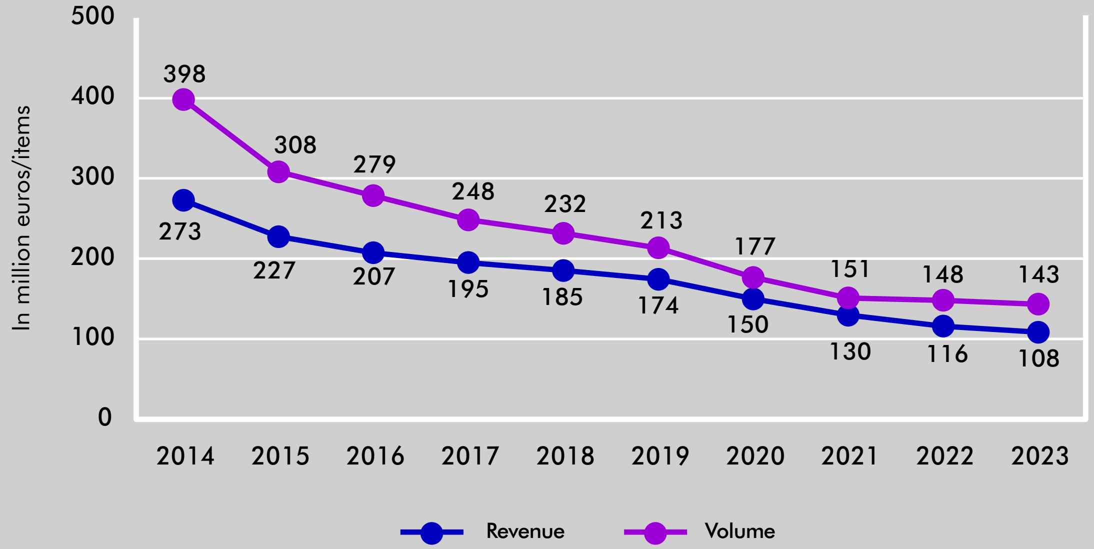
The Universal Service Provider (USP)

In 2023, the USP recorded revenues of 108 million euros, a 7% decrease compared to 2022, having handled 143 million postal items, i.e. 3% less than the previous year. The historical trend of the USP's revenues and postal items volume during the last decade, is presented in Chart 2.18.

The majority of the USP's revenues (80.9%) stemmed from handling of letters up to 2 kg, followed by parcels up to 20 kg (10.6%) and newspapers (4.9%). In 2023, the average revenue for direct mail, newspapers and small packages showed a notable increase of 25.2%, while the average revenue for the other two categories decreased by 21.9% and 15.8% respectively. The total volume of postal items and the corresponding revenues, as well as the average revenue per postal item category are presented in Table 2.4.

Contract (55%) and retail customers (45%) generated the USP's revenues. The USP's customer base consisted mainly of public sector companies (17%), banks/assurance companies (17%) and individuals (20%).

Chart 2.18: USP's revenue and postal items volume



Source: EETT (based on data provided by postal services providers)

Table 2.4: USP's revenue and postal items volume shares per service, 2023

	Total volume (%)	Total revenue (%)	Average revenue (in euros)	Difference 2023-2022 (%)
Letters	89.2%	80.9%	0.69	-6.5%
Direct mail	4.3%	2.3%	0.40	25.2%
Newspapers	5.6%	4.9%	0.66	15.8%
Books-catalogues-magazines	0.0%	0.0%	0.00	0.0%
Small packages	0.3%	1.3%	3.64	23.1%
Parcels	0.6%	10.6%	12.89	-21.9%
Total	**100%**	**100%**	-	-

Source: EETT (based on data provided by postal services providers)

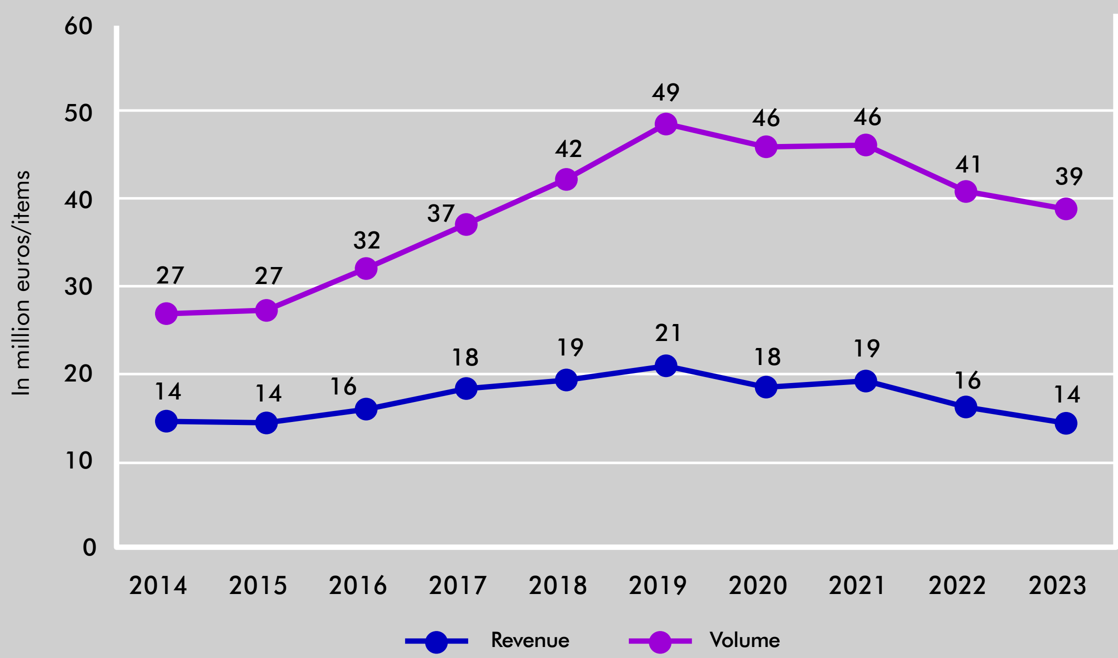
Companies with an Individual License

In addition to the USP, ten companies with an Individual License[54] were active in the US sector in 2023. 97% of the revenues came from three companies, which handled 99% of the postal items.

In 2023, the companies with an Individual License once again experienced a decrease in both revenues and the volume of postal items. Specifically, the revenues of companies with an Individual License were 14 million euros, a 12% decrease compared to the previous year, while the handled postal items were 39 million, 5% fewer than in 2022. The overtime course of revenues and the volume of postal items by companies with an Individual License, during the last decade, is shown in Chart 2.19.

As presented in Table 2.5, in 2023, letter mail handling almost monopolized the sector's activity, as it did in previous years.

Chart 2.19: Revenue and postal items volume of companies with Individual License



Source: EETT (based on data provided by postal services providers)

54. Particularly, four companies with an Individual License operated in the handling of letters, three in the distribution of direct mail, one in the distribution of newspapers, two in the distribution of books/catalogues/magazines and three in the distribution of parcels.

Table 2.5: Postal items volume and revenue per service for companies with Individual License, 2023

	Total volume (%)	Total revenue (%)
Letters	97.7%	96.6%
Direct mail	1.2%	0.8%
Newspapers	0.6%	1.7%
Books-catalogues-magazines	0.5%	0.8%
Parcels & small packages	0.01%	0.1%
Total	**100%**	**100%**

Source: EETT (based on data provided by postal services providers)

2.2.3. The courier services sector[55]

In 2023, 76 new companies entered the courier services sector, bringing the total number of companies operating under General Authorization to 720 versus 713 in 2022. Their revenues amounted to 607 million euros, increased by 16% compared to 2022, while 134 million postal items were handled, 11% more than the previous year. The upward trend in both revenues and the volume of handled items over the last decade (Chart 2.20) is attributed to the impressive growth of e-commerce, which has positively influenced the handling of small packages and parcels.

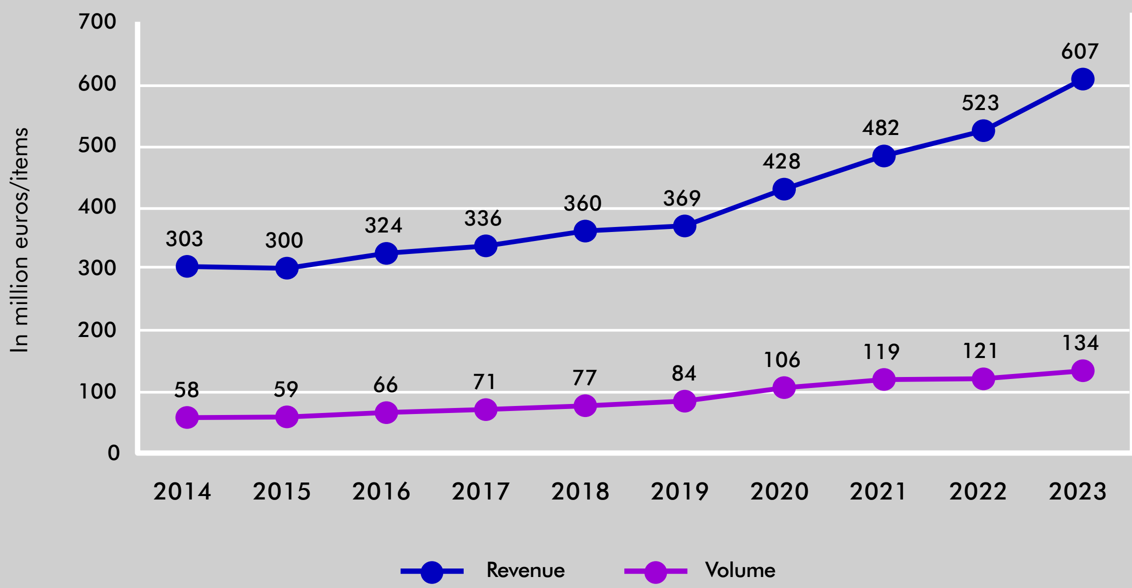
Specifically, letters constitute 33% of postal items handled by courier companies, whereas parcels and small packages constitute 67%. Correspondingly, letters generated significantly lower revenues (21%) for companies under General Authorization than parcels/small packages (79%). The volume and revenues share of postal items handled by the courier companies are shown in Chart 2.21.

It is worth noting that, in 2023, as in 2022, the largest volume of postal items (65%) was handled by just six companies, out of the total of 720 companies, accounting for 74% of the sector's revenue (Chart 2.22).

The degree of competition between postal companies is reflected in the Herfindahl-Hirschman Index (HHI)[56], which demonstrates the market concentration by indicating the extent to which a small number of companies represents a large share of the market. The higher the HHI, the higher is the degree of market concentration. Specifically, an HHI index between 1,000 and 1,800 suggests a moderately concentrated market. In 2023, the HHI index for the courier market decreased significantly compared to the previous year, reflecting a moderate level of concentration (Chart 2.23).

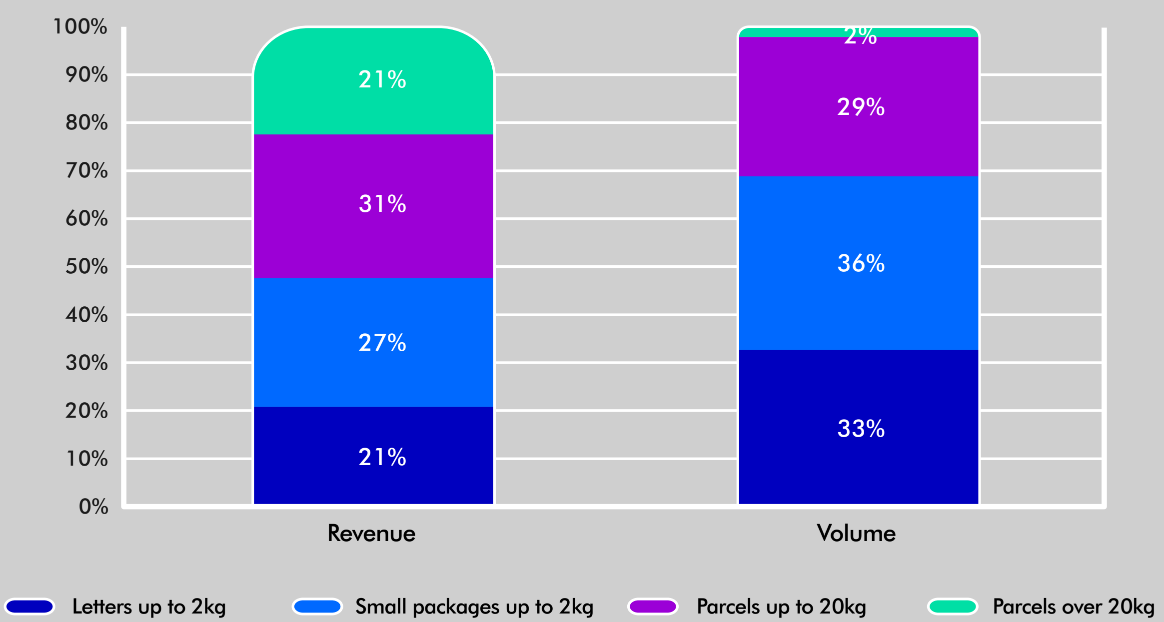
55. The companies in the courier services sector operate under General Authorization and provide courier services, i.e. express delivery of postal items with monitoring and track and trace systems. The activities of the courier companies include the handling of letters up to 2 kg, small packages up to 2 kg, parcels from 2 up to 20 kg and parcels heavier than 20 kg.
56. Source: Hirschman A. (1945), National Power and the Structure of Foreign Trade, Berkley & Los Angeles: Publications of the Bureau of Business and Economic Research, University of California and Herfindahl, O.C. (1950), Concentration in the U.S. Steel Industry, Columbia University, unpublished Ph.D. thesis. $HI=\sum^{n}_{i=1} s_i^2$, where s is the market share of company "i" and n is the number of companies.

Chart 2.20: Revenue and postal items volume of companies under General Authorization



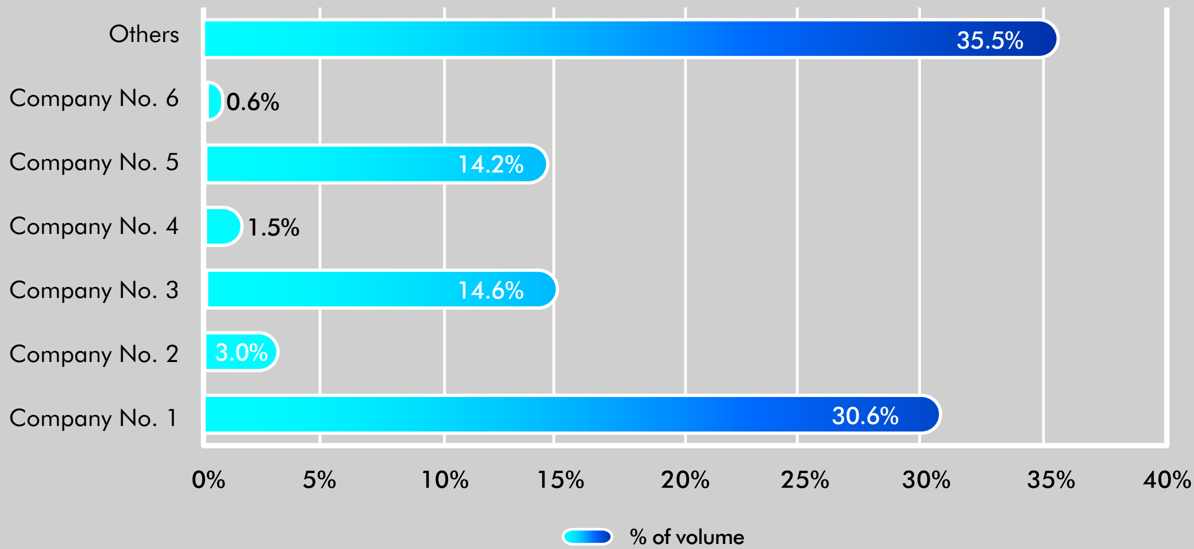
Source: EETT (based on data provided by postal services providers)

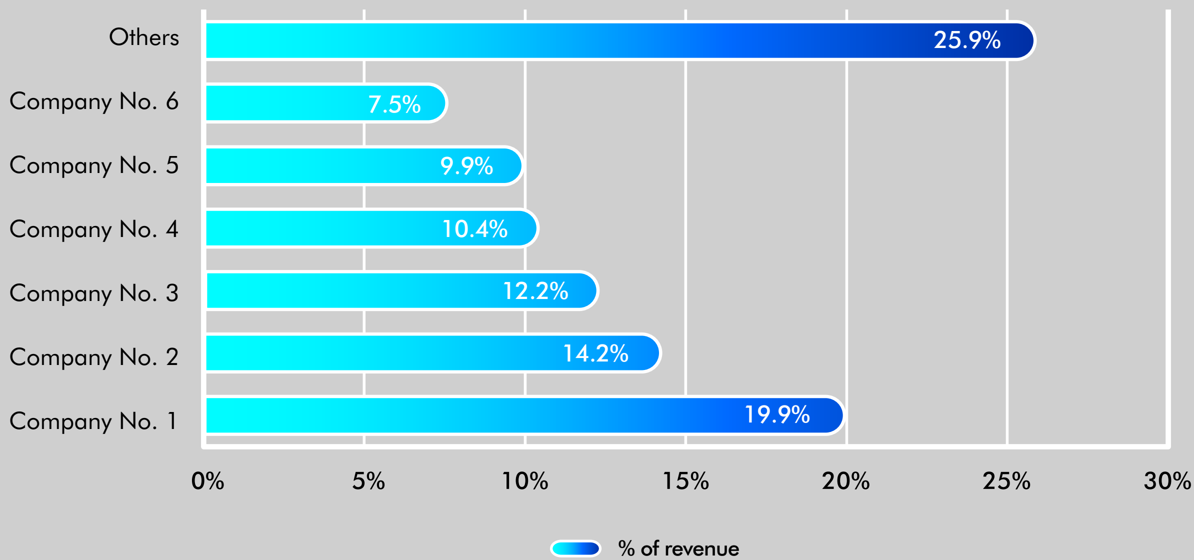
Chart 2.21: Breakdown of revenue and postal items volume per service in the courier sector, 2023



Source: EETT (based on data provided by postal services providers)

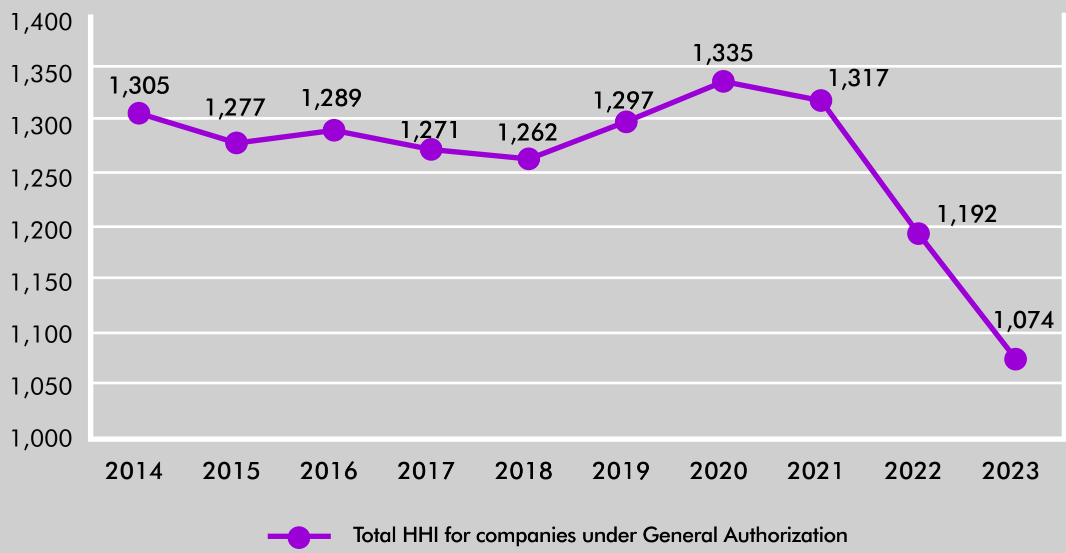
Chart 2.22: Revenue and postal items volume shares of courier companies, 2023





Source: EETT (based on data provided by postal services providers)

Chart 2.23: Herfindahl-Hirschman Index for companies under General Authorization



Source: EETT (based on data provided by postal services providers)

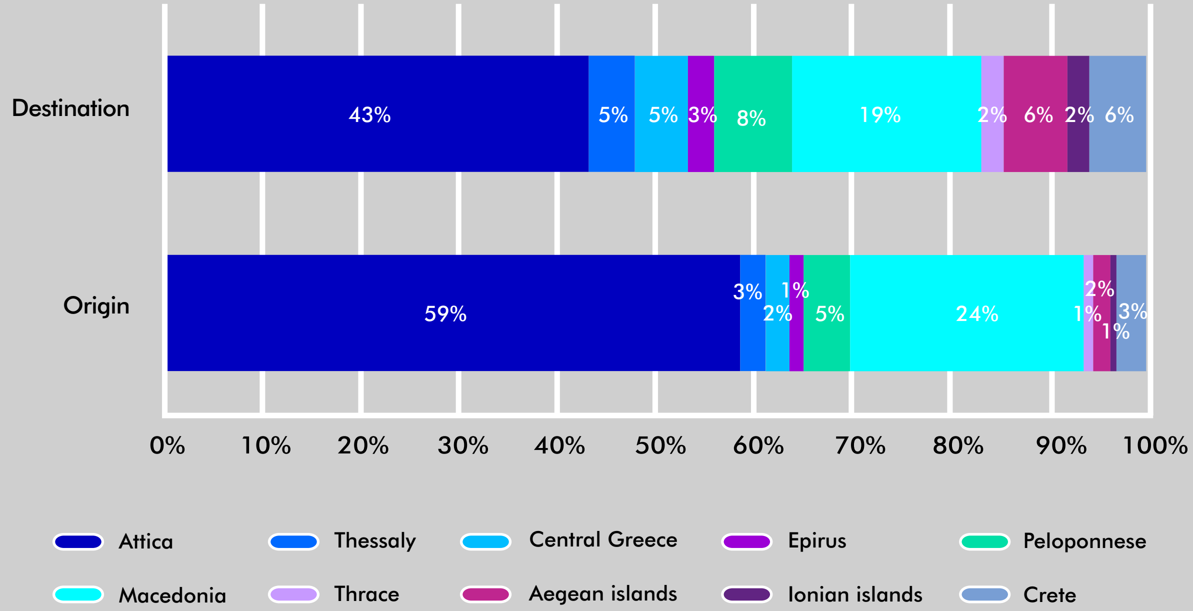
Approximately 83% of postal items was handled from the regions of Attica and Macedonia to both domestic and international destinations, as presented in Chart 2.24. Additionally, 62% of postal items from both domestic and international origins was delivered to the same areas.

The pivotal role of cross-border e-commerce boosted the activity of courier operators, with 23% of their revenues generated by international outbound traffic and 16% by international inbound traffic. The most significant part of outbound traffic was directed to EU countries (70%), USA-Canada (11%) and the rest of Europe (10%), while the majority of inbound traffic originated from EU countries (94%), the rest of Europe (2%) and Asia (2%) (Chart 2.25).

Contract customers accounted for 93% of courier companies' revenues, while 7% stemmed from retail customers. Revenues per customer type are shown in Chart 2.26.

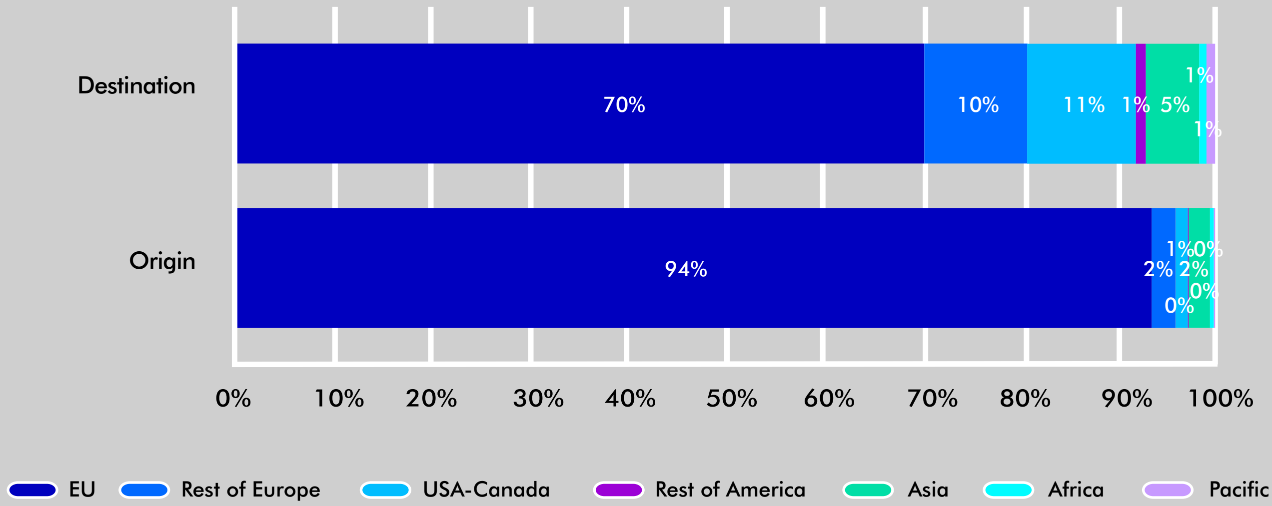
The major clients of courier companies were, predominantly, businesses mainly from the e-commerce sector (43%), but also from general trade (12%), industry (9%), the pharmaceutical industry (6%), shipping companies (4%), telecommunications (4%), etc. (Chart 2.27).

Chart 2.24: Origin and destination of courier items shipments per geographic region, 2023



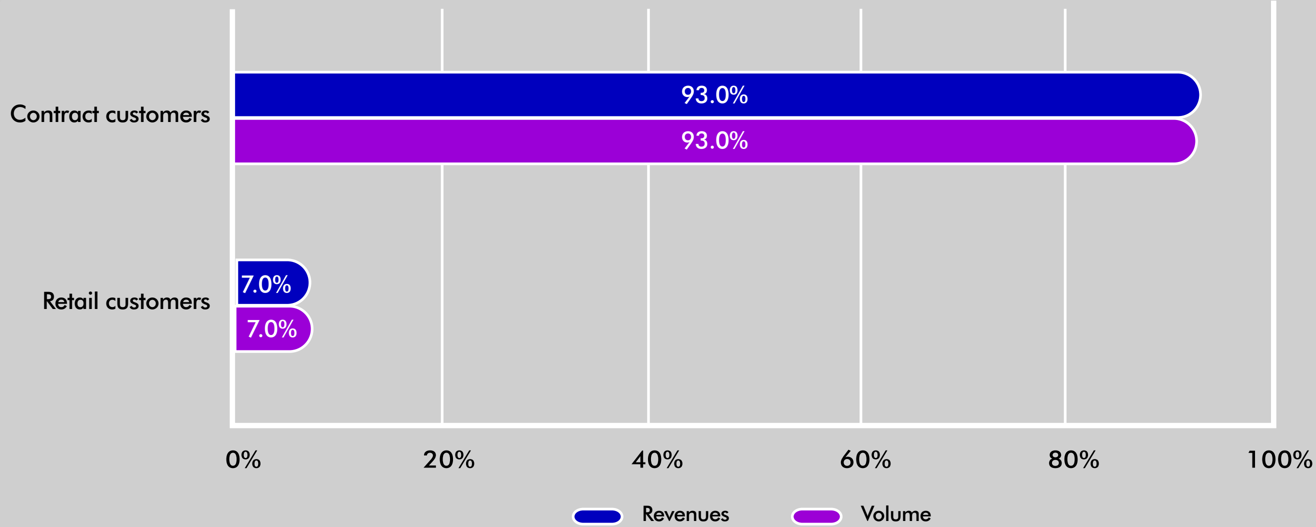
Source: EETT (based on data provided by postal services providers)

Chart 2.25: Origin and destination of cross-border courier shipments per geographic region, 2023



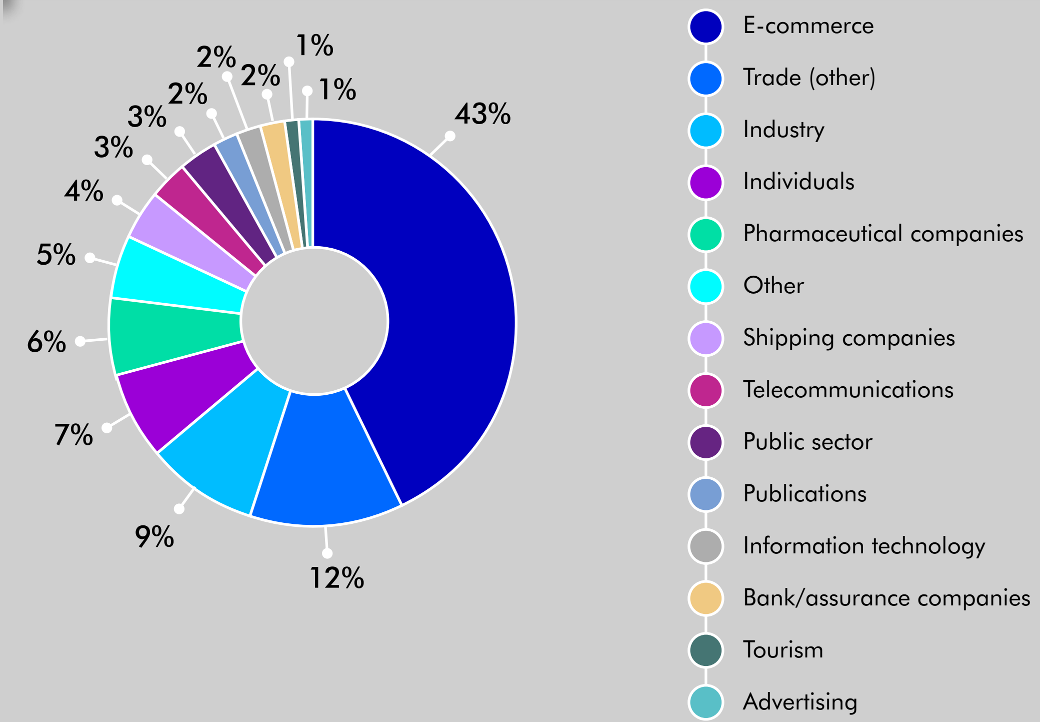
Source: EETT (based on data provided by postal services providers)

Chart 2.26: Revenue and postal items volume of courier companies per customer type, 2023



Source: EETT (based on data provided by postal services providers)

Chart 2.27: Breakdown of courier companies' customer base in terms of revenue, 2023



Source: EETT (based on data provided by postal services providers)

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