

## TABLE OF CONTENTS

|   |          |
|---|----------|
| <b>I. STATE, DEVELOPMENT, AND PROSPECTS OF THE ELECTRONIC COMMUNICATIONS MARKET</b>                             | <b>6</b> |
| 1. Volume and structure of the Bulgarian electronic communications market                                       | 6        |
| 1.1. Market volume  | 6        |
| 1.2. Market structure   | 7        |
| 2. Voice telephony services   | 10       |
| 2.1. Fixed voice telephony services   | 12       |
| 2.2. Mobile voice telephony services  | 16       |
| 2.3. Voice services provided over broadband wireless access (BWA) networks by means of radio frequency spectrum | 21       |
| 3. Leased lines services  | 21       |
| 4. Data transfer and Internet access  | 25       |
| 5. Transmission and/or distribution of radio and TV programmes services   | 30       |
| 5.1. Retail distribution of radio and TV programmes   | 32       |
| 5.2. Wholesale transmission and/or distribution of radio and TV programmes and IPTV                             | 37       |
| 5.3. Terrestrial broadcasting – VHF broadcasting  | 39       |
| 6. Bundled services   | 40       |
| 7. Prospects for the development of the Bulgarian electronic communications market                              | 43       |
| 8. Provision of the universal service   | 44       |
| 8.1. Degree of satisfaction from the universal service provision  | 44       |
| 8.2. Analysis of the provision of the universal service   | 44       |
| 8.2.1. Access to and provision of the universal service   | 44       |
| 8.2.2. Access to public payphones   | 45       |
| 8.2.3. Ensuring telephone directory and provision of enquiry services   | 46       |
| 8.2.4. Affordability of tariffs of the universal service  | 46       |
| 8.3. Quality of the universal service   | 47       |
| 8.4. Compensation of net costs accrued due to the universal service provision                                   | 48       |
| 8.5. Complaints and complaint resolutions   | 48       |
| 8.6. The universal service outlook  | 49       |

# I. STATE, DEVELOPMENT, AND PROSPECTS OF THE ELECTRONIC COMMUNICATIONS MARKET

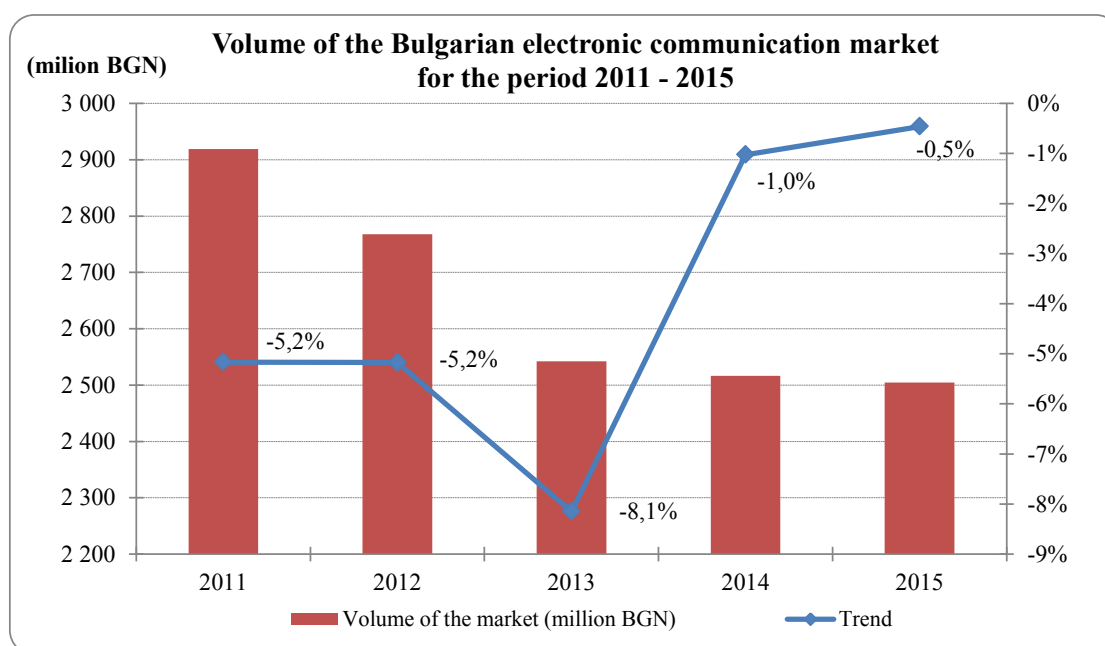
## 1. Volume and structure of the Bulgarian electronic communications market

### 1.1. Market volume

According to data from the CRC register (as of 31.12.2015) 1,162 undertakings were registered in CRC with the intention to provide public electronic communications, as for one year their number has increased by 0.5%. From these registered undertakings, 1,051<sup>2</sup> (90,4%) have submitted to CRC the information under Art. 5 of General Terms & Conditions for Carrying out Public Electronic Communications. During the year, 892 undertakings were active in business, including 33 enterprises which as of 31.12.2015 have suspended their activities on providing public electronic communications and have been removed from the CRC register.

In 2015 the total volume of the Bulgarian electronic communications market was almost without change<sup>3</sup> compared to 2014 and amounted to BGN 2.505 billion.<sup>4</sup>

Figure 1 below shows the dynamics in the electronic communications market volume in the country for the period 2011-2015.



*Note: In reference to the amended Art. 33, par. 2 of the Law on electronic communications and with the purpose of comparing the information, CRC Annual Report provides data, submitted by the undertakings, without any subscribers or revenue assessment, and for that purpose the data has been recalculated for the period 2011-2014.*

**Source:** Data submitted to CRC

**Fig. 1**

<sup>2</sup> The data is based on the information received by the CRC as of 03.05.2016.

<sup>3</sup> Market volume decrease equals to 0,5%

<sup>4</sup> Including incomes from undertakings, discontinued operations in 2015

Presented data shows that the process of overcoming the negative tendency of market volume decrease, started in 2014, is still continuing, as the total volume of electronic communications market in 2015 constitutes 2.9% of the total GDP<sup>5</sup> of Bulgaria.

## 1.2. Market structure

Information on revenue from the provision of public electronic communications in Bulgaria by segments determined according to the type of services for the period 2013 – 2015, is provided in Table 1.

*Table 1*

### Structure of the public electronic communications market in Bulgaria by type of the provided services for the period 2013– 2015

| Public electronic communications services   | Year             |                  |                  |
|---|------------------|------------------|------------------|
|   | 2013             | 2014             | 2015             |
|   | (million BGN)    |                  |                  |
| <b>1. Voice telephony services</b>  | 1,485.413        | 1,373.179        | 1,131.441        |
| 1.1. Fixed voice service through geographic numbers from the NNP, carrier selection service and public payphones <sup>1</sup> | 225.492          | 203.340          | 174.305          |
| 1.2. Mobile voice service through numbers from the NNP  | 1,250.880        | 1,157.208        | 942.830          |
| 1.3. Other voice services <sup>2</sup>  | 9.041            | 12.631           | 14.305           |
| <b>2. Leased lines services</b>   | 35.225           | 34.830           | 31.896           |
| <b>3. Data transfer and/or Internet access services</b>   | 363.157          | 369.048          | 403.332          |
| <b>4. Transmission and/or distribution of radio and TV programmes services</b>  | 257.438          | 259.575          | 244.411          |
| <b>5. Bundled services</b>  | 350.376          | 424.703          | 643.483          |
| <b>6. Other services</b>  | 50.802           | 54.971           | 50.121           |
| <b>TOTAL</b>  | <b>2,542.411</b> | <b>2,516.307</b> | <b>2,504.684</b> |

<sup>1</sup> The data for 2013 and 2014 has been updated as the data presented is without an assessment.

<sup>2</sup> Includes revenue from carrying out VoIP (voice IP service where no NNP (National Numbering Plan) numbers (geographic or non-geographic) are used, the service quality is not guaranteed and the user must use/have Internet access through the respective device - computer/telephone), voice service provided through numbers with national destination code „99x“ and others.

<sup>3</sup> The segment includes revenue from the provision of duct network access, satellite systems access services, shared use including provision of towers, masts; dark fibre, co-location services other than those provided for interconnection and other services.

**Source:** Data submitted to CRC

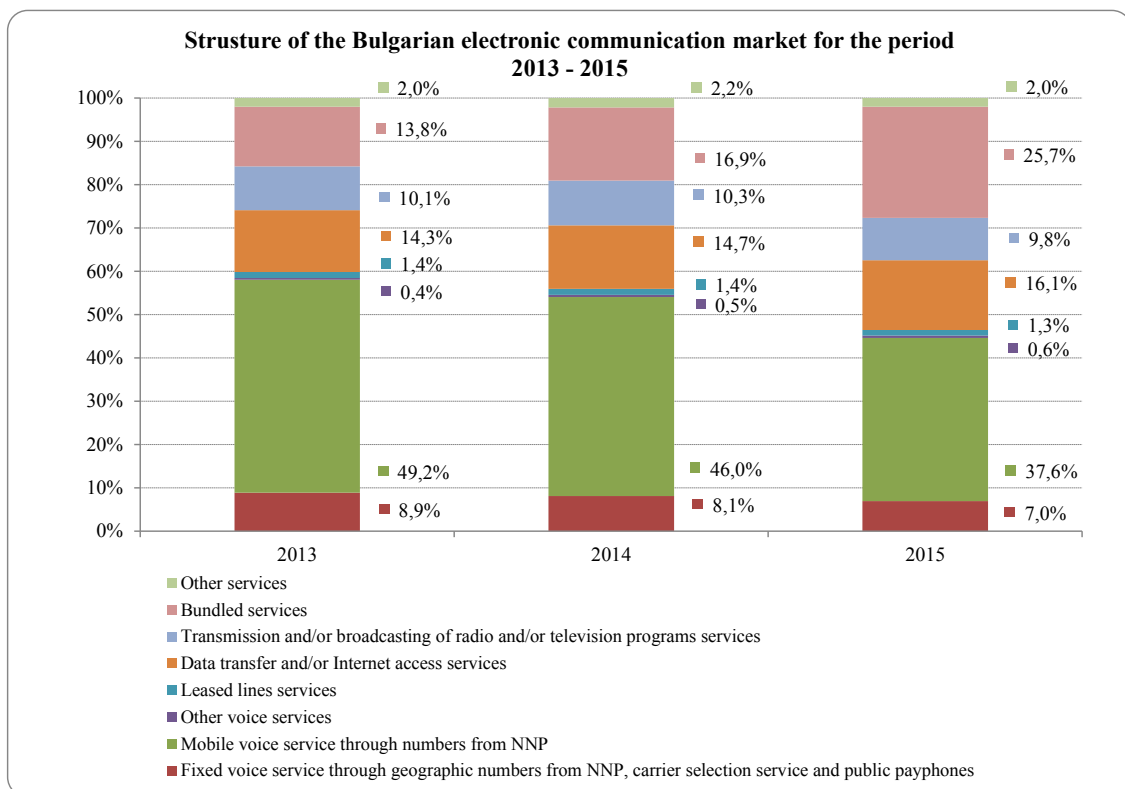
In 2015 as in the previous years, the total volume of the electronic communications market<sup>6</sup> in Bulgaria was determined by revenue from voice services, bundled services, and standalone services for data and/or Internet access.

<sup>5</sup> Calculated at current prices. Source: NSI:

<http://www.nsi.bg/bg/content/2206/%D0%B1%D0%B2%D0%BF-%D0%BF%D1%80%D0%BE%D0%B8%D0%B7%D0%B2%D0%BE%D0%B4%D1%81%D1%82%D0%B2%D0%B5%D0%BD-%D0%BC%D0%B5%D1%82%D0%BE%D0%B4-%D0%BD%D0%B0%D1%86%D0%B8%D0%BE%D0%BD%D0%B0%D0%BB%D0%BD%D0%BE-%D0%BD%D0%B8%D0%B2%D0%BE>

For another consecutive year, the share of voice telephony services (fixed, mobile and other voice services) in the total volume of the public electronic communications market remained the highest - 45,2%, regardless of the reported decrease by 9,4 percentage points, compared to 2014. The revenues from bundled services are on second place and represents 25.7% of the total market volume, which is an increase of 8.8 percentage points, compared to their share in 2014. Data transfer services and/or Internet access services, which represent 16.1% of the total market volume, are third by importance, marking an increase by 1.4 percentage points compared to 2014.

The change in the relative shares of the segments revenue in the structure of the electronic communications market for the period 2013 – 2015 is shown on Figure 2.



**Source:** Data submitted to CRC

**Fig. 2**

Based on the summary of the information submitted by the undertakings, the following main changes in the structure of the Bulgarian electronic communications market are outlined in 2015, compared to 2014:

- ✓ The voice telephony services segment registered a decrease (in an absolute value) by 17.6%, as the highest decrease of 18.5% being observed for the mobile voice service. The decrease in total revenue from mobile voice service is due to a drop in its retail revenue as a standalone service, caused by the increase in mobile telephone service consumption in a bundled service together with other electronic communications services, the subscription fees' revenue from which goes under the „Bundled services” segment;

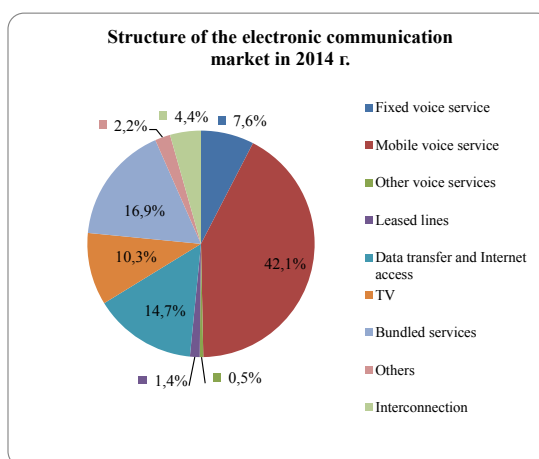
<sup>6</sup> Formed by revenues from services provided standalone and by revenues from bundled services (installation fees and monthly subscription)

- ✓ The “Leased lines services” segment registered a revenue reduction by 8.4%. The revenue decrease was more significant compared to the previous reporting period (2013-2014), when the reported reduction was by 1.1%. This amendment in 2015 is due both to the decrease in revenue from the retail provision of the service, and to the decrease in revenue from the wholesale provision of the service;
- ✓ In the “Data transfer and/or Internet access services” segment the volume of revenue increased by 9.3%, as the revenue from Internet access service increased by 13.2%;
- ✓ In the “Transmission and/or distribution of radio and/or TV programmes services” segment a revenue drop by 5.8% was registered, which is mainly due to the decrease of revenue from provision of cable television (-19.7%) and in the wholesale service – transmission of radio- and TV programmes and terrestrial broadcasting of radio- and TV programmes (-11.2%);
- ✓ In the “Bundled services” segment the volume of revenue registered growth by 51.5%. This growth is due to the double increase in revenue from the double-play service – “mobile voice service and mobile Internet access”. Significant revenue increase was reported for the bundled services „fixed voice service and pay TV” – 17.0% and for „mobile voice service, pay TV and mobile Internet access”, where the growth was more than 50 times, but still the share of these revenues in the total bundled services revenue remained minimal – 0.03%;
- ✓ In the “Other services” segment there was a drop by 8.8%, which is mainly due to the decrease by 13.4% of the revenues from co-location and other types of shared use services, including the provision of access to towers, masts, dark fibre, etc. Revenue from the provision of “access to duct networks” service also has a minimal decline by 2.7% for one year. Only in revenue from "access to satellite systems" service, also included in this market segment as well, an increase by 7.8% compared to 2014 was reported.

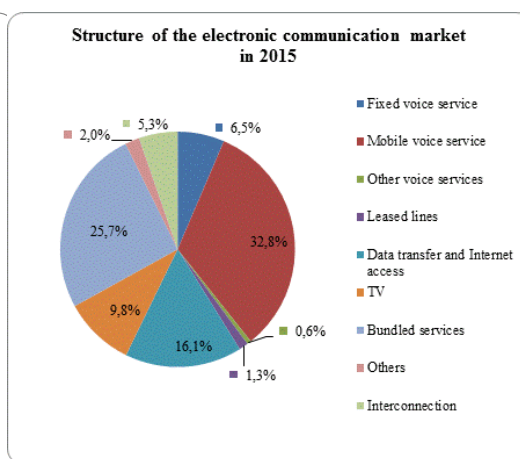
### **Interconnection**

In 2015 for the first time since 2009 the revenue from interconnection registered an increase by 20.4%, compared to 2014. This outcome is due to a significant increase in terminated traffic in mobile undertakings’ networks, which also influences the realised revenue, despite the lower price applied for termination in mobile networks, compared to 2014, valid since 01.01.2015 (Decision No. 135/14.02.2013).

Figures 3 and 4 show the trend in the revenue from interconnection in the total market volume for 2014 and 2015.



**Fig. 3**



**Fig. 4**

**Source:** Data submitted to CRC

Data shows that the share of the revenue from interconnection in the total market volume increased, as in 2015 it was 5.3% or by 0.9 percentage points higher, compared to the previous reporting period (2014).

### ***Investments***

In 2015, 457 undertakings have invested in deployment and maintenance of public electronic networks, which is 11.8% less than the previous period. The total amount of investments by these undertakings reached BGN 524 million in 2015, out of the planned BGN 544 million in 2014, which shows that the investments planned by the undertakings for 2015 have been almost fully realized.

According to the data submitted to CRC, 401 undertakings intend to invest in the provision of public electronic communications services nearly BGN 503 million in 2016.

In 2015, 105 undertakings (97 undertakings in 2014) have invested in next generation access (NGA) networks an amount of BGN 52 million. Compared to 2014, this is BGN 25 million less. This caused a decrease of the share of NGA investments in the total volume of investments, which was 9.9% in 2015, whilst in 2014 it was 13.0%.

For 2016, 93 undertakings plan investments for deployment and maintenance of next generation access networks to the amount of BGN 50 million.

## **2. Voice telephony services**

In 2015 the total volume of the revenue earned from the services, included in the Voice services market segment, amounted to BGN 1.131 billion, as the trend of revenue reduction from these services persisted for another year. Compared to 2014, in 2015 a reduction of 17.6% in the total amount of revenue was observed, whilst the decrease in the previous period (2013-2014) was 7.6% and 17.3% in the period 2012-2013.

The revenue in this segment is generated from the provision of the following services: fixed voice service through geographic numbers from the National Numbering Plan (NNP), access to public telephony service provided by the Carrier Selection service (CS service), telephony services via public payphones, mobile voice service through numbers from the NNP (including Short Message Service /SMS/ and Multimedia Messaging Service /MMS/) and other voice services. Revenue from the "Other voice services" position is gained from the provision of VoIP<sup>7</sup>, from voice service through numbers with national destination codes like „99x"<sup>8</sup>, from the provision of voice service through commercial representation, from web-based incoming voice services, etc.

Table 2 presents summarised information on the segment under review, namely: number of undertakings providing services in this market segment in 2015, number of their subscribers/lines using voice telephony services, as well as the revenue from services provided.

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<sup>7</sup>Voice IP service where no NNP numbers are used, the quality of service is not guaranteed and the user must use/have Internet access through the respective device - computer/telephone.

<sup>8</sup>Voice services provided over broadband wireless access (BWA) networks by means of radio frequency spectrum. As of 31.12.2015 the provision of this service was discontinued and the subscribers of the services, based on WiMax technology, were migrated to mobile voice service.

**Table 2**  
**Number of undertakings, subscribers/lines, and revenue by type of voice telephony services provided in 2015**

| Name of the service   | Number of undertakings providing the service as of 31.12.2015 | Number of subscribers/users as of 31.12.2015 |                                       | Revenue (in million. BGN excl. VAT) <sup>2</sup> |
|---|---|--|---------------------------------------|--|
|   |   | Total <sup>1</sup>                           | including bundled service subscribers |  |
| <b>1. Fixed voice services</b>  | ///   | ///  | ///                                   | <b>174,305</b>                                   |
| 1.1. Fixed voice service through numbers from the NNP and the carrier selection service | 26  | 1,587,364*                                   | 566,143                               | 173,505  |
| 1.2. Telephony service through public payphones   | 5   | 8 637**                                      | ///                                   | 0,801  |
| <b>2. Mobile voice service through numbers from the NNP</b>                             | 4   | 9,194,633                                    | 3,043,653                             | 942,830  |
| <b>3. Other voice services<sup>3</sup></b>  | 34  | ///  | ///                                   | 14,305   |
| <b>Total</b>  |   | ///  | ///                                   | <b>1,131,441</b>                                 |

<sup>1</sup> Including bundled service subscribers

<sup>2</sup> Excluding revenue from bundled services

<sup>3</sup> Including VoIP, voice service through numbers with national destination code „99x“ and others

\* Number of lines of fixed voice telephony service subscribers;

\*\* Number of public payphones/telephone booths.

**Source:** Data submitted to CRC

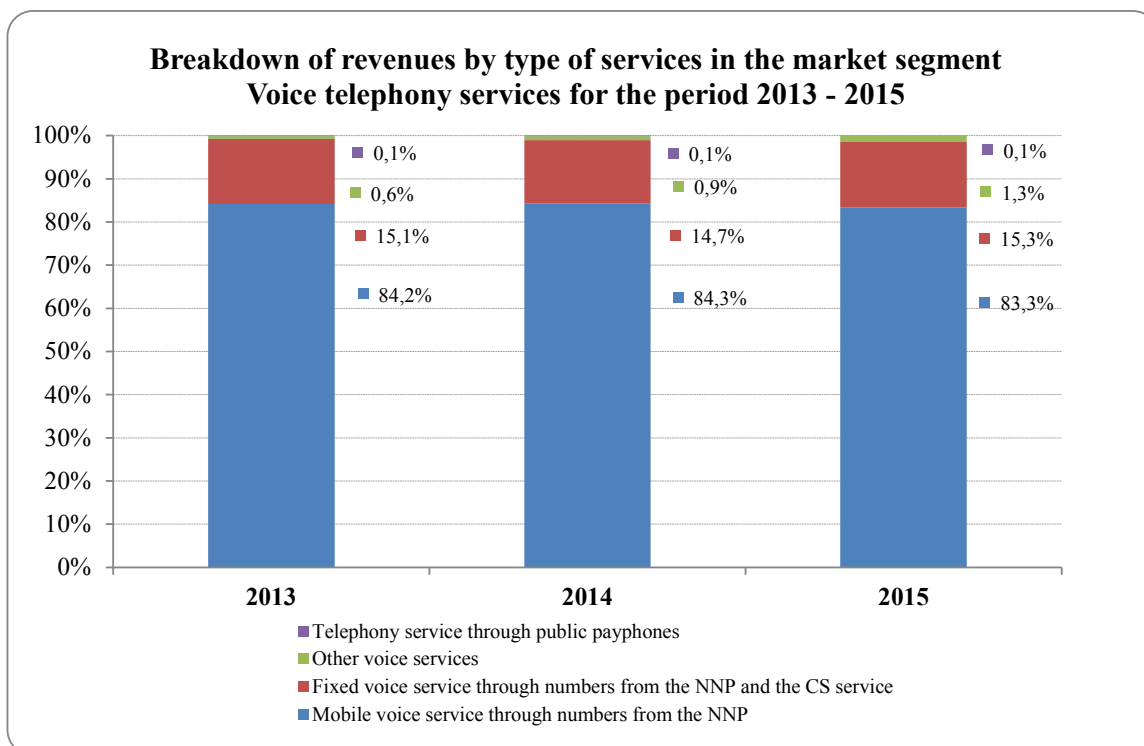
In 2015, as in 2014, the total number of undertakings which declared activity on providing fixed telephony service was 26.

The number of undertakings which declared activity on providing telephony service via public payphones/telephone booths remained the same. At the end of 2015 the undertakings providing this service were 5, including the „Bulgarian Telecommunications Company“ EAD (BTC).

In 2015 the number of undertakings offering services included in the group "Mobile voice service through numbers from the NNP", increased by one - "Max Telecom" OOD, and as a result, at the end of the year, the mobile voice telephone services providers were 4.

In 2015, 34 undertakings provided services included in the group "Other Voice Services", as the major part of the revenue in this group was formed by VoIP services – 72.3%.

Figure 5 shows the distribution of revenue from the different services in the segment volume for the period 2013 - 2015.



*Source:* Data submitted to CRC

**Fig. 5**

In 2015, the breakdown of revenue by types of services in the market segment Voice telephony services did not change significantly, compared to the previous years. For yet another year the mobile voice service holds the highest share (83.3%) in revenue generated from voice services, despite the reduction of 1.0 percentage point, compared to the previous year. The share of the revenue from fixed voice service through geographic numbers from the NNP and the CS service increased by 0.6 percentage point reaching 15.3%. The share of the revenue gained from provision of other voice services increased as well, reaching 1.3%, compared to 0.9% in 2014. For another year in succession the share of revenue from public payphones remained unchanged.

## **2.1. Fixed voice telephony services**

### *Players on the fixed voice telephony services market*

In 2015, CRC authorised two more undertakings („Max Telecom” OOD and “Rutelkom” OOD) to provide fixed telephony service through geographic numbers. The authorisation of one undertaking for provision of fixed telephony service through geographic numbers – “Compatel Limited”, was terminated at the beginning of 2015, due to expiration of the requested authorisation time. In 2015, on request by the undertakings, the authorisations for use of individually assigned scarce resources – geographic numbers, of „669C” EOOD, which included geographic numbers from the NNP and a code for the CS service, and of „Alfa Tek” OOD, which included a code for the CS service, were terminated. Throughout the year, another undertaking, “Mobiltel” EAD filed a request for termination of the authorisation for the CS service.

As a result, the number of undertakings authorised to provide access to fixed voice telephony service through geographic numbers and access to public telephony service with



CS service reached 31, of which 26 declared they have had activity in provision of fixed voice telephony service in 2015.

### ***Development of the fixed voice telephony service segment***

In 2015, for another year in succession, consumption of fixed telephone service decreased due to the declining consumer interest in the telephone services provided through geographic numbers at a fixed location. Therefore this market segment was again characterised by a decline:

- in the total volume of revenue earned from the provision of the services included in the segment (fixed telephony services<sup>9</sup>, access to public telephony services through the CS service and access to public telephony services through public payphones and telephone booths), which amounted to BGN 174.3 million in 2015, decreasing by 14.3% as compared to 2014. In 2015 the market share of the incumbent in terms of revenue from provision of fixed telephony service, including the CS service, amounted to 86.8%, registering a minimum decrease of 0.1 percentage points compared to the level in the previous year (86.9%)
- in the volume of the outgoing traffic (measured in minutes) generated by subscribers<sup>10</sup> from national (local and long-distance calls, calls to terrestrial mobile networks, to networks for broadband wireless access, and to non-geographic numbers) and international calls. In 2015, compared to 2014, there was a decrease by 14.4%, whilst the reduction in 2014 compared to 2013 was 10.9%. The use of the CS service also continued to shrink. The volume of the traffic generated from the provision of CS service dropped almost 18 times compared to 2014 and its share in the total volume of telephone traffic generated by subscribers of the fixed telephony service reached only 0.01%;
- in the total number of fixed telephone lines and in the number of subscribers of CS service.

According to data submitted to CRC, at the end of 2015, 22 undertakings provided end users with access to the fixed telephony service through geographic numbers from the NNP, and 2 of them also provided access to the public telephony service via the CS service.

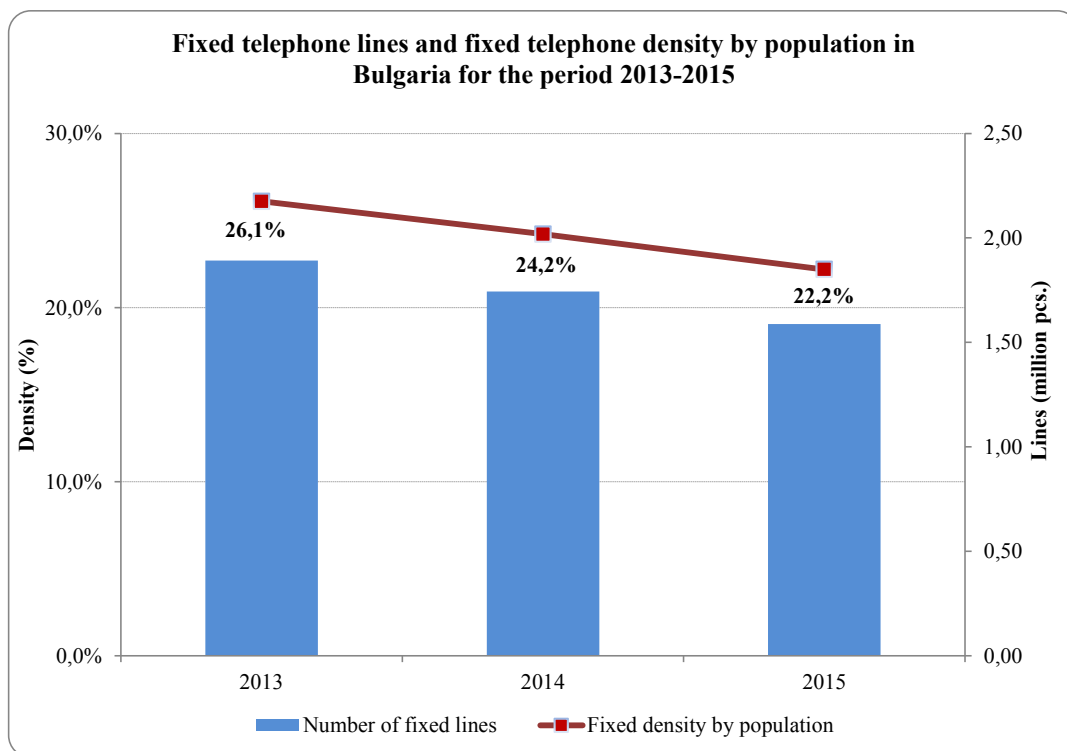
The information submitted by the undertakings which provide access to the fixed telephony service to end users, revealed that in 2015, as in the year before, there was a decrease in the number of fixed telephone lines. In 2015 there was a decline by 9.0%, compared to 2014, which is 1.2 percentage points more than the decline in 2014 compared to 2013 (7.8%). For another year this is a result mainly of the decrease by 12.3% in the number of fixed telephone lines of the incumbent. The alternative undertakings also faced a decline in the number of fixed telephone lines - 2.4% in 2015 and 3.1% in the previous year. The market share of the incumbent, calculated based on the number of fixed telephone lines, at the end of 2015 amounted to 63.7%, which is a decrease of 2.5 percentage points, compared to the previous year.

Figure 6 presents data on the variation in the numbers of the fixed telephone lines and the fixed telephone penetration of the population for a three-year-period.

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<sup>9</sup>Excluding revenues from installation fees and monthly subscriptions for bundled services with fixed telephony service included.

<sup>10</sup>Including the traffic generated by fixed telephony service, CS service included, and the traffic from calls via public payphones and telephone booths.



**Source:** Data submitted to CRC

**Fig. 6**

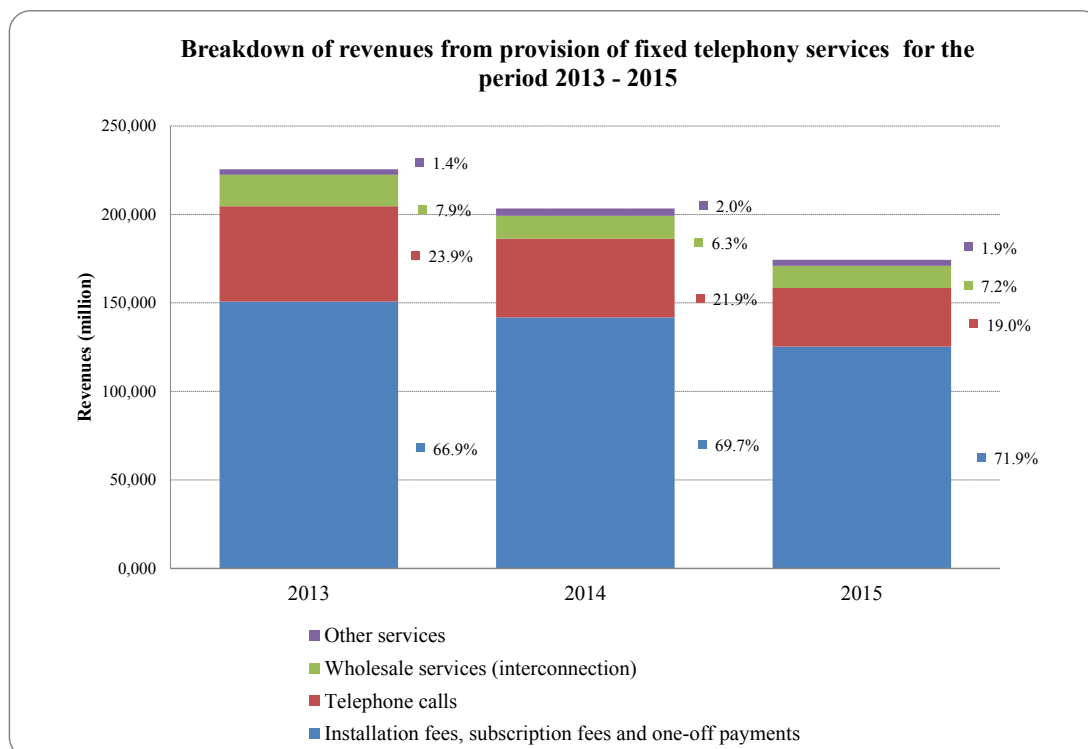
As a result from the decline in the total number of fixed telephone lines, a drop was also observed in the value of the fixed density by population indicator calculated as the ratio between the total number of active telephone lines and the number of the country's population at the end of the relevant year.

In the provision of CS service, in addition to the decreased consumption for one more consecutive year, a significant cut down was also reported in the number of subscribers using this service at the end of the year. Thus, at the end of 2015 the number of the users of the service decreased more than twice compared to the end of 2014.

### ***Breakdown of the revenue and the traffic generated from provision of fixed telephony service***

It is clear from Figure 7 that in the period 2013-2015 a significant share of nearly 70% of the revenue from the provision of fixed telephony service<sup>11</sup> are generated from installation fees, subscription fees, and one-off payments on a subscription basis. For the period reviewed, there has been an increase in the relative share of revenue from this segment (by 5.0%), which is to the prejudice of the relative share of revenue from telephone calls and wholesale services.

<sup>11</sup> Excluding revenue from monthly subscription and installation fees for fixed telephony service included in a bundle with other electronic communications services. Including revenues generated from the CS service as well as revenues from public payphones and telephone booths.



*Source:* Data submitted to CRC

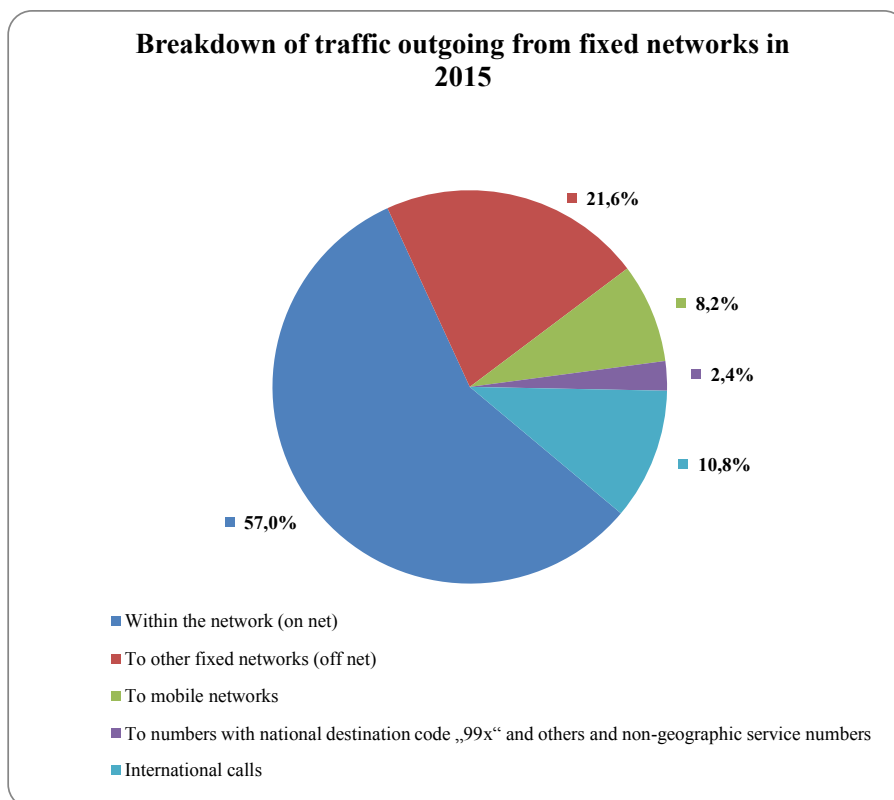
**Fig. 7**

Generally, for another subsequent year the volume in absolute value of the revenue from subscription and from telephone calls dropped down, but the drop in revenue from telephone calls is with a faster rate, which influences the distribution of shares of revenue by services, shown in fig. 7. In 2015, compared to 2014, the revenue in absolute terms from subscriptions decreased by 11.6%, with a 25.6% drop in revenue from telephone calls.

Another reason for the increase of the relative share of revenue from subscriptions and respectively the decrease of the share from telephone calls is that the total volume of the traffic generated by subscribers' calls decreased and at the same time the share of the used minutes included in monthly subscriptions increased, compared to the total traffic volume. In 2015, according to the data submitted by the undertakings providing fixed telephony services, the volume of outgoing minutes included in the monthly subscriptions represents 76% of the total traffic generated by the subscribers of fixed telephony service.

Figure 8 presents the breakdown of the total volume of traffic generated from fixed networks<sup>12</sup>. As evident from this breakdown, the major part of the traffic is formed by calls within the network (on net), followed by calls to other fixed networks, and international calls.

<sup>12</sup>Including traffic generated by subscribers of fixed telephony service with geographic numbers from the NNP, traffic generated by subscribers to the CS service, and traffic from public payphones and telephone booths.



*Source:* Data submitted to CRC

**Fig. 8**

As in the previous year, the major part of the total traffic generated in 2015 - 57.0%, was the on-net traffic. However, in absolute value the decrease in volume compared to 2014 is the biggest for this type of traffic - 20.2%.

### ***Public payphones***

According to data submitted by the undertakings, at the end of 2015 the number of public payphones and telephone booths in the country registered a significant decrease compared to the year before and amounted to 8637. The reduction in revenue was 36.0% compared to 2014, while the volume of traffic decreased by 30.5%. The BTC's activity under the obligations to provide universal service generated almost the total volume of traffic, the revenue, and the number of operative public payphones and telephone booths.

## **2.2. Mobile voice telephony services**

### ***Market players***

At the end of 2015, "Max Telecom" OOD entered on the mobile voice telephony services market, by offering the "Voicer" service. Thus, together with the traditional players on this market segment - "Mobiltel" EAD, "Telenor Bulgaria" EAD and BTC, the number of undertakings providing public mobile telephony services on the Bulgarian market reached 4.

### ***Coverage***

Table 3 below presents information on the coverage of the terrestrial mobile networks under the GSM and UMTS standards of the undertakings as of 31.12.2015.

**Table 3**

| Undertaking            | Mobiltel EAD |        | Telenor Bulgaria EAD |        | BTC    |        |
|------------------------|--------------|--------|----------------------|--------|--------|--------|
|                        | GSM          | UMTS   | GSM                  | UMTS   | GSM    | UMTS   |
| Coverage by territory  | 99.84%       | 99.20% | 99.50%               | 99.06% | 99.65% | 99.12% |
| Coverage by population | 99.99%       | 99.95% | 99.98%               | 99.88% | 99.99% | 99.95% |

*Source:* Data submitted to CRC

It is clear from the data above that the GSM coverage of the country by territory and population is nearly 100%. The only difference compared with the end of 2014, is in the “Mobiltel” EAD coverage by territory, which increased by 0.03 percentage points.

The investments input in mobile networks represent 54.2% of the total investments of the undertakings providing mobile telephony services in 2015, reporting a drop by 21.2% for a one-year period. The drop is mainly due to fluctuation in the data of the investments volume indicator by “Mobiltel” EAD, “Telenor Bulgaria” EAD and BTC, which is particularly pronounced for one of them. Sharp variations in the investments volume of this undertaking are observed, as in 2014 compared to 2013 this indicator registered a growth of 111% and after this peak, in 2015 the volume of its investments decreased by almost 35% compared to 2014.

#### ***Development of the mobile voice telephony services segment***

In 2015, this market segment again was characterised by a decline in the total revenue from the provision of mobile telephony services as standalone services, which compared to the year before decreased by 18.5% and at the end of 2015 amounted to BGN 943 million.<sup>13</sup> This decline is a result mainly of an increase in the consumption of mobile telephony services bundled with other electronic communications services, with revenue in 2015 amounting to BGN 317 million, which is a 106% growth, compared to the year before.

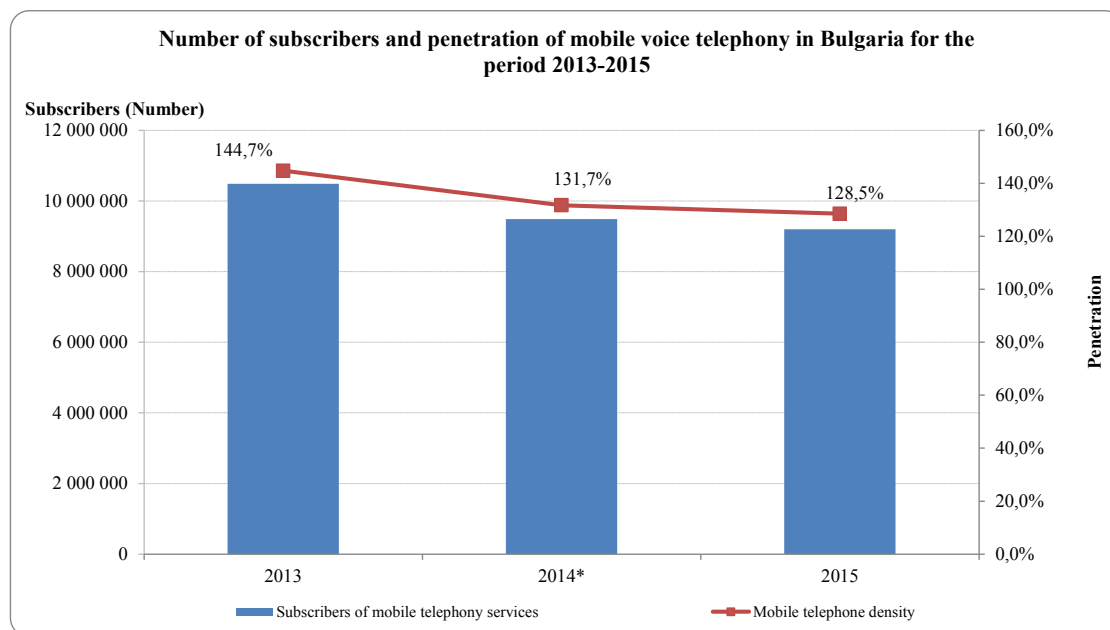
As of 31.12.2015 the number of the active SIM cards used for outgoing or incoming calls at least once in the past 3 months<sup>14</sup> in 2015 equals 9 194 633. In comparison, as of 31.12.2014, the number of the active SIM cards allowing the usage of voice services, is 9 486 927<sup>15</sup>. The decline registered in the number of the active SIM cards allowing the usage of voice services in 2015 amounted to 3.1%<sup>16</sup>, which was mainly due to strong competition between the market players, offering more advantageous subscription plans with more free minutes for calls outside their own network, which makes it useless to own SIM cards from more than one mobile operator (Fig. 9).

<sup>13</sup>Including revenues from wholesale and retail mobile voice telephony services and additional services related to the mobile voice service (such as SMS, MMS, video calls, information services, etc.), and excluding revenue from monthly subscriptions for mobile telephony service provided in bundle with other electronic communication services (accounted in the Bundled services market segment).

<sup>14</sup>This definition of the indicator applies since 2014 as a result of a change in the international institutions' (EC, ITU) definition. For 2013, the indicator includes the number of active SIM cards allowing the use of voice services and with validity of the pre-paid cards of 12 months.

<sup>15</sup> Data for 2014 has been updated after the Annual Report 2014

<sup>16</sup> Excluding data transfer cards which do not allow voice phone calls.



\* Data for 2014 has been updated after the Annual Report 2014

Source: Data submitted to CRC

Fig. 9

Due to the decrease in absolute value of the number of users of mobile telephony services in 2015, the mobile telephone penetration indicator continued to shrink (3.2 percentage points less than 2014), reaching 128.5%<sup>17</sup>.

Despite the presence of a new market player, in 2015 the redistribution of market shares between the three main mobile operators “Mobiltel” EAD, “Telenor Bulgaria” EAD and BTC continued. “Mobiltel” EAD<sup>18</sup> and BTC<sup>19</sup> registered an increase in their market shares both in terms of subscribers and of revenue from the provision of mobile telephony services, to the prejudice of the market share of “Telenor Bulgaria” EAD<sup>20</sup>.

In 2015 the main factors that influenced the segment development continued to be the saturation of the traditional voice services markets, the reduced termination rates on individual mobile networks imposed by CRC’s Decision No. 1362/31.05.2012 and Decision No. 135/14.02.2013 and the increased consumption of mobile telephony services offered in bundle with other electronic communication services (an increase of 60% in the number of subscribers to bundled services was reported for a period of one year).

**Ratio between users of pre-paid services and contract subscribers**

<sup>17</sup>This indicator was calculated as the ratio between the number of users of mobile telephony services at 31.12.2015 and the number of the population at 31.12.2015 based on data from NSI (Population by districts, municipalities, place of residence and sex: <http://www.nsi.bg/bg/node/2972>)

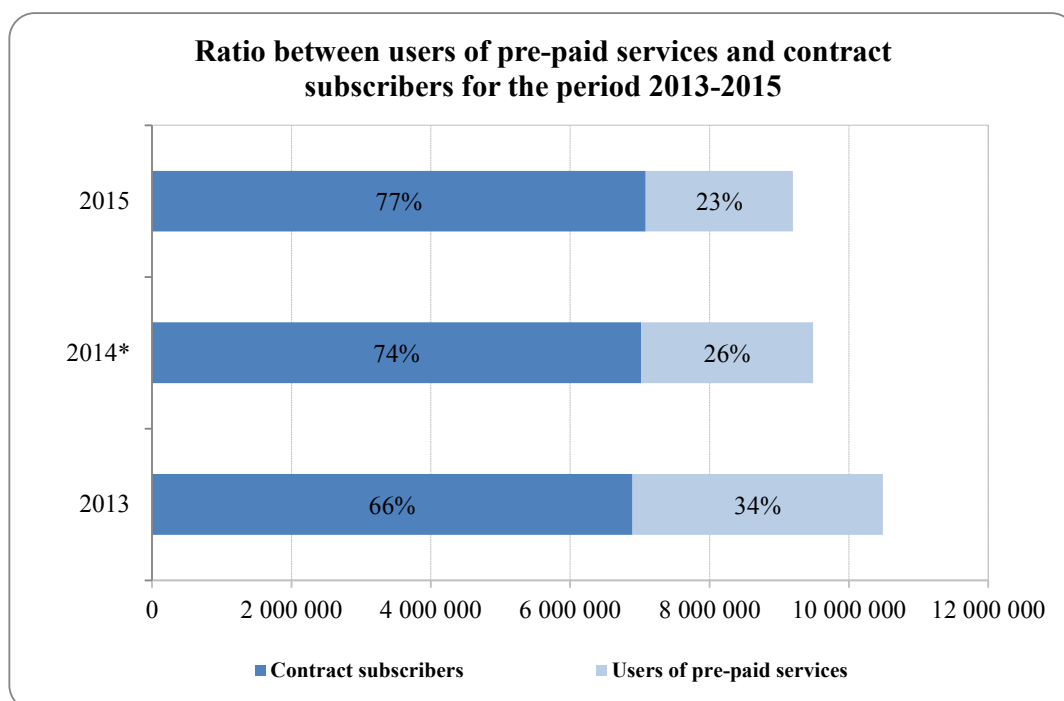
<sup>18</sup>In 2015, the relative share of Mobiltel EAD calculated on the basis of number of subscribers amounted to 40.9%, up by 0.5 percentage points for a one-year period, while the one calculated on the basis of revenue amounted to 40.8%, registering an increase of 1.9 percentage points.

<sup>19</sup> In 2015, the relative share of BTC calculated on the basis of the number of subscribers amounted to 25.5%, up by 1.4 percentage points compared to the year before, while the one calculated on the basis of revenue amounted to 30.7%, registering a growth of 4.7 percentage points.

<sup>20</sup> In 2015, the relative share of “Telenor Bulgaria” EAD calculated on the basis of the number of subscribers amounted to 33.6%, down by 1.9 percentage points compared to the year before, while the one calculated on the basis of revenue amounted to 28.5%, registering a decrease of 6.6 percentage points.

It is clear from the data presented in Figure 10 that the number of the contract subscribers in Bulgaria continued to grow to the prejudice of the number of users of pre-paid services, whose share in the total number of users of mobile telephony services decreased to 23% (Fig. 10)<sup>21</sup>. In 2015, following the trend of the preceding years, more than half (53.8%) of the new subscribers activated during the year were on contracts.

The decline in the reported number of pre-paid cards as of 31.12.2015 (compared to 2014) – 15%, reflected on the number of active SIM cards indicator, which, as it has already been mentioned, was down, compared to the year before



\*Data for 2014 has been updated after the Annual Report 2014.

**Source:** Data submitted to CRC

**Fig. 10**

### ***Subscribers of services provided under a different trademark<sup>22</sup>***

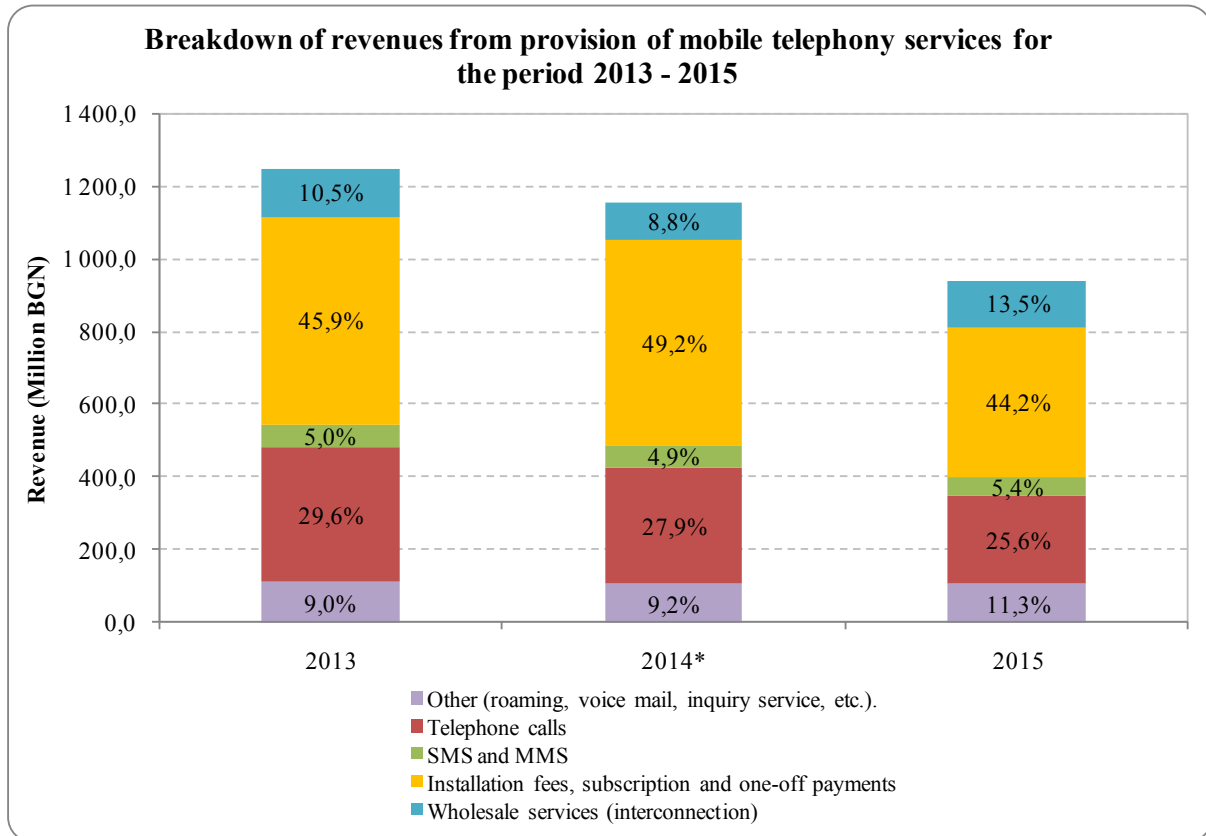
According to data submitted to CRC as of 31.12.2015, the relative share of the number of subscribers of services provided under a different trademark in the total number of active SIM cards allowing the use of voice services decreased for the fourth consecutive year and reached 4.3%. The reported decrease in absolute values is 7.4%, compared to 2014, and is mainly due to the cutdown in the number of pre-paid cards, resulting mainly from the shift in customer preferences to the use of contractual services and from the plans of undertakings for their own trademarks, as well as from the circumstance that “Telenor Bulgaria” EAD discontinued provision of services under a different trademark.

<sup>21</sup>The data do not take into account mobile data card services, which do not allow voice phone calls.

<sup>22</sup>Different trademarks are both trademarks owned by the undertaking (such as Loop, Frog Mobile) and trademarks owned by other legal entities (such as Alo, Da!). In 2015, BTC did not offer services provided under different trademark.

***Breakdown of revenue from services provided via mobile networks***

Monthly subscription and installation fees continued having a decisive role in the mobile telephony services revenue structure in 2015 as well, despite the observed drop in their share. In 2015 their share shrank by 5 percentage points compared to 2014 reaching 44.2% of the total volume of the segment (Fig. 11).



\*Data for 2014 has been updated after the Annual Report 2014.

**Source:** Data submitted to CRC

**Fig. 11**

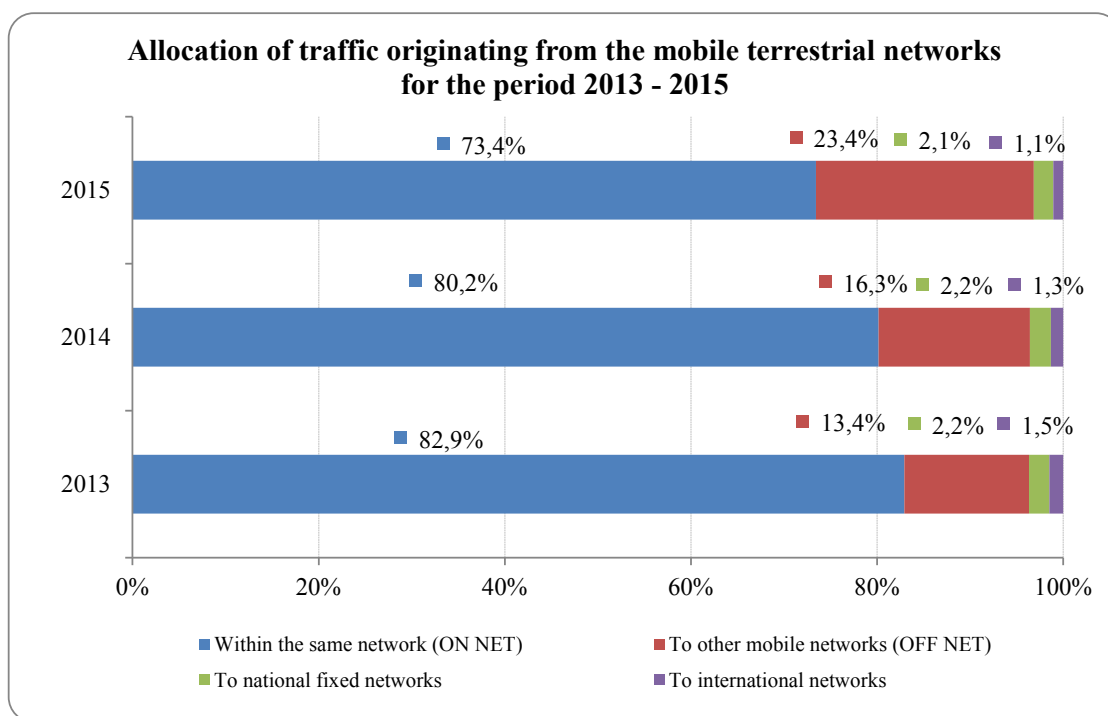
For another consecutive year, revenue from telephone calls forms the second largest share in the segment - 25.6%. They also register a drop by 2.3 percentage points compared to their share in 2014, but it has to be noted that their actual share is greater than reported, considering that revenue from the free-of-charge minutes for calls comprised in the tariff plans is reported as revenue from monthly subscription.

For the first time since 2011, in 2015 a growth in the relative share of the wholesale revenue volume was registered, which compared to 2014 grew by 24.4%. In 2015 the share of this revenue in the segment increased by 4.7 percentage points this taking the third largest share in it - 13.5%.

In 2015, the relative share of the on-net traffic (generated within the same mobile network) represents 73.4% of the total retail traffic generated on the mobile networks in the country (Fig. 12). Following the trend from 2014, the relative share of the on-net traffic continued to decrease and unlike the previous years, in 2015 the decrease rate was faster, accounting for a cut down of 6.8 percentage points, compared to the year before. The relative share of the traffic generated to other mobile networks was 23.4%, registering a growth of 7.1



percentage points compared to the previous year. The share of outgoing traffic to fixed networks amounted to 2.1% of the total outgoing traffic generated in 2015 and almost kept its level from the preceding years (2012 - 2014) – 2.2%.



*Source:* Data submitted to CRC

**Fig. 12**

### *Short multimedia and text messages*

In the past 2015 the decline trend, both in the number of multimedia messages sent (by 19.2%), and in the number of short text messages sent (by nearly 27%), continued.

### **2.3. Voice services provided over broadband wireless access (BWA) networks by means of radio frequency spectrum**

As of 31.12.2015 the provision of voice telephony services through geographic and non-geographic numbers using the WiMax technology and broadband wireless access (BWA) networks by means of radio frequency spectrum was ceased. In reference to the “Max Telecom” OOD plans, the undertaking's clients, using WiMax technology voice services, have migrated in 2015 toward the "Voicer" mobile voice service, which “Max Telecom” OOD has been providing to the mobile services market since October 2015.<sup>23</sup>

### **3. Leased lines services**

<sup>23</sup> Revenues, realized in 2015 from provision of voice telephony services through the WiMax technology, have been recorded in chapter "Other voice services" of the "Voice telephony services" market segment.

The downward trend in the segment "Leased lines" observed in the previous years, continued in 2015 as well - the total revenue from the provision of the service in 2015 amounted to BGN 27.894 million, which represents a decrease by 13.7% compared to 2014<sup>24</sup>.

Table 4 below presents summarised information on the number of undertakings, providing the leased lines service, including international leased lines, as well as the amount of the revenue received by them.

**Table 4**

| Name of the service              | Number of undertakings providing services in 2015 | Number of leased lines as of 31.12.2015 | Revenue (In million BGN excluding VAT) |
|----------------------------------|---|---|--|
| <b>1. Wholesale leased lines</b> | <b>21</b>   | <b>3,393</b>                            | <b>17,924</b>                          |
| 1.1. National leased lines       | 17  | 3,109                                   | 12,680                                 |
| 1.2. International leased lines  | 9   | 284                                     | 5,245                                  |
| <b>2. Retail leased lines</b>    | <b>10</b>   | <b>3,161</b>                            | <b>9,970</b>                           |
| <b>Total</b>                     | <b>23</b>   | <b>///</b>                              | <b>27,894</b>                          |

**Source:** Data submitted to CRC

According to the data in the CRC's register, as of 31.12.2015, a total of 89 undertakings have notified CRC of their intention to provide the leased lines service, including international leased lines. Ten of them were new undertakings<sup>25</sup>, and five undertakings<sup>26</sup> have ceased to provide the service. At the end of 2015, 23 undertakings<sup>27</sup> have been active in the leased lines market segment, eight<sup>28</sup> of which provided the service on both - the retail and the wholesale market. Two new undertakings<sup>29</sup> have started offering the international leased lines service.

Figure 13 presents the structure of revenue from providing leased lines service (wholesale and retail) for the period 2013 - 2015.

<sup>24</sup> Including revenues from national wholesale and retail leased lines and the revenues from international leased lines - only revenue from their national sections.

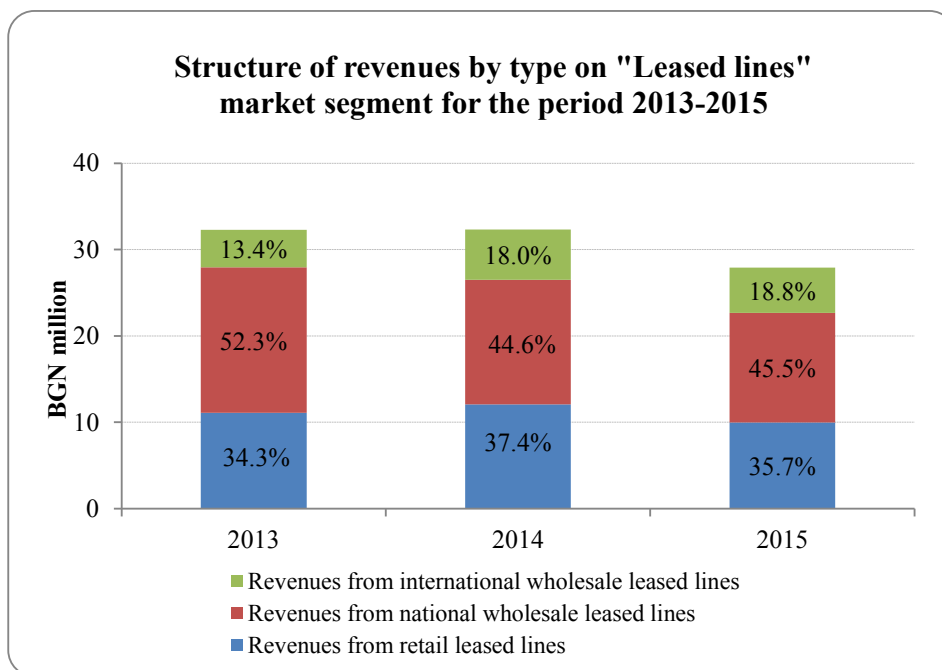
<sup>25</sup> „BDIN BG COM” OOD, „ATA” EOOD, „CABLE SAT-ZAPAD” OOD, „SETTRADE” EOOD, „SKYNET BULGARIA” OOD, „TRANZIT BALKAN TELECOM” OOD, „ULTRANET” OOD, „FIBRECOM” OOD, „HASHLINK” OOD and „CITYNET TV” OOD.

<sup>26</sup> „COMNET” EOOD, „L.K.P.AD. NET+ 2014” EOOD, „TEDYSPEED” EOOD, and „NELY & CO” EOOD.

<sup>27</sup> „BLIZOO MEDIA & BROADBAND” EAD, „BULGARTEL” EAD, BTC EAD, „VESTIBEL BG” EAD, „GLOBAL COMMUNICATION NET” AD, „GTS TELECOM” CRL, „NBI SISTEMI” OOD, „ENDZHALSOFT” OOD, ET „ENDZHALSOFT – ANGEL GAROV”, „COOLBOX” AD, „MOBILTEL” EAD, „NETERA” EOOD, „NET IS SAT” OOD, „NOVATEL” EOOD, „PLADI COMPUTERS” OOD, „PRONET TELEKOM” OOD, „SOFIA COMUNIKATIONS” EAD, „TELECABLE” AD, „Telenor Bulgaria” EAD, „TELIASONERA INTERNATIONAL CARRIER BULGARIA” EOOD, „TELNET” OOD, „TRANS BALKAN TELECOM” OOD and „TURK TELECOM INTERNESHANAL” EOOD.

<sup>28</sup> „BLIZOO MEDIA & BROADBAND” EAD, BTC EAD, „VESTITEL BG” AD, „COOLBOX” AD, „MOBILTEL” EAD, „NETERA” EOOD, „SOFIA COMMUNICATIONS” EOOD and „TELNET” OOD

<sup>29</sup> „TELIASONERA INTERNATIONAL CARRIER BULGARIA” EOOD and „TRANS BALKAN TELECOM” OOD

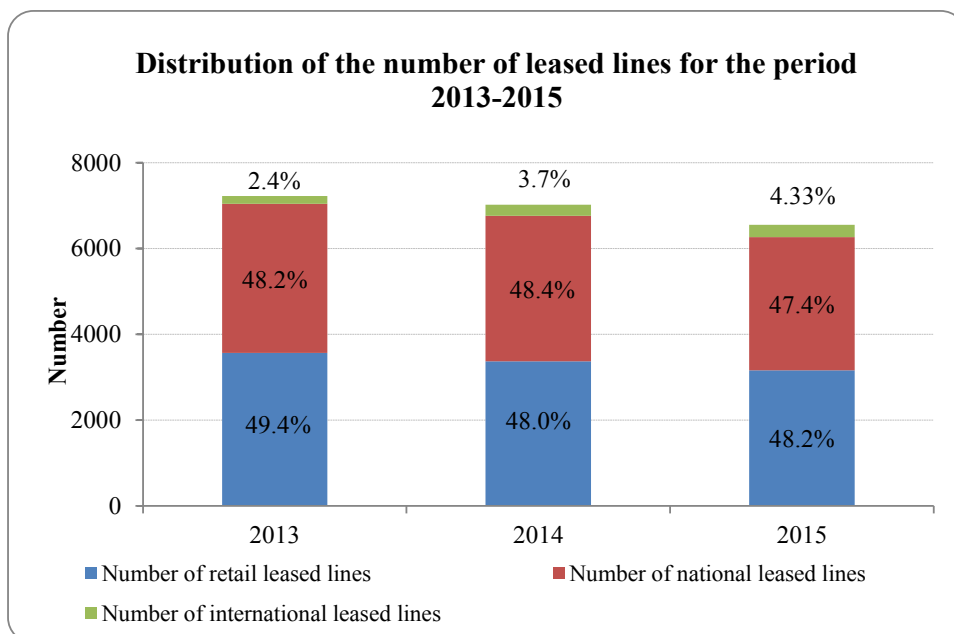


*Source:* Data submitted to CRC

**Fig. 13**

As evident from the data presented in Figure 13, the change of the structure of the total market volume formed by the revenue from retail and wholesale leased lines (including national and international) is insignificantly small in 2015, compared to 2014. The lack of a significant change in the structure of this market segment was due to approximately the same decrease reported for one-year period in absolute values both in the revenue from retail leased lines provided (by 17.5%) and the revenue from wholesale leased lines provided (by 11.4%), respectively a decrease in the national leased lines provided (11.9%) and in the international leased lines provided (10.0%).

The total number of wholesale and retail leased lines provided by the undertakings in 2015 decreased by 6.7% in absolute values compared to the year before, which was due to the decrease by 6.2% of the number of retail leased lines provided and the decrease by 8.5% of the number of national wholesale leased lines provided. Only the number of international leased lines registered a growth of 10.1% for a one-year period, causing their share in the total market structure to increase, reaching 4.3%.



**Source:** Data submitted to CRC

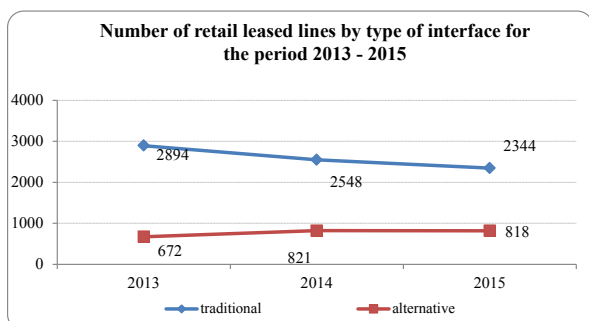
**Fig. 14**

As evident from Figure 14, in 2015 the share of retail leased lines in the total volume is almost identical to the one in 2014. In 2015, 185 new lines were launched, which represents 5.9% of the total number of retail leased lines. The market structure remains similar to that in 2014.

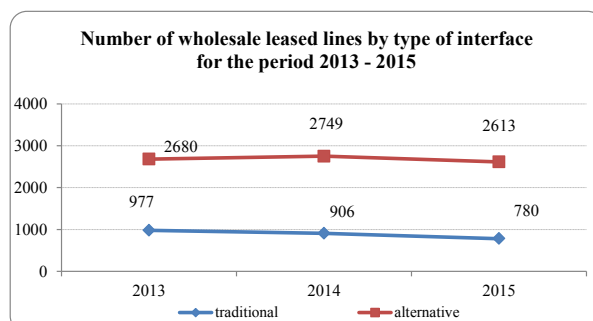
In 2015, the market share of the incumbent calculated based on revenue once again registered a decrease by 5.2 percentage points for a one-year period, while the market shares, calculated based on number of lines (wholesale and retail), remained almost equal to those from the previous year.

Figures 15 and 16 present the distribution of the wholesale and retail leased lines provided for the period 2013<sup>30</sup> – 2015 according to the interface type.

**Fig. 15**



**Fig. 16**



**Source:** Data submitted to CRC

<sup>30</sup> Data for 2013 and 2014 has been updated.

As evident from the data, the trend for gradual decrease in the number of traditional retail lines continued, as for a period of one year the indicator decreased by 8.0% in absolute terms. Analogical trend is also observed in the wholesale leased lines - decrease of 13.9%. The number of alternative retail lines, in contrast to the year before, registered no change compared to 2014, but the alternative wholesale lines registered a decrease of around 5%.

As a whole, the leased lines market continued to shrink. In 2015, again, a stable trend was observed regarding the reduction of the number of leased lines. Due to the orientation of the demand towards higher-speed and higher-quality leased lines which meet the specific requirements of each individual client, the focus has been redirected from leased lines with traditional and alternative interface toward innovative access products, which offer flexible solutions, lower prices and are fully compatible with the individual needs of the users, especially when the transmission speed is crucial.

#### 4. Data transfer and Internet access

In 2015, the services for Internet access and data transfer in the country continued to undergo an upward development, registering a growth in subscribers' numbers as well as in revenue. Table 5 presents summarised information on the number of undertakings which provided services in this market segment in 2015, on the number of their subscribers/users, as well as on the amount of the generated revenue.

**Table 5**  
**Number of subscribers/users and revenue by type of Internet access and data transfer services provided in 2015**

| Name of the service   | Number of undertakings providing services in 2015 | Number of sub/scribers/users as of 31.12.2015 |                                       | Revenue (In million BGN excluding VAT) <sup>2</sup> |
|---|---|---|---------------------------------------|---|
|   |   | Total <sup>1</sup>                            | including bundled service subscribers |   |
| <b>1. Internet access services and data transfer services (retail)</b>                  | ///   | ///   | ///                                   | <b>360.942</b>                                      |
| 1.1 Internet access <sup>3</sup> , including  | 655   | 6,071,815                                     | 3,418,204                             | 313.944   |
| 1.1.1 fixed   | 549   | 1,571,556                                     | ///                                   | 161.843   |
| 1.1.2 wireless  | 177   | 4,500,259                                     | ///                                   | ///   |
| mobile access <sup>4</sup>  | 6   | 4,457,211                                     | 2,631,917                             | 152.194   |
| satellite   | 2   | ///   | ///                                   | ///   |
| other type (RLAN, HomeBox, Mobix)   | 173   | ///   | ///                                   | ///   |
| 1.2 Data transfer services  | 58  | ///   | ///                                   | 46.512  |
| 1.3 Other services (sale of vouchers, hosting, e-mail, etc.)                            | ///   | ///   | ///                                   | 0.486   |
| <b>2. Wholesale services</b>  | ///   | ///   | ///                                   | <b>42.391</b>                                       |
| 2.1 Provision capacity for Internet connectivity (Peering and Transit)                  | 90  | ///   | ///                                   | 31.358  |
| 2.2 Data transfer services  | 13  | ///   | ///                                   | 4.265   |
| 2.3 Wholesale provision of Internet access via networks to next generation access (NGA) | 29  | ///   | ///                                   | 5.524   |
| 2.4 Other wholesale services  | 4   | ///   | ///                                   | 1.243   |
| <b>Total</b>  | ///   | ///   | ///                                   | <b>403.332</b>                                      |

<sup>1</sup> Including bundled service subscribers  
<sup>2</sup> Excl. revenue from bundled services  
<sup>3</sup> The data on the total number of subscribers and the revenue from internet access services is based on the data received by CRC from 90.9% of the registered undertakings.  
<sup>4</sup> Mobile access via data cards or modems, bundled services with mobile Internet access included, and subscribers of data transfer bundles, purchased in addition to voice plans via 3G and 4G UMTS/HSPA+/LTE mobile networks.

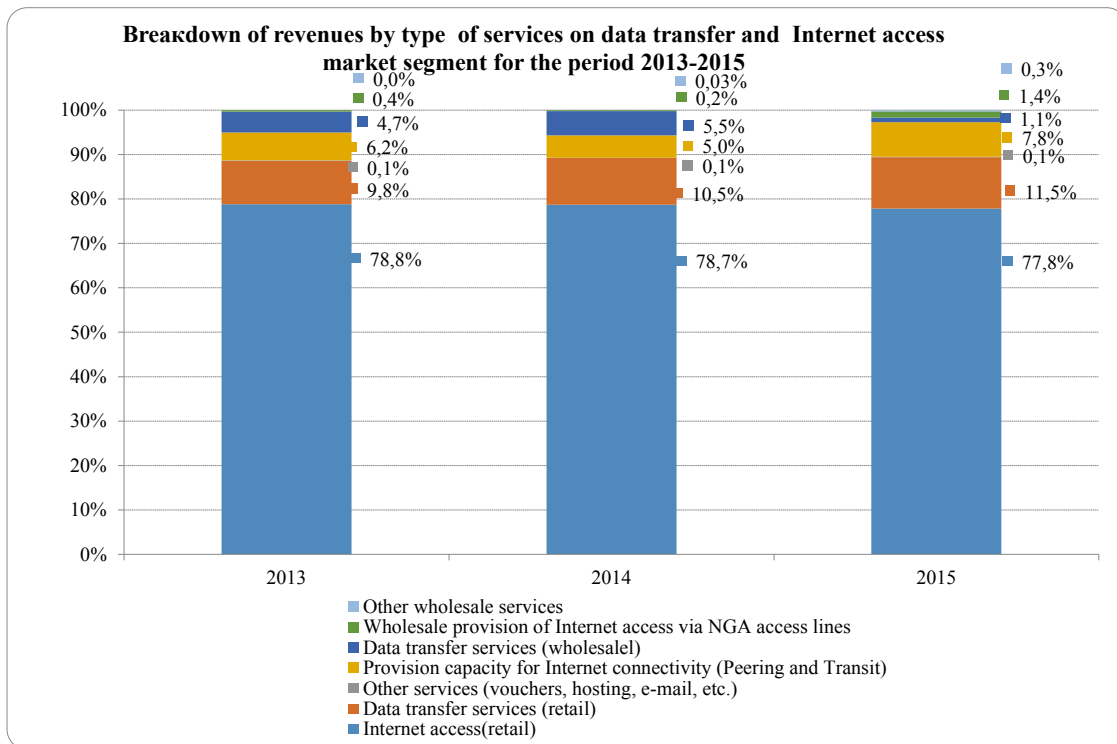
**Source:** Data submitted to CRC

### Market players

At the end of 2015, the total number of undertakings registered by CRC for their intention to provide data transfer and/or Internet access services was 921 and compared to the year before there was an increase by 2.7%. The number of active data transfer and Internet access service providers was 669<sup>31</sup>, as last year there was a growth by 4% (or 25 undertakings more) compared to 2014.

### Development of the “Data transfer and Internet access” segment

In 2015, the revenue<sup>32</sup> from the “Data transfer and Internet access” segment reached BGN 403.332 million, increased by 9.3% compared to 2014. The revenue from retail services amounted to BGN 360.942 million and compared to 2014 they increased by 9.5%, while the revenue from wholesale services amounted to BGN 42.391 million, registering a growth by 7.2% compared to the previous year. Figure 17 presents the structure of the revenue generated for the period 2013 - 2015.<sup>33</sup>



**Source:** Data submitted to CRC

**Fig. 17**

<sup>31</sup> Including undertakings that notified CRC for suspension of their activity in 2015 and have declared revenues during the year.

<sup>32</sup> Including revenues from standalone services related to retail Internet access (fixed and wireless), retail data transfer and wholesale services (capacity for Internet connectivity, wholesale access services, provision of wholesale Internet access services via NGA access networks, wholesale data transfer services).

<sup>33</sup>Data for 2013 and 2014 has been updated.

As evident from the data presented, the general breakdown of revenue in the segment showed no significant alterations and it remained relatively stable. The revenue from retail Internet access holds the largest relative share (77.8%), reaching BGN 313.944 million last year, and registering a growth in an absolute value of 8.1%, compared to 2014.

In 2015, the number of Internet subscribers in the country observed an increase, higher even than in 2014. As of 31.12.2015, the total number of subscribers (fixed and wireless Internet access) amounted to 6,071,815 and increased by 31% compared to the end of 2014. In 2015, the number of subscribers using bundled services (with fixed and mobile Internet access included), increased by 52% reaching 3,418,204, as their relative share is above 56% of the total number of Internet access subscribers

The number of fixed Internet access subscribers (including bundled services) increased by 8% compared to 31.12.2014, reaching 1 571 556<sup>34</sup>.

As of 31.12.2015, the number of subscribers using mobile services for Internet access<sup>35</sup> increased by 42.4% compared to the year before and reached 4,457,211. This growth is mainly due to the rise by 76.6% for a period of one year of the number of subscribers of bundled services with mobile Internet access included. The subscribers using mobile Internet via data cards and/or modems increased by 14.8%, and those who purchased packages for data transfer in addition to their subscription plans grew by 5.2%.

As of 31.12.2015, mobile Internet access provided via LTE technology was offered by three undertakings - "Max Telecom" OOD, "Bulsatcom" EAD and "Blizoo Media and Broadband" EAD, via the "Max Telecom" OOD network (based on agreement for cooperation and provision of wholesale services signed between the two latter undertakings at the end of 2014). The number of the subscribers using Internet access via LTE technology registered an increase over seven times for last year and at the end of 2015, reached almost 20 000, but despite their significant increase their share represents only 0.3% of the total subscribers to mobile Internet access services.

Figure 18 presents the penetration<sup>36</sup> of fixed broadband Internet access by population and by households<sup>37</sup> and mobile access<sup>38</sup> by population for the period 2013 – 2015.

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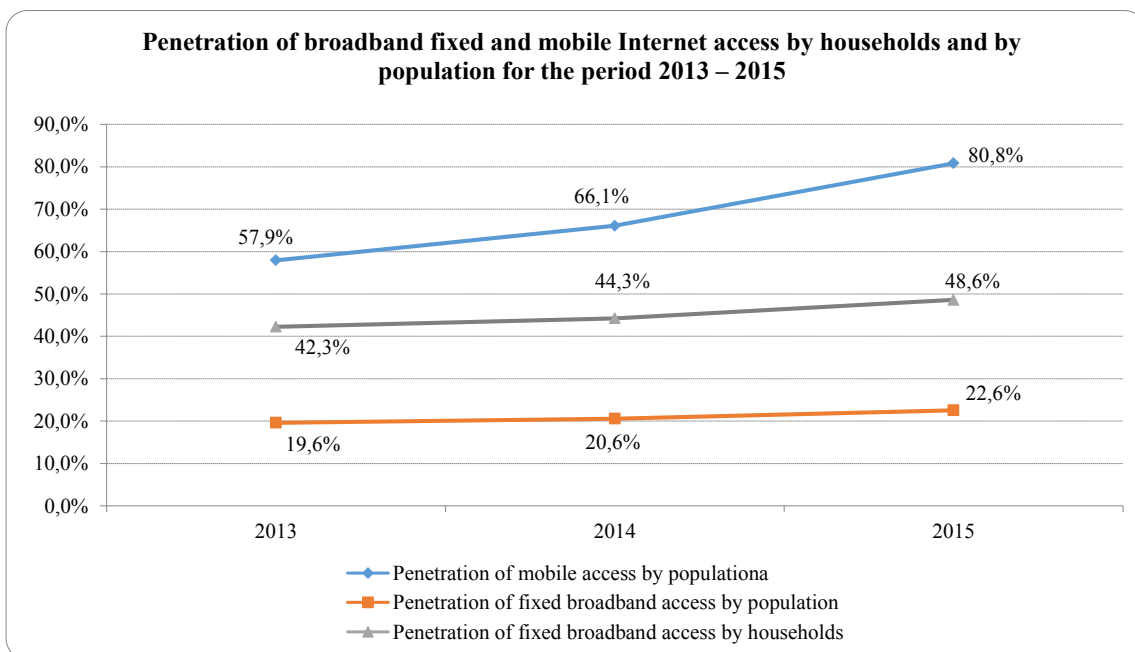
<sup>34</sup> Based on the data submitted to CRC by 90.9% of the registered undertakings.

<sup>35</sup> Mobile access via data cards and modems, add-on data packages purchased in addition to voice service, subscribers of bundled services with included mobile Internet access via 3G and 4G UMTS/HSPA+/LTE mobile networks.

<sup>36</sup> This indicator was calculated as the ratio between the number of the subscribers and the number of the population in the country at the end of the relevant year based on data from NSI (Population by regions, communities, place of residence and sex: <http://www.nsi.bg/bg/node/2972>), as well as the 2011 census data.

<sup>37</sup> For the calculation the number of residential subscribers at the end of the relevant year has been used.

<sup>38</sup> These include: subscribers of bundled services with mobile Internet access included, data cards and modems, subscribers of add-on data packages, as well as subscribers of standard mobile Internet access provided without an additional subscription.

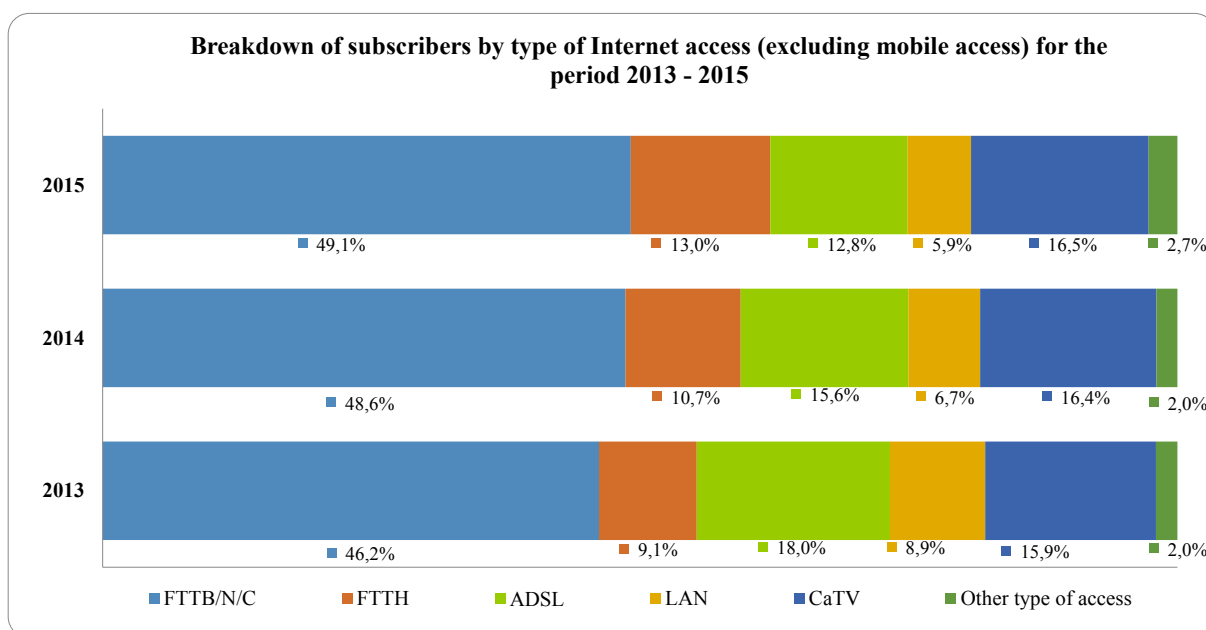


Source: Data submitted to CRC

Fig. 18

At the end of 2015, the penetration of fixed broadband Internet access by households reached 48.6% compared to 44.3% at the end of the year before and 42.3% at the end of 2013. For the period under review (2013-2015) the change in the penetration of fixed broadband Internet access by population indicator was 3 percentage points and as of 31.12.2015 it reached 22.6%. Most significant is the growth of the penetration of mobile Internet access by population indicator - almost 23 percentage points for the period 2013-2015.

The breakdown of fixed and wireless access subscribers (excluding those using mobile access) by type of Internet access for the period 2013 – 2015<sup>39</sup> is shown on Figure 19.



Source: Data submitted to CRC

Fig. 19

<sup>39</sup> Data for 2013 and 2014 have been updated.



As of 31.12.2015, the major part of Internet subscribers in Bulgaria (62.1%) used access via fibre data transfer networks (FTTx), and for the period 2013 - 2015 was reported a growth of 27.6% in absolute terms, or 6.8 percentage points.

For the second ranked by number of subscribers – CATV access (based on transmission and/or distribution of radio and TV programmes networks and DOCSIS standard), an increase of 18.1% (or 0.6 percentage points) in the subscribers number for the period 2013-2015 was registered. At the end of 2015, almost 3/4 (73.4%) of the CATV subscribers use the DOCSIS 3.0 protocol, where the maximum speed to the subscriber may reach 200 Mbps, while at the end of 2013 the subscribers using DOCSIS 3.0 were 51% of the total CATV users.

In 2015 as well, the downward trend in ADSL access subscribers continued, as in for the period 2013-2015 there was a drop by 5.2 percentage points in the share of this type of access in the total number of subscribers. This decrease was mainly due to the upgrade of the incumbent's network and the incumbent's investments in fibre access technologies, causing an increase by 146% in the number of fibre access Internet subscribers of BTC for the period 2013 – 2015.

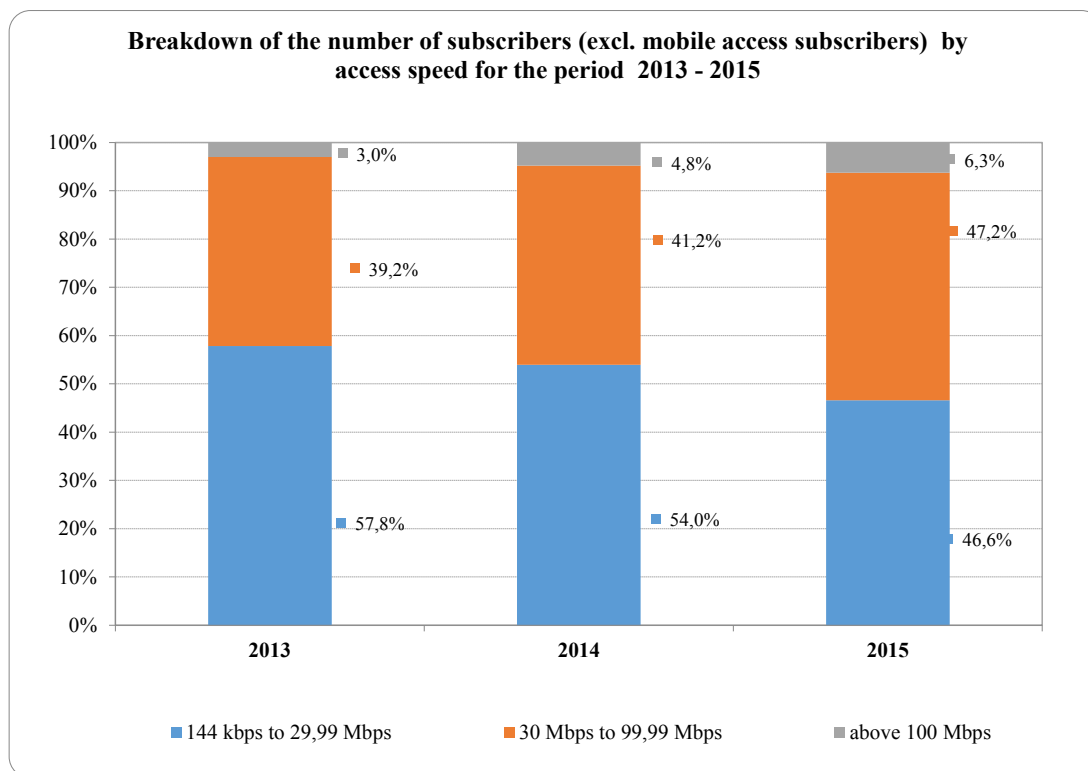
In 2015, the number of LAN access subscribers continued to decrease and for the period 2013 - 2015 there was a reduction by 3 percentage points in the relative share of those subscribers in the total market structure, as this reduction was mainly to the prejudice of the increase in the share of optical connectivity subscribers.

The other types of access (RLAN, Homebox, Mobix, Dial-up, satellite network access) held an insignificant relative share (2.7%) in the total number of subscribers.

As of 31.12.2015 the subscribers of fixed broadband access using high-speed access via next-generation networks (NGA<sup>40</sup>) reached 71.3% of the total number of fixed broadband access subscribers, registering an increase by 6.6 percentage points, compared to the end of 2014. The upward development of broadband Internet access via NGA networks has a positive role and on speeds of offered Internet services. The chart below presents the breakdown of the number of Internet access subscribers depending on international download speed for a three- year period (2013-2015). Due to the insignificant number of subscribers using narrowband access (0.02% of the total number), the data on this type of access are not presented on Fig. 20.

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<sup>40</sup> Including optical (FTTB and FTTH), hybrid fibre-optical (FTTN with minimum speed of 30Mbps), cable networks on the DOCSIS 3.0 standard and LAN and RLAN access with minimum speed of 30Mbps.



**Source:** Data submitted to CRC

**Fig. 20**

As a result of the increasing share of subscribers using optical connectivity (FTTB/FTTH) and DOCSIS 3.0 cable access protocol, at the end of 2015, the prevailing number (47.2%) of the subscribers of broadband Internet access used high-speed access with international download speed from 30 Mbps to 99 Mbps, which represents an increase in their share by 8 percentage points compared to the data for 2013. The highest growth was observed in the users of ultra-high-speed access (above 100 Mbps), which have increased more than twice for the period 2013-2015, reaching slightly more than 101 000 subscribers at the end of 2015.

Based on the above-mentioned data, the observed trends in the development of the data transfer and Internet access segment are expected to continue in 2016, namely:

- Maintaining the upward trend of subscribers, including those using bundled services (with fixed or mobile Internet access included);
- Continuing the migration to NGA networks, which will also increase the share of the subscribers using high-speed and ultra-high-speed Internet access;
- The growth rate of mobile access subscribers will continue to exceed the growth of the fixed access subscribers and will be one of the main prerequisites for the increase in the number of subscribers in the segment, as well as the increase of the Internet services penetration indicator among the population in the country.

## **5. Transmission and/or distribution of radio and TV programmes services**

In 2015, the volume of the Transmission and/or distribution of radio and TV programmes services market segment amounted to BGN 244,411 million, registering a decrease of nearly 6% compared to 2014.

Summarized information on the number of undertakings provided services for transmission and/or distribution of radio and television programmes, on the number of their

subscribers/users and the amount of revenue generated from them, along with the structure of the segment, is presented in Table 6 and in Figure 21 below:

**Table 6**  
**Number of subscribers/users and revenue by type of transmission and/or distribution of radio and TV programmes services in the segment provided in 2015**

| Name of the service   | Number of undertakings provided the service in 2015 | Number of sub/scribers/users as of 31.12.2015 |                                       | Revenue (in million. BGN excl. VAT) <sup>2</sup> |
|---|---|---|---------------------------------------|--|
|   |   | Total <sup>1</sup>                            | including bundled service subscribers |  |
| <b>1. Retail distribution of radio and TV programmes<sup>3</sup></b>  | <b>299</b>  | <b>1,784,013</b>                              | <b>755,529</b>                        | <b>185.388</b>                                   |
| 1.1. Cable TV   | 272   | 633,749                                       | 327,984                               | 54.678   |
| 1.2. Satellite television   | 3   | 912,940                                       | 204,974                               | 128.308  |
| 1.3. IPTV   | 27  | 237,324                                       | 222,571                               | 2.402  |
| <b>2. Terrestrial broadcasting of radio and TV programs<sup>4</sup></b>   | <b>75</b>   | <b>///</b>                                    | <b>///</b>                            | <b>///</b>                                       |
| <b>3. Carrying out of transmission/distribution of radio and/or television programmes</b>                                 | <b>16</b>   | <b>149</b>                                    | <b>///</b>                            | <b>59.023</b>                                    |
| 3.1. Transmission of radio and TV programmes services   | 7   | 48  | ///                                   | 8.818  |
| 3.2. Distribution of radio and/or television programmes services, including wholesale IPTV provided to other undertakings | 11  | 101   | ///                                   | 50.205   |
| <b>Total</b>  | <b>///</b>  | <b>///</b>                                    | <b>///</b>                            | <b>244.411</b>                                   |

<sup>1</sup> Including bundled service subscribers

<sup>2</sup> Excl. revenue from bundled services

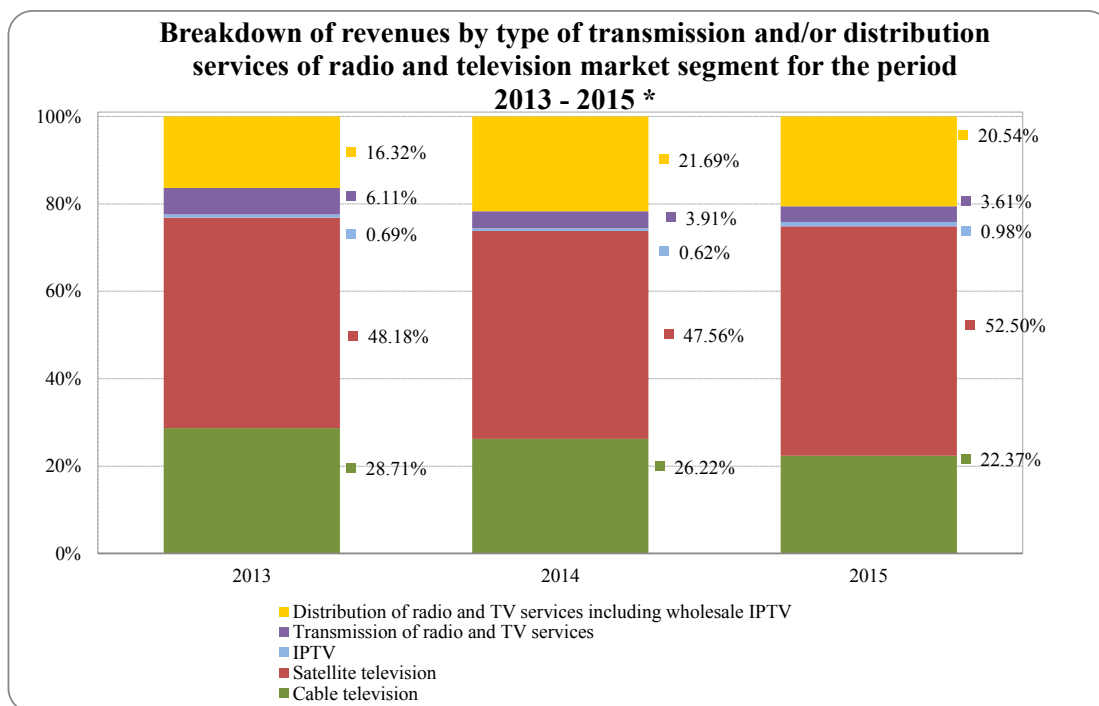
<sup>3</sup> Data on the total number of the subscribers and revenue from distribution of retail radio and television programmes services are based on information received from 91.3 percent of the registered undertakings.

<sup>4</sup> 3 of the undertakings registered by CRC for the provision of the service have not submitted an activity report for 2015

**Source:** Data submitted to CRC

In 2015, there was a growth in revenue from two of the services in the segment - retail IP-television (50%) and satellite TV (3.9%)<sup>41</sup>. The other three services in the segment registered a decline in revenue, respectively by 13.1% from wholesale transmission services of radio and television programmes, by 19.7% from cable TV and by 10.8% from distribution of radio and TV programmes, including wholesale IPTV.

<sup>41</sup> The volume of the market segment "Transmission and/or distribution of radio and television programmes services" covers only the revenues from standalone cable TV, satellite TV and IP-television (television service, not provided bundled with other electronic communications services). The revenues from the provision of bundled services with television are included in the volume of the market segment "Bundled services".



**Fig. 21**

In 2015, the largest share of the total volume of the segment (75.85%) continued to be occupied by the revenue from the provision of retail distribution of radio and TV programmes services (Fig. 21): cable TV, satellite TV and IPTV. Regardless of the growth in the number of retail IPTV subscribers reported in 2015, its share by revenue remained the lowest in the segment – only 1%.

### 5.1. Retail distribution of radio and TV programmes

#### Market players

The number of undertakings provided retail distribution of radio and television programmes services in 2015 decreased by 13 compared to 2014 and amount to 299<sup>42</sup> (Table 6).

As of 31.12.2015, the total number of undertakings registered at CRC for the provision of cable television was 344, as the number of undertakings that actually provided this service amounted to 256 (decrease by 23 compared to 2014). For yet another year, the number of cable operators decreased as a result of competitive pressure exerted by market players, providing satellite television and IPTV.

In 2015, the number of cable operators providing digital TV to their subscribers did not change in absolute terms compared to 2014 and remained 185 but it increased in relative terms by 6 percentage points, which represents 72% of the total number of cable operators operating in 2015. For comparison, this share was 66% in the previous year and 55% in 2013.

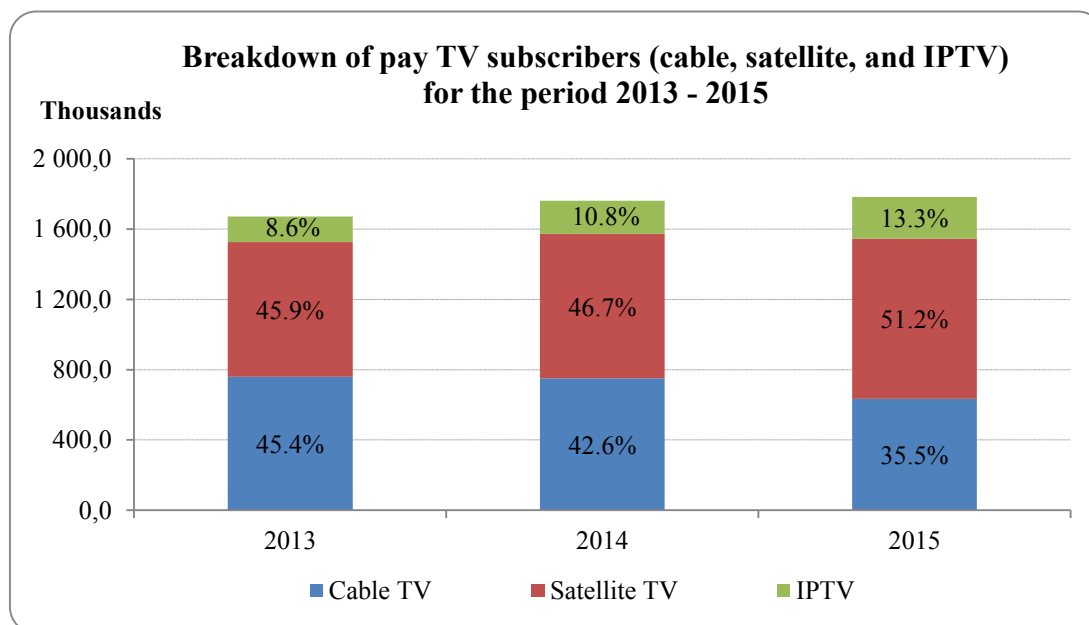
As of 31.12.2015, the number of undertakings providing satellite television in Bulgaria remained three: BULSATCOM AD, BTC, and “Mobiltel” EAD.

<sup>42</sup> Including undertakings that have notified the CRC for cessation of their activities in 2015 and have declared revenues during the year.

As of 31.12.2015, 136 undertakings were registered for providing IPTV, 27 of them actually provided this service. Another 7 declared their intention to start offering this service in 2016.

### Subscribers of retail distribution of radio and television programmes services

In 2013 - 2015, the number of subscribers of pay TV retail services increased by 6.8%, as for the last year the observed growth was 1.2% reaching 1.78 million subscribers<sup>43</sup>.



**Source:** Data submitted to CRC

**Fig. 22**

The most significant increase was observed in the number of subscribers of IP-television in 2015 compared to the previous year – by 25%, as of 31.12.2015 they reached 13.3% of the subscribers of pay TV in the country (Fig. 22). For a third consecutive year, however, the growth rate decreased, which indicates that inter-platform competition in the segment intensified regarding the quality and diversity of services offered.

The number of the satellite television subscribers also registered an increase - by 11% compared to the previous year. At the end of 2015 the number of the subscribers using the service standalone or bundled with other electronic communications service, covered over half (51.2%) of the total number of subscribers of pay TV in the Bulgaria.

As of 31.12.2015 a significant decline of 15.5% for a period of one year was observed in the number of cable TV subscribers, as its share in total number of subscribers of pay TV is ranked after that of satellite TV subscribers and occupies 35.5%.

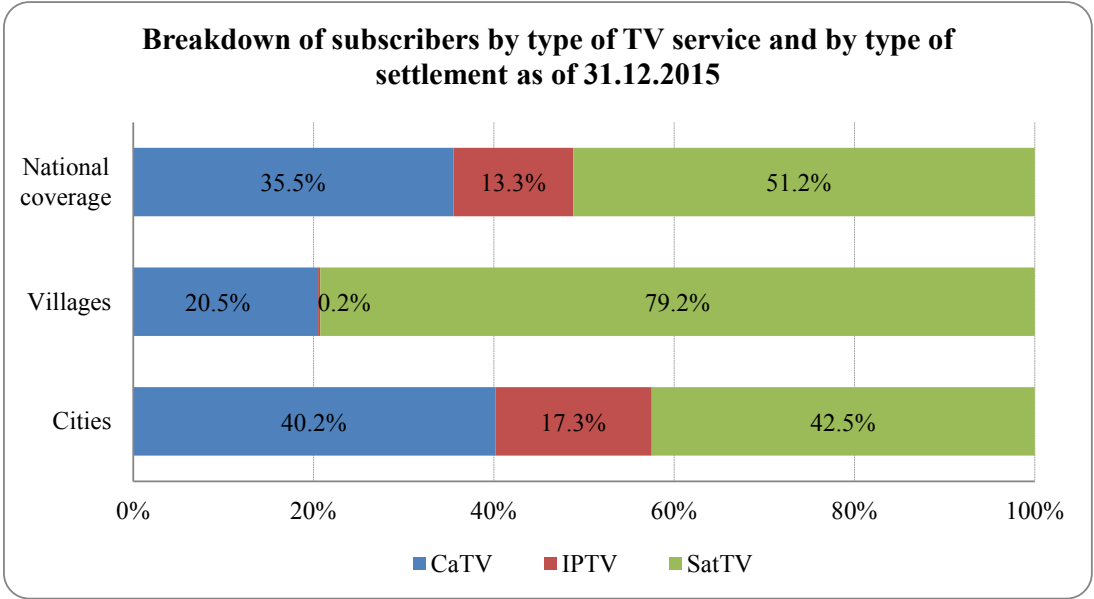
In the last several years, the TV sets and the quality they ensure have undergone a strong development. This has reflected on the services offered by an increasing part of television content providers, as value-added services are gradually beginning to turn into a necessity for end users. As a result, more and more undertakings provide High-Definition TV channels to their subscribers. In 2015, the number of undertakings providing HD channels was 118, covering 42% of the total number of undertakings providing services to this market segment. For comparison, in 2014 this share amounted to 36.5%.

<sup>43</sup> Including subscribers of bundled services which as of 31.12.2015 were 755 529.

"Pay-per-View" services (PPV) and video on demand (VOD) services were offered by undertakings providing cable TV as well as by IPTV providers and as of 31.12.2015 the summarised data indicates that:

- the number of the unique subscribers who have used the PPV service at least once increased by 36% compared to 2014, reaching 9727;
- the number of the unique subscribers of video on demand (VOD) service continued to decline (by 54% compared to 2014) reaching 13.8 thousand subscribers.

Figure 23 below presents the structure of pay TV subscribers by type of the settlement in which this service was used as of 31.12.2015.



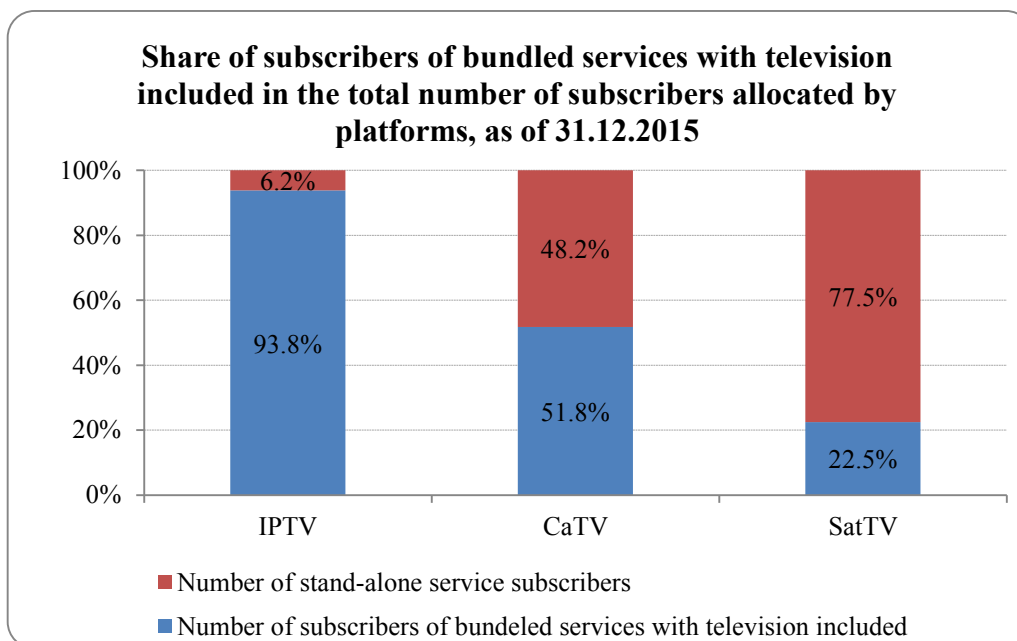
Note: The distribution of the number of satellite TV subscribers is based on an expert estimation.

Source: Data submitted to CRC

Fig. 23

As evident from Figure 23, the distribution of the users of pay TV (cable, satellite, and IP-television) in the cities and villages is uneven and does not correspond to their distribution at national level. While cable operators and IPTV providers focused their efforts mainly to attract customers in the cities due to the expected higher return on their investments invested in building infrastructure to the end user, thanks to the advantage of satellite technology providing wireless access to the subscriber at national level, the options for attracting subscribers both in urban and in rural areas are limited only by consumer preferences. In many villages where there is no coaxial or fibre-optical network built, the only alternative for pay TV access is the satellite TV, thus the share of subscribers of this television platform in rural areas is much higher than the shares of the other two platforms.

The number of bundled services subscribers with television service included increases annually, as for the period 2013 - 2015 its share in the total number of subscribers of pay TV increased by 5 percentage points reaching 42%. In the following chart (Fig. 24) the share of subscribers of bundled services with television service included in total number of subscribers, allocated by platforms as of 31.12.2015 is shown.



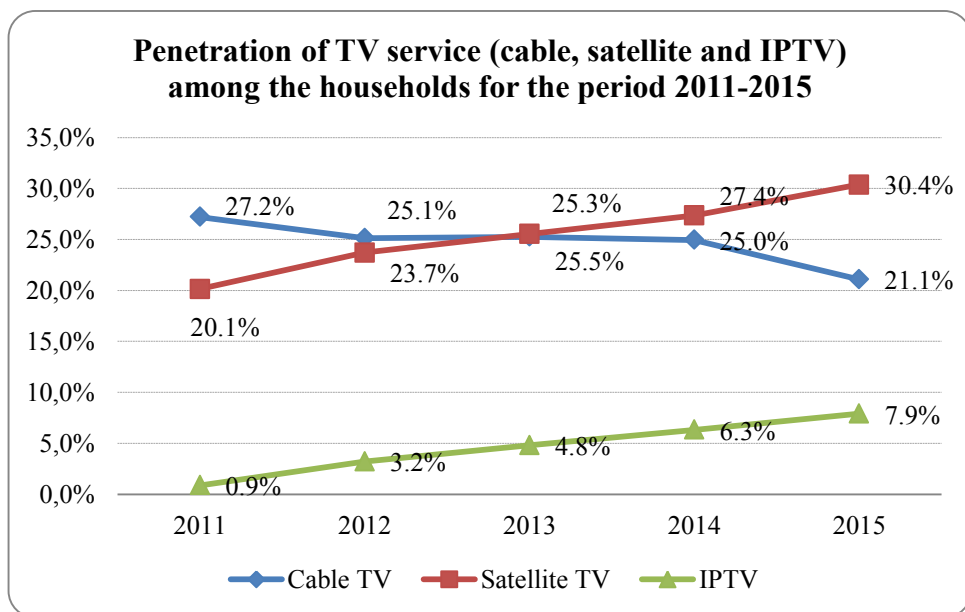
**Source:** Data submitted to CRC

**Fig. 24**

The chart clearly shows that the number of bundled services subscribers with IP television included constitutes almost 94% of the total number of subscribers of IP television, as this share remained almost unchanged compared to the year before. For the same period, the relative share of bundled services subscribers with cable television included increased by 8 percentage points to 51.8%, while the number of subscribers of bundled services with satellite television included decreased by 2.5 percentage points to 22.5%.

The increase in the number of subscribers is reflected on the penetration<sup>44</sup> of pay TV (cable TV, satellite TV, and IPTV) among households, which reached 59.4% as of 31.12.2015 (58.6% at the end of 2014). The highest growth was registered in the penetration rate of satellite TV (by 3 percentage points) compared to 2014, as its share at the end of 2015 amounted to 30.4%. The share of cable television in 2015 was 21%, or by nearly 4 percentage points less than in the previous year, and that of IPTV reached 7.9%, which represents an increase of 1.6 percentage points compared to 2014 (Fig. 25).

<sup>44</sup> The indicator was calculated as the ratio between the number of users of pay TV as of 31.12.2015 and the number of households taken from the last official census of NSI (National statistical institute) conducted in 2011 (3,005,589 - ordinary households).

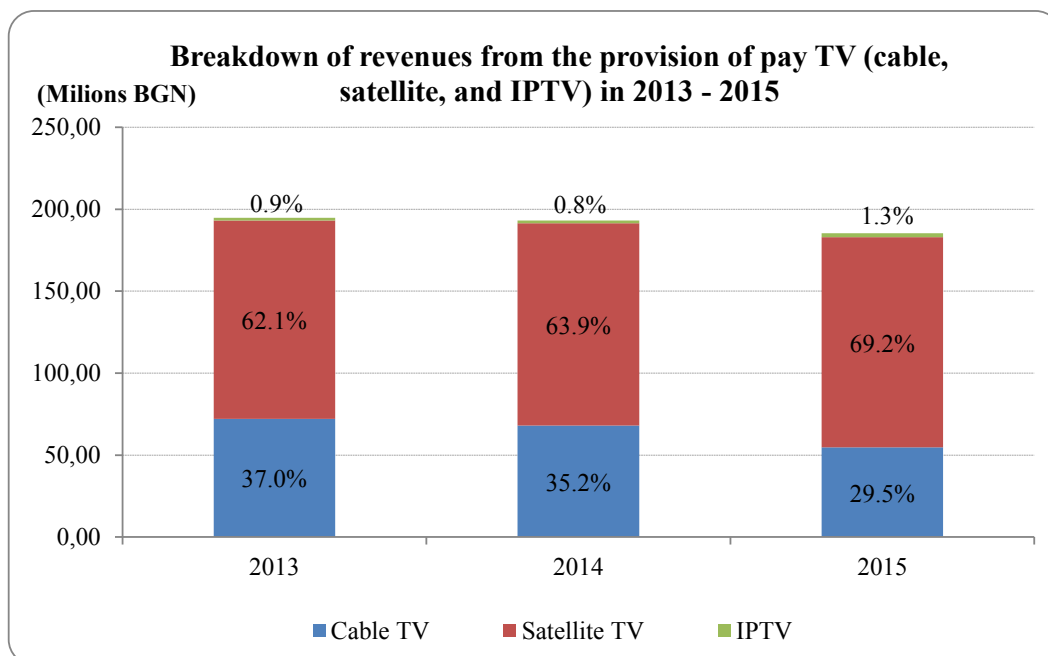


*Source:* Data submitted to CRC

**Fig. 25**

**Revenue from carrying out retail distribution of radio and television programmes services**

The volume of total revenue earned from subscribers of pay TV in 2015 amounted to BGN 185.388 million. The decrease in total revenue from pay TV observed during the previous one-year period is continued, as in 2015 they decreased by 4% compared to 2014.



*Source:* Data submitted to CRC

**Fig. 26**

The decrease in the total volume of pay TV market in Bulgaria results from the decrease in the revenue from provision of cable television for the period 2014- 2015 by



almost 20%. For another consecutive year, the revenue from satellite television shows an upward trend. In 2015 compared to the previous year a growth by 4% was recorded, and the share held by the revenue from satellite TV in the total revenue from pay TV in the country continued to be the largest and amounted to 69.2% (Fig. 26). In contrast to the previous one-year period in which a decline in the revenue from IPTV was observed, in 2015 they increased significantly - by 50% compared to 2014, due to the increase in the number of subscribers using IPTV as a standalone service.

It is expected that the intensified competition between the providers of cable TV, satellite TV, and IPTV observed in the past few years will continue the relocation of the subscribers between the three television platforms.

## **5.2. Wholesale transmission and/or distribution of radio and TV programmes and IPTV**

In 2015, the total number of undertakings providing wholesale for transmission and/or distribution of radio and television programmes services and wholesale IPTV was 16.

Detailed information about the number of undertakings providing in 2015 wholesale transmission and/or distribution of radio and television programmes, on the number of service users and on the amount of the revenue generated from them, as well as on the market structure of the above-mentioned services, is presented in Table 7 and in Figure 27 below:

**Table 7****Number of subscribers/users and revenue from the provision of wholesale transmission and/or distribution of radio and television programmes services, incl. wholesale IPTV, in 2015**

| Types of wholesale transmission and/or distribution of radio and/or television programmes services                           | Number of undertakings providing the service in 2015 | Number of subscribers/users as of 31.12.2015 | Revenue from the service in 2015 (In million BGN excl. VAT) |
|--|--|--|---|
| <b>1.1. Transmission of radio and/or television programmes, including:</b>   | 7  | 48   | 8.818   |
| 1.1.1. Terrestrial radio relay transmission  | 1  |  |   |
| 1.1.2. Satellite transmission  | 5  | ///  | ///   |
| 1.1.3. Other type of transmission  | 3  | 18   | 0.133   |
| <b>1.2. Distribution of radio and/or television programmes, incl. wholesale IPTV provided to other undertakings, incl. :</b> | <b>11</b>  | <b>101</b>                                   | <b>50.205</b>   |
| 1.2.1. Terrestrial broadcasting  | 7  |  |   |
| 1.2.2. Satellite broadcasting  | 2  | ///  | ///   |
| 1.2.3. Another type of distribution of radio and/or television programmes, including wholesale IPTV                          | 3  | 25   | 1.610   |
| <b>Total</b>   | <b>16</b>  | <b>149</b>                                   | <b>59.023</b>   |

**Source:** Data submitted to CRC

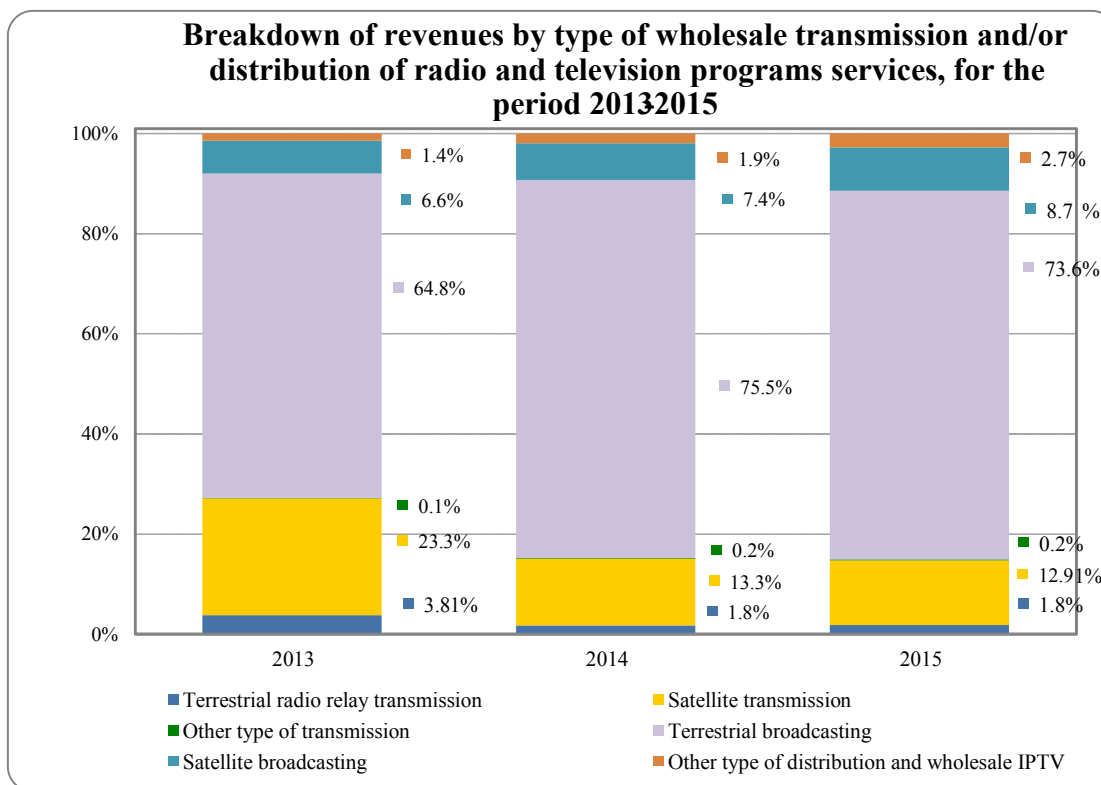
In 2015 the number of undertakings providing transmission of radio and television programmes services was 7, as the number of users of these services increased by 9.1% compared to 2014.

Compared to the previous year, the number of the undertakings providing distribution of radio and television programmes services, including wholesale IPTV, increased by 1 and undertaking reached 11, but the users of these services decreased by 25.74%.

The revenue generated from the provision of wholesale transmission and distribution of radio and television programmes distribution/broadcasting, including wholesale IPTV, in 2015 amounted to BGN 59.023 million and reported a decrease by 11.2% compared to the previous year.

This decline was a result of reported for 2015 reduction of revenue from the provision of terrestrial radio relay transmission (by 9.8%), satellite transmission (13.8%), and terrestrial broadcasting (13.3%). In the revenue generated from the provision of satellite broadcasting, another type of transmission (optical/ fibre) and wholesale IPTV was observed an increase by 5.1%, 4.0%, and 26.4% respectively, compared to 2014, but due to their relatively low share (11.7%) in the total volume of revenue from wholesale transmission and distribution of radio and television programmes services, their growth failed to offset the decline in reported revenue of the abovementioned 3 wholesale services.

In general, the revenue from transmission services (satellite, radio relay and optical) of radio and television programmes decreased by 13.1% compared to 2014 and those generated from wholesale services for distribution of radio and television programmes registered a drop of 10.8%.



**Source:** Data submitted to CRC  
**Fig. 27**

From the data in Figure 27 it is clear that in 2015 the largest share of the total volume of revenue from provision of wholesale services for transmission and distribution of radio and television programmes continued to occupy the terrestrial radio broadcasting - 73.6 %, and the smallest share (0.2%) was occupied by wholesale provision of other types of transmission (optical) of radio and television programmes. The number of undertakings provided wholesale IPTV in 2015 remained unchanged - 3<sup>45</sup>.

### 5.3. Terrestrial broadcasting – VHF broadcasting

At the end of 2015 70 undertakings were registered at CRC to provide services for terrestrial broadcasting of radio programmes. 68 of them submitted a report on their activity during the year, 67 of these undertakings are active.

As of 31.12.2015 the undertakings with national coverage were two - BNR and “Darik Radio” AD. The achieved coverage by population of their radio programmes as of 31.12.2015 remains unchanged compared to the previous year: 95% for "Horizont" programme and 91% for "Hristo Botev" programme of BNR, and 95.5% for the radio programme of “Darik Radio” AD.

The undertakings with local coverage were 68, representing 97.1% of the total number of the undertakings having registration for provision of terrestrial broadcasting of radio programmes as of 31.12.2015.

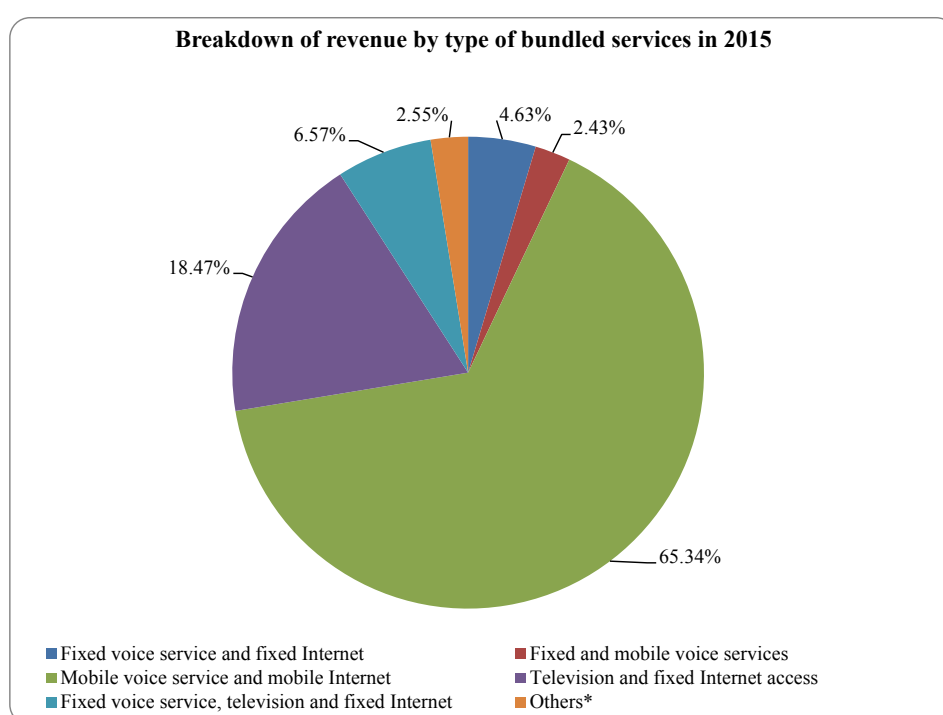
<sup>45</sup>“Mitko.com” EOOD, “Neterra Communications” EOOD and “Viora interactive” OOD

## 6. Bundled services

Bundled services<sup>46</sup> are still one of the most used electronic communications services by users, as in 2015 they formed 25.7% of the total electronic communications market volume (see above). At the end of 2015 the undertakings offering bundled services were 100, as 92 of them offered a bundled service "TV and fixed Internet access".

In 2015, the revenue (from installation fees and monthly subscription) from bundled services reached BGN 643.5 million, registering an increase of 51.5% compared to the previous year. For a consecutive year, the revenue from double play bundles held the largest share in the total volume of revenue generated from the offered bundles on the market - BGN 589.99 million. The revenue from triple play services amounted to BGN 52.5 million and from quadruple play bundles - BGN 1.0 million.

Figure 28 presents the breakdown of revenue in 2015, by types of bundled services.



Note: \*The revenue from bundles, the share of which is less than 2%<sup>47</sup> in the total volume of revenue from the bundled services are included.

Source: Data submitted to CRC

**Fig. 28**

As evident from Figure 28, the share of revenue from double play bundle services, including mobile voice service and mobile Internet access, was the largest - over 65% of the total volume of the segment. Revenue from this service has registered the greatest increase for one-year period - 113.7%. The main reason for that increase was the fact that one of the undertakings offering mobile voice and mobile Internet as a bundle service in 2015 has

<sup>46</sup>The bundled services include two or more electronic communication services (fixed voice services, mobile voice services, fixed Internet access, mobile Internet access, TV and others) offered jointly by any given undertaking (at a common price).

<sup>47</sup>Fixed voice and TV; Mobile voice and fixed Internet; Mobile voice and TV; Fixed voice, mobile voice and TV; Fixed voice, mobile voice and fixed Internet; Fixed voice, mobile voice and mobile Internet; Mobile voice, TV and fixed Internet; Mobile voice, TV and mobile internet; Fixed voice, mobile voice, fixed Internet and TV, and Other.

offered to its customers better pricing and better characteristics (included minutes and MB) of this bundle. This caused an increase of 1.7 times in the number of subscribers of the bundled service "Mobile voice service and mobile Internet access" offered by the undertaking. The next ranked biggest increase of revenue was held by "Fixed voice service and TV" bundle in which a growth of 16.7% has been recorded compared to 2014. The smallest increase in revenue compared to the previous year is registered in the "Fixed and mobile voice services" bundle – 2.7%.

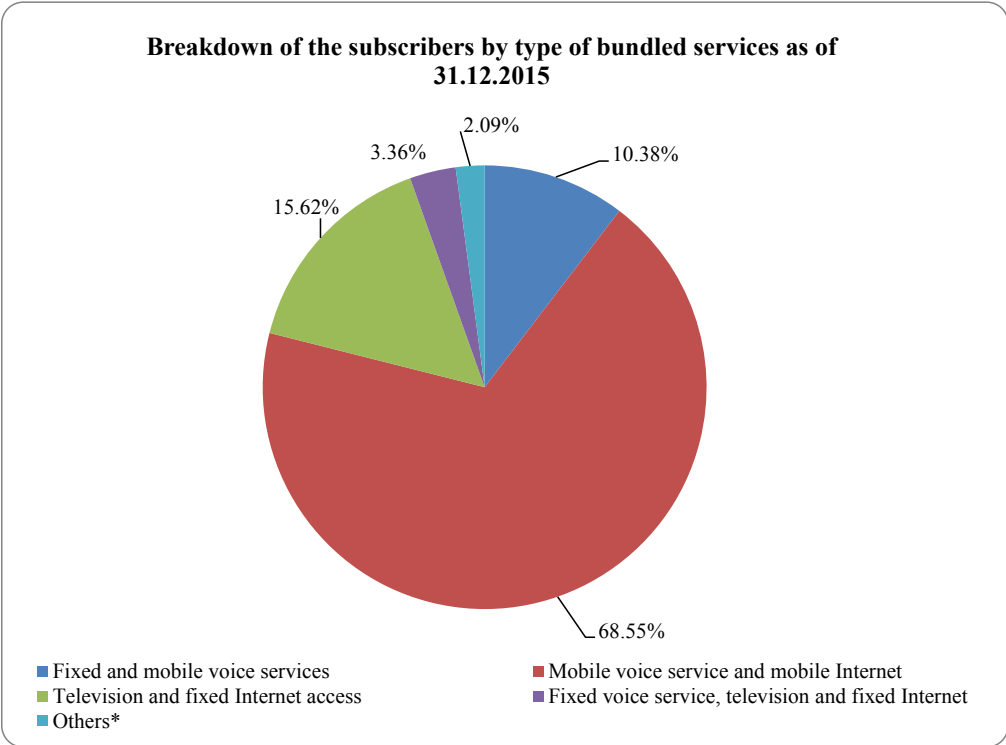
For a certain number of the bundled services a decrease of the revenue was observed compared to 2014, as the largest decrease was recorded for the bundle "Mobile voice service, TV and fixed Internet access" - by 58.6%.

The bundled services that formed over 90% of the revenue in the segment considered are as follows: "Mobile voice service and mobile Internet access", "TV and fixed Internet access", "Fixed voice service, fixed Internet access and television", "Fixed voice service and fixed Internet access", "Fixed voice service and mobile voice service". In 2015, the share of the revenue generated from these bundled services in the total bundled services' revenue was 97.5%, or there was a growth by 3.7 percentage points compared to 2014 (93.8%).

The number of subscribers of bundled services at the end of 2015, according to the data submitted by the undertakings providing public electronic communications in Bulgaria, is 3.81 million which represents an increase of more than 45% compared to 2014.

That increase in the number of the subscribers of bundled services has an impact on the "penetration by population" indicator<sup>48</sup> which has increased in 2015 by 16.9 percentage points compared to 2014, and reached 53.2%. This indicated that more than half of the population in the country use more than one electronic communications service.

The breakdown of subscribers by type of bundled services in Bulgaria is presented on Figure 29.



Note: \*The subscribers of bundled services, the share of which is less than 1% in the total number of subscribers of bundled services are included.

<sup>48</sup> This indicator was calculated as a ratio between the number of subscribers of bundled services provided by the undertakings and the Bulgarian population based on the data as of 31.12.2015 of NSI (Population by regions, municipalities, place of residence and sex): <http://www.nsi.bg/bg/node/2972>

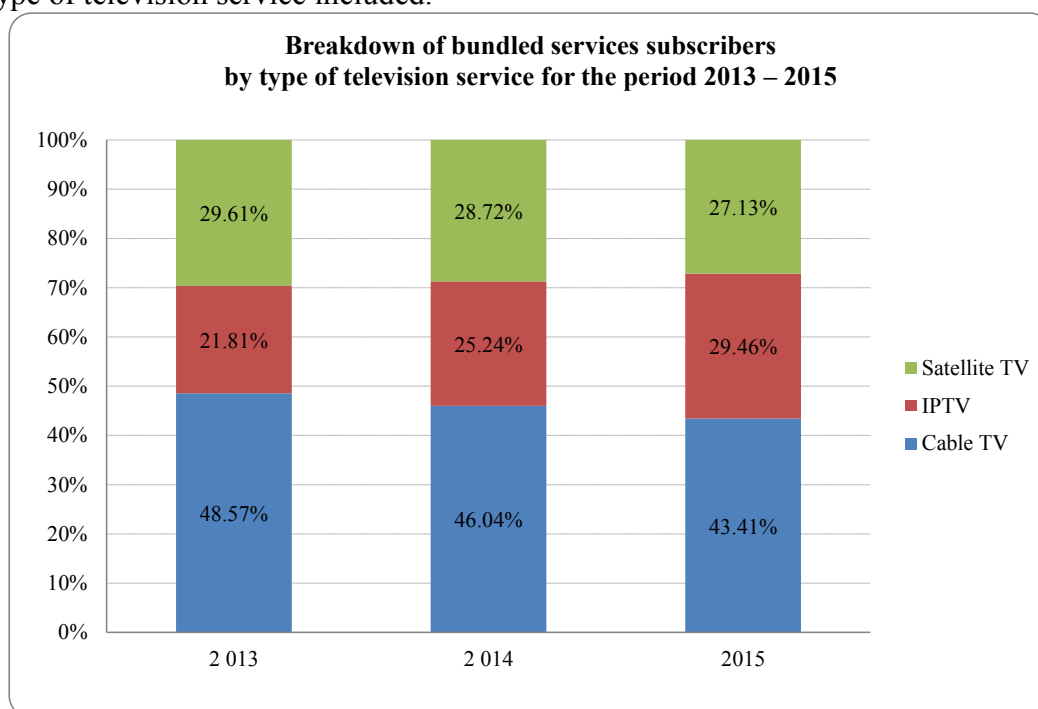
**Source:** Data submitted to CRC

**Fig. 29**

As it is evident from the data presented on Figure 29, "Mobile voice service and mobile Internet access" (68.6%), "TV and fixed Internet access" (15.6%), and "Fixed voice service and mobile voice service" (10.4%) are the bundled services that represented the greatest interest to the subscribers in 2015. These three bundled services were most preferred in the last two years as well.

The number of subscribers of the most widely used bundled service - "Mobile voice and mobile Internet access" has increased by 76.9% compared to 2014 and at the end of 2015 reached 2,611,197 subscribers. The big peak of interest in this package is mainly due to the convenience that it provides to the consumers with regard to the possibility of using of both basic services for communication and access to information wherever there is coverage of the mobile network. The continued development and distribution of devices through which it is possible to use such bundled service, also contributed to its popularity. The number of subscribers of the second most used bundle ("TV and fixed Internet access") reached 594,808 subscribers, and for a one-year period there has been registered a growth of nearly 12%. Fixed voice service and mobile voice service in a bundle is used by 395,400 subscribers, and the growth in 2015 is 7.6% compared to the data from 2014.

Figure 30 below presents the breakdown of subscribers of bundled services according to the type of television service included.



**Source:** Data submitted to CRC

**Fig. 30**

In 2015 the downward trend in the share of subscribers of bundled services with cable TV and satellite TV in the total number of subscribers of bundled services with television continued, respectively by 2.6 percentage points and by 1.6 percentage points, compared to data from the previous year, which in absolute terms represents a decrease of 769 subscribers and 114 subscribers respectively. The share of subscribers of bundles with IPTV continues to grow and as compared to 2014 it has been increased by 4.2 percentage points up to 29.5%. In

absolute terms for a period of one year, an increase has been reported in the number of subscribers of bundled services with IPTV in the amount of 42.3 thousand.

Given the fact that the bundled services are an attractive solution both for the consumers as well as for the undertakings providing electronic communications, it is logical the trend of growth observed in the previous years for both monitored indicators - the number of subscribers and revenue from bundled services, to continue in 2015. This segment of the electronic communications market continues to develop due to the diversity and the quality of the bundles offered and is one of the basic drivers for the development of the electronic communications market in Bulgaria.

## **7. Prospects for the development of the Bulgarian electronic communications market**

The prospects for the development of the Bulgarian electronic communications market, as have been outlined in the report of the Commission for 2014, shall continue to be in effect in the future. The migration of subscribers from fixed to mobile services will continue in the coming years. The influence of OTT<sup>49</sup> services on the electronic communications market will intensify, as the extent of this influence will considerably depend on the business strategy adopted by the undertakings providing traditional communication services towards OTT providers.

In the short term, the following trends are expected on the electronic communications market:

- with respect to the “voice services” segment no considerable changes are expected from the segment development observed in the past years. The offering of fixed and mobile voice services bundled with other electronic communications services will increase, the increased offering of subscription plans with included additional free-of-charge minutes for outgoing calls will also continue, as well as the redirection of users from fixed voice to mobile voice service;
- regarding services for broadband Internet access at a fixed location the trend of deployment of next generation access networks is expected to continue in response to the growing demand of high-speed Internet;
- the number of mobile broadband access subscribers will continue to increase strongly, which will surpass in its development compared to the fixed broadband access. The development and exploitation of new LTE networks by mobile operators in Bulgaria will lead to increased competition in this segment of the market, and as a result - to an increase in the maximum reachable transmission speed and growth in consumption of mobile access Internet services;
- with respect to the leased lines the market is expected to continue to shrink, as customers of that service (both retail and wholesale) will redirect towards innovative access products that offer flexible technical solutions at lower prices and higher transmission speed with guarantees of quality and service and most of all - completely tailored to the individual needs of users;
- in the segment "Transmission and/or distribution of radio and television programmes services" the intensified competition observed over the past few years between the providers of cable TV, satellite TV, and IPTV will continue the relocation of the subscribers between the three television platforms. In addition, the increased penetration of mobile broadband services and the increase of capacity of mobile networks via LTE will lead to intensified usage of TV via mobile devices;
- bundling of public electronic communications services will continue to be the preferred solution both for consumers as well as for the undertakings.

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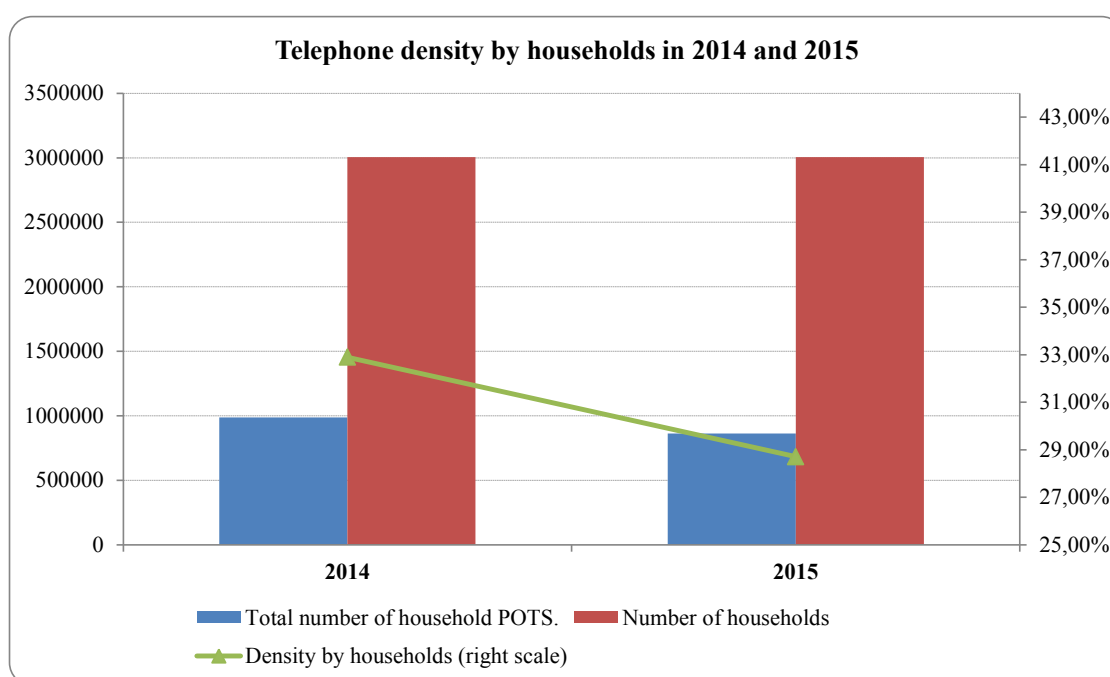
<sup>49</sup> Over-The-Top

## 8. Provision of the universal service

### 8.1. Degree of satisfaction from the universal service provision

At the end of 2015, BTC, as a universal service provider<sup>50</sup>, ensures coverage measured by the number of territorial units by 0.03 percentage points less than the year before, which was mainly due to the faster decrease in the number of settlements, compared to the rate of reduction of territorial units in which fixed telephone service is provided as of 31.12.2015. The coverage mentioned includes settlements and settlement formations (resorts, etc.), which are included in the Unified Classification of Administrative-Territorial and Territorial Units.

In 2015, the telephone density by households<sup>51</sup> registered a decrease by 4.19 percentage points compared to the previous year. The decline in the values of this indicator reflects the steady downtrend in the number of BTC's residential subscribers as of 31.12.2015. BTC ensures access and provides public telephone services to nearly 12.73% less subscribers compared with the previous year.



*Source: NSI and data submitted to CRC*

**Fig. 31**

### 8.2. Analysis of the provision of the universal service

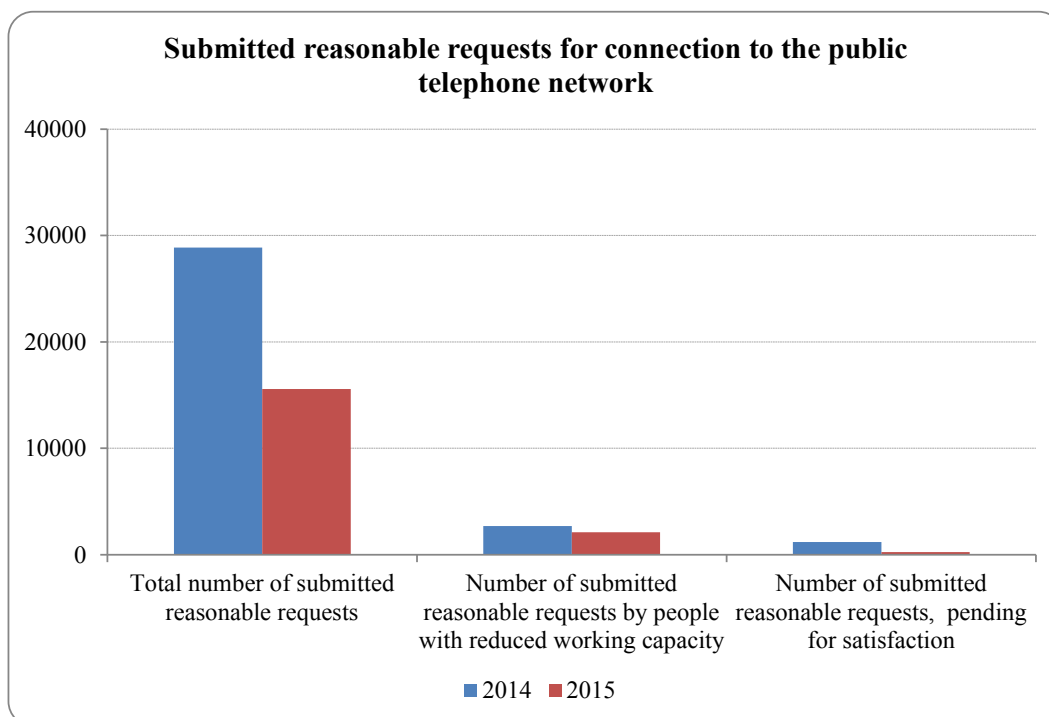
#### 8.2.1. Access to and provision of the universal service

As evident from Figure 32 below, at the end of 2015, the submitted requests for connection followed the downward trend observed in the past years and the last year they decreased by 46%. In relation to the reduced number of requests for connection filed by people with disabilities in 2015, it should be noted that compared to trends in past years the rate of decrease is growing. The submitted requests for connection were 21% less than the last year, while the decline in 2014 was 3.5% compared to 2013, as the rate of decline marks the acceleration of 17.6 percentage points.

<sup>50</sup> Pursuant to § 7 of Law on Electronic Communications.

<sup>51</sup> The density by households' index is measured by dividing the total number of residential lines by the number of households in the country based on data from NSI.





*Source: Data submitted to CRC*

**Fig. 32**

In 2015, the percentage of requests for connection awaiting approval was down by 78 percentage points, which is due to the undertaking's intent to attract new subscribers. In this regard, the share of the rejected requests for connection compared to the total number of submitted requests was 21.22%, as the major part (77.25%) of this share is a result of discontinued interest by the customers.

BTC performs its obligation to ensure free-of-charge calls to emergency numbers, as their share in 2015 amounted to 0.48% of the total volume of calls to national numbers.

### 8.2.2. Access to public payphones

According to the criteria stipulated for in Ordinance No. 6<sup>52</sup> BTC is obliged to ensure a sufficient<sup>53</sup> number of public payphones (PPs).

Table 8 presents data about the performance of the obligation to provide a sufficient number of public payphones in 2015:

**Table 8**

| Population | Number of municipalities | Sufficient number of public payphones |
|------------|--------------------------|---------------------------------------|
|------------|--------------------------|---------------------------------------|

<sup>52</sup> Ordinance No. 6 of 13 March 2008 on universal service under the Law on Electronic Communications (title amend. SG, issue 77 of October 9, 2012)

<sup>53</sup> A sufficient number of public payphones is considered to be present when there is at least 1 public payphone and/or 1 public access point for voice telephone services available in municipalities with up to 500 residents; at least 1 public payphone and/or 1 public access point to voice telephone services per 500 residents in municipalities with more than 500 residents and at least 1 public payphone and/or 1 public access point for voice telephone services per 1500 residents in municipalities with more than 1500 residents.

|                            |             |             |
|----------------------------|-------------|-------------|
| below 500 residents        | 1952        | 1952        |
| from 500 to 1500 residents | 1013        | 1297        |
| over 1500 residents        | 485         | 3695        |
| <b>Total:</b>              | <b>3450</b> | <b>6944</b> |

*Source: Data submitted to CRC*

In 2015 continues the steady trend of reduction in the number of public payphones owned by BTC, which was interrupted only in 2013, when the number of PPs showed an insignificant increase of 0.08% compared to the previous year.. The decline in the number of PPs in 2015 was significant - 1.9%. As in 2014, in 2015 the criteria for a sufficient number of public payphones installed in municipalities with over 1500 residents exceeded considerably the minimum number required by Ordinance No. 6. In the remaining categories municipalities, the criteria for a sufficient number of public payphones were not met.

The number of public payphones, property of BTC, whose qualitative characteristics include facilities for users with impaired hearing and for users with none or impaired eyesight, also registered a decrease of 2.7% compared to the previous year. As of 31.12.2015, these PPs formed 70.12% of the total number of public payphones in the country. Part of them provide for a textual or other type of connection for people with impaired hearing or speech and are accessible for users in wheelchairs by being installed in suitable locations. No change was observed in the quality parameter of the provided PPs.

Free calls to the national emergency numbers and to the European emergency call number 112 can be made from all public payphones.

### **8.2.3. Ensuring telephone directory and provision of enquiry services**

In compliance with LEC and with relation to the provisions of Art. 6 of Ordinance No. 5<sup>54</sup>, the undertaking obliged to provide the universal service must issue at least one telephone directory in printed and/or electronic form. In 2015, by its Decision 590/04.12.2015, CRC approved BTC's proposal<sup>55</sup> for the release of a public telephone directory in an electronic form in 2015, which is available at the undertaking's official website<sup>56</sup>.

In compliance with its obligation to provide a telephone directory enquiry service for the numbers comprised in the comprehensive telephone directory, BTC provided end users with a 24-hour telephone directory enquiry service in the past year through number 11 800.

In 2015, there was a 22.13% decrease in the number of calls, ensuring the enquiry services and 16.1% decline in the number of free-of-charge calls to emergency numbers.

### **8.2.4. Affordability of tariffs of the universal service**

In performing the obligation to provide price packages within the scope of universal service at affordable prices<sup>57</sup>, in 2015 BTC continued to offer, with no change in prices and conditions, the price packages intended for users: with low income ("Limited plan", as named

<sup>54</sup> Ordinance No. 5 of 13.12.2007 on the terms and procedure for release of telephone directories, including working with database, their transfer and use, and for carrying out telephone enquiry services

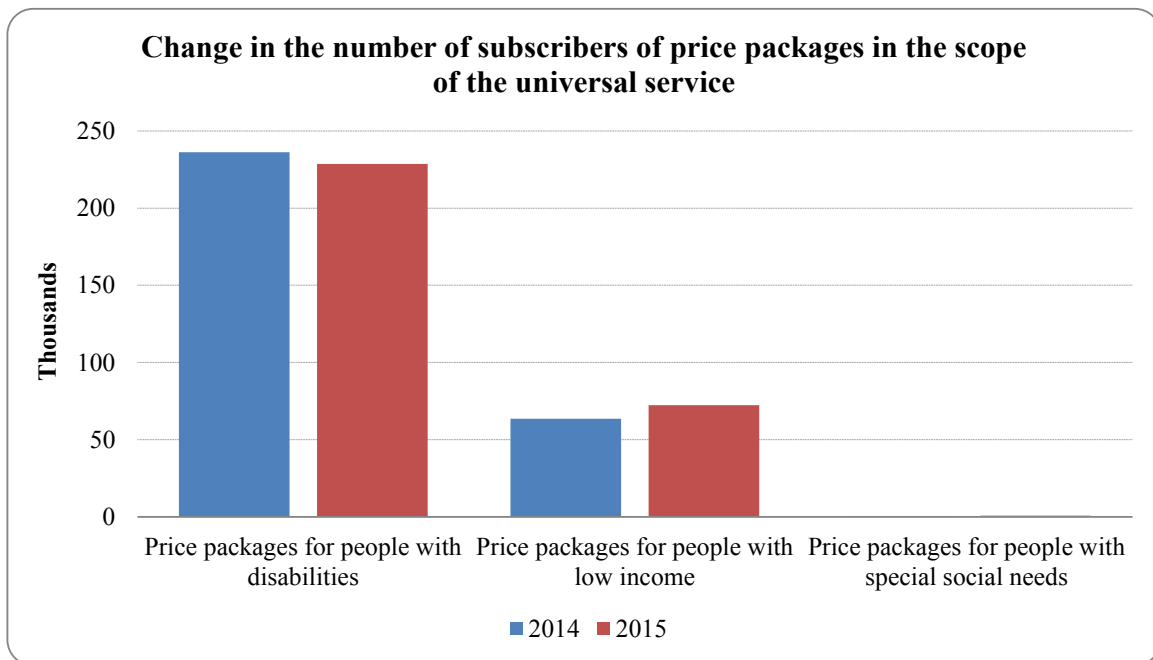
<sup>55</sup> Letter, Ref. No. 04-04-243/ 06.11.2014

<sup>56</sup> <http://www.vivacom.bg/online/cgi-bin/wpd.cgi?temp=home.html&ls=0>;

<sup>57</sup> Stipulated in the Methodology for determining prices and price packages for the universal service adopted with Ordinance Nr. 2544 of 25.10.2008 of the Council of Ministers, prom. SG, issue 94 of 131.10.2008)

by BTC); people whose work capacity or capacity for social adaptation has been impaired by over 90% ("Handicap 160" and "Handicap 300" plan, as named by BTC); people whose work capacity or capacity for social adaptation has been impaired by over 50% ("Handicap 300" plan, as named by BTC); people admitted to social or health institutions ("Social and health institutions" plan, as named by BTC).

As of 31.12.2015 the subscribers of price packages within the scope of universal service have been increased by 0.44% compared to those of 2014. The chart below displays the trend in the number of subscribers of price packages in the scope of the universal service for 2014 and 2015:



**Source:** Data submitted to CRC

**Fig. 33**

The chart clearly shows that during the period considered the number of consumers using price packages for people with disabilities has decreased by 3.2%. The number of users of price packages for people with low incomes and price packages for people with special social needs has increased by 13.7% and by 18.7% respectively.

### 8.3. Quality of the universal service

The Quality of Service (QoS) parameters of the universal service provision are stipulated for in Ordinance No. 6<sup>58</sup>, as the target values of the parameters were adopted by Decision No. 345/31.03.2011 of CRC and are publicly available at the CRC's official website<sup>59</sup>.

According to the data submitted by BTC, in 2015, the undertaking reported fulfilment of all indices, as quality higher than the targets for the universal service was achieved in the following index groups:

- *Time for initial service provision;*
- *Fault percentage per subscriber line;*

<sup>58</sup> Ordinance No. 6 of 13 March 2008 on universal service under the Law on Electronic Communications (title amend. - State Gazette, issue 77 of October 9, 2012)

<sup>59</sup> <http://www.crc.bg/section.php?id=904&lang=bg>

- *Time by which the fastest 80% and 95% of valid requests for failures of the access lines;*
- *Failed calls percentage;*
- *Call set-up time;*
- *Call set-up time (response) for calls via operator services;*
- *Call set-up time (response) for calls to telephone enquiry services;*
- *Percentage of functional public telephone devices*
- *Percentage of complaints concerning the correctness of bills.*

#### **8.4. Compensation of net costs accrued due to the universal service provision**

In 2015, BTC did not submit to CRC a request for compensation of universal service provision within the statutory period 30.06.2015, thus the amount of the net expenditures and the unfair burden of its provision was not calculated during the last year. In this regard, the activity of the Fund for compensation of the universal service did not start and no funds were deposited due to the absence of grounds for their collection.

#### **8.5. Complaints and complaint resolutions**

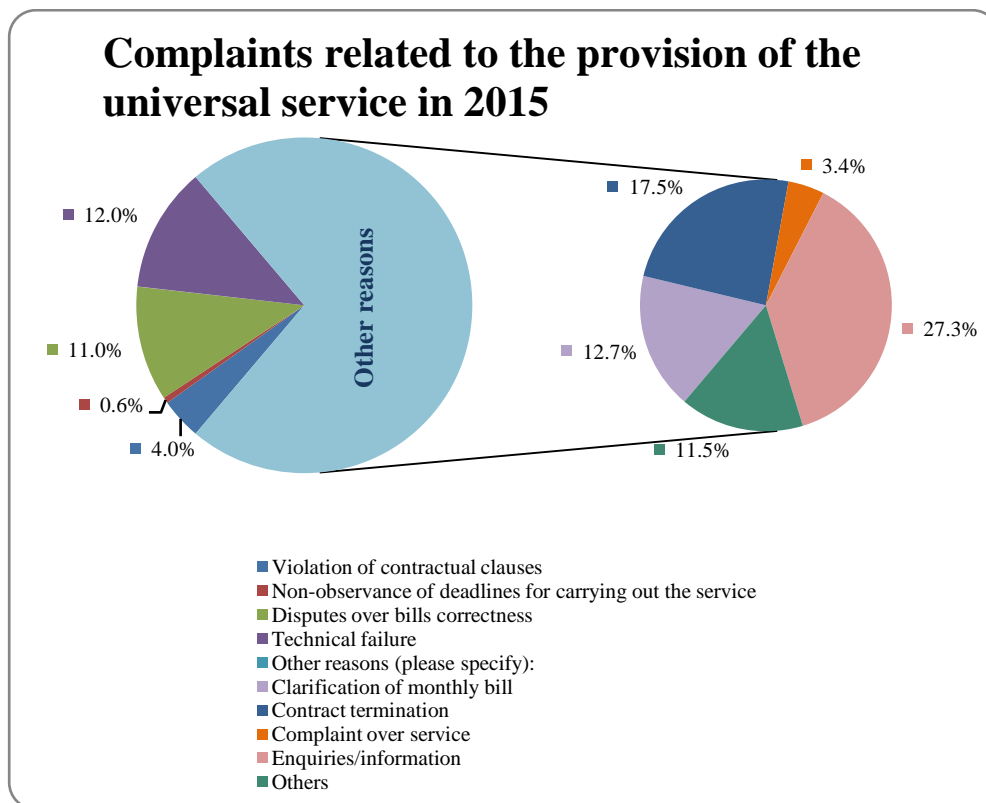
According to the General Conditions governing the relations between BTC and end users, the undertaking provides the possibility that users individually track and control their costs through:

- provision of detailed bills free of charge<sup>60</sup>;
- selective limitation of outgoing calls free of charge;
- deferred payment when connecting to public telephone networks.

In 2015, the number of complaints filed against the undertaking regarding the provision of the universal service, was 50.2% less than in 2014. Most often complaints disputed technical failures, bills correctness, contract terminations, and violation of contractual clauses. The causes for filing complaints are illustrated on the figure below:

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<sup>60</sup> 59 The content of the itemized bill is defined in Art. 260, Para 3 of LEC



*Source:* Data submitted to CRC

**Fig. 34**

The percentage of complaints regarding technical failure was 12.03% of the total number of complaints, which is down by 17.4 percentage points compared to 2014. At the same time, the share of complaints for contract termination compared to the total number of complaints is 17.46 and registered an increase of 3.76 percentage points compared to the same indicator for the previous year.

In 2015, BTC responded to 99.78% of the complaints within the regulatory deadline of 30 days, while the percentage of resolved complaints amounted to 68% of the total number of complaints filed.

## 8.6. The universal service outlook

As evident from the data presented, it can be concluded that overall interest in the services within the scope of universal service has registered a decrease - excluding the insignificant increase in the use of price packages that provide preferential conditions for vulnerable social groups<sup>1</sup>. CRC has reported that the decrease in demand for universal service show signs of a steady trend in recent years as a result of the enhanced replacement of traditional telephone services at a fixed location with mobile phone service and expansion of opportunities for communication that the end users receive via broadband Internet access. Given the above, CRC expects this downward trend in interest in the services within the scope of universal service in Bulgaria to be maintained and for the year thereafter.

<sup>1</sup> Price packages for people with decreased work capacity or reduced capacity for social adaptation; people admitted to social or health institutions; or those with low incomes.