LITHUANIAN COMMUNICATIONS SECTOR 2015

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Vilnius

COMMUNICATIONS REGULATORY AUTHORITY OF THE REPUBLIC OF LITHUANIA

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FOREWORD OF THE MINISTER OF TRANSPORT AND COMMUNICATIONS OF THE REPUBLIC OF LITHUANIA

Information and communication technologies are the words that we have been used to hear and use for a long time. Technology-based decisions are prevailing in all areas of our lives. This is of a special relevance at various levels of communications and information dissemination.

The first and the most important level is our personal, both qualitative and quantitative needs for access to communication or information, which may be satisfied with no obstacles left. As many as 94% of Lithuanian Internet users read the news online. With such a high indicator we are proud to be in the first place in the European Union (EU). We are very active in communicating by means of videotelephony (2nd place in the EU). Such a joyful result has been mainly caused by the favourable technical possibilities provided to the users of service providers – 97% of households may use 30 Mb/s and higher speed rate Internet rate (4th place in the EU). Most importantly, the price of this service (with a view to the persons' revenue share in per cent spent for the least expensive broadband communication) is the lowest in the EU.

Moreover, the value added created by specific communications services for the economy of Lithuania is highly significant. We welcome the fact that free Internet access promotes e-commerce which is becoming more and more attractive to Lithuanian users. In 2015, almost every third Lithuanian resident of the age between 16 and 74 bought goods or services via the Internet. The companies are also at work and actively improve their management processes, including the transition from paper invoices to electronic ones, the use of qualified electronic signature, resource planning, etc. Thus, today's Internet access serves as a key which helps find proper tools to solve personal or corporate problems.

Another important area is public electronic services which were used by 44% of Lithuanian residents in 2015. This is by 30% more than two years ago. It may be stated that the essential progress has been reached when implementing public electronic services and changing the habits of communication between the public and the state institutions. In terms of the formation and implementation of information society policy, it will be aimed at a qualitative leap in the area of electronic services by setting clear criteria as to which services must be created, what their actual benefit is and how they correspond to the customers' needs.

These facts are remarkable, but there is a reverse side to the coin. As in many spheres of our lives, negative outcomes cannot always be avoided, especially when it comes to rapid development processes. In the EU every fourth, and in Lithuania every fifth resident encounters Internet security problems. The main challenges faced by the users are computer viruses, illegal use of personal details, websites containing the content which is harmful to our children. These obstacles cause more passive online shopping, avoidance of banking procedures in the digital space, still a relatively low use of public electronic services.

However, all the problems may be solved and the development of information society remains one of the key strategic goals approved by the Government of the Republic of Lithuania. Only open, educated, continuously learning society carrying out knowledge-based activities and being able to effectively use ICT means is successful society of today and tomorrow. Most of the results of Lithuania with a view to the EU Digital Economy and Society Index exceed the EU average. I believe that the aim of continuous improvement and mutual work of all stakeholders – state institutions, businesses, citizens – will reduce the digital exclusion of Lithuanian residents, will allow creating technologically advanced both private and public electronic services and will undoubtedly strengthen the role of ICT in business development. This is perhaps the only and inevitable way.

Minister of Transport and Communications

Rimantas Sinkevičius

FOREWORD OF THE DIRECTOR OF THE COMMUNICATIONS REGULATORY AUTHORITY OF THE REPUBLIC OF LITHUANIA

The year has passed at lightning speed. Technologies improve at the same speed. This is welcome as the trends are promising. For the first time since 2008 the revenue of the electronic communications sector reflecting the service providers' opportunities to grow has increased. Although this is only the first step after a 6-year break, it is likely to be the beginning of a new trend. Only the stable growth of the revenue may ensure the growth of investments in the communications sector.

Nevertheless, the demand which is especially dynamic in the communications sector is a definitely significant factor for the development of every market. Throughout the entire lifetime of the Communications Regulatory Authority of the Republic of Lithuania ("RRT") during which the development of the electronic communications sector was monitored the number of the broadband Internet access subscribers was certainly growing – it stood at almost 1.2 million in 2015. Most importantly, the users were able to use the highest quality services as 43.6% of Internet access subscribers were provided with optical fibre communication lines. This is the indicator that we may be justly proud of: based on the latest data, Lithuania is ranked the 9th in the world outperforming all European countries.

The communications sector is characteristic of innovations and continuous technological progress; therefore, new products are particularly welcomed on the market. One of such examples is IPTV services. Since the very beginning of the provision of such services in 2008, the number of IPTV subscribers has grown by almost 5 times. In addition, the customers have been increasingly choosing the packages of several services, where a customers have to pay one invoice for several different electronic communications services. The operator consolidation process observed in 2005 will likely increase the supply of packages of two or more services, and we will continue to witness the offers to buy service baskets, which would ensure all required communication possibilities. Most importantly, such offers should meet the customers' needs and expectations.

One of the main goals of RRT is the efficient use of electronic communications resources. In 2015, we drafted the specification of the conditions for the auction granting the right to use radio frequencies from the 900 MHz and 1800 MHz duplex radio frequency bands, and at the beginning of 2016, the winners that would use these radio frequencies (channels) between 1 November 2017 and 31 October 2032 were selected during the auction held by RRT. These frequency bands are important for the development of LTE or 4G networks which is required to ensure the highest quality mobile communications services. In the last year alone, the number of subscribers using the services provided over LTW networks grew by 5 times. This was mainly impacted by the number of 4G network base stations which increased twice.

The electronic communications market further needs general approach of the whole of Europe towards the effective competition on this market and promotion of creation of internal market of the European Union, protection of consumers' rights, as well as towards the quality and efficiency of work performed and decisions made. Only the harmonized activity of the regulators of the European Union Member States in the communications sector may ensure the best competitive conditions in the internal market. One more significant step in this direction was the Regulation of the European Parliament and of the Council approved on 27 October 2015 laying down measures concerning open internet access and provision of roaming services in the European Union. As of 30 April 2016 the roaming prices have been reduced and the transitional period which will take place till 15 June 2017 will commence upon the end whereof the higher decrease of the roaming prices in the EU is expected: it is anticipated that when travelling in the EU the prices of international calls, short text messages and data transmission services applicable in the local market will be applied.

However, the regulation of the communications sector, including the postal service market as well, has recently encountered significant challenges in the whole of the European Union. In 2015, various working groups were solving the problems in terms of the delivery of postal parcels related to high prices of such services and inefficiency of the market. This is hindering the cross-border e-commerce; therefore, the supervision of the parcel market will be further actively strengthened. It is necessary to adjust to dynamic, global changes and ensure that end users receive the high-quality services at acceptable prices.

Retrospectively, it is delightful that electronic service providers were able to invest in the next-generation networks, although the generated revenue had been decreasing for a long time. This is further proof that the communications sector remains one of the most prospective and most dynamic sectors characteristic of unstoppable progress. And we, consumers, will further remain the important judges in the ring which is called the “market”.

Director of the Communications Regulatory Authority

Feliksas Dobrovolskis

Name of the country	Lithuania
Capital	Vilnius
Area, km²	65 200
Population	2,888,582
Number of households	1,289,546
Country phone code	+370
Internet domain	.lt

N.B.!

- The icons provided in the tables ( ) illustrate the trends prevailing between 2010 and 2015 (decreasing, increasing, fluctuating).
- The figures provided on the left of the charts (e.g. +3.2%; –4.5%) show the changes of respective indicators in 2015 (positive, negative) compared to 2014.
- The report "Lithuanian Communications Sector 2015" has been drafted using the information on electronic communications and postal activities provided by electronic communications networks and service providers, as well as postal service providers. The report also contains the information received from the Radio and Television Commission of Lithuania and from the European Commission.
- The lists of electronic communications service providers and postal service providers are presented in Annexes 1 and 2.
- The data submitted by the electronic communications networks and service providers and postal service providers may be updated after the publication of the relevant annual report; therefore, the data of earlier periods provided in the reports of different years may differ.
- The data provided in the tables and figures of the report are rounded up to decimal places; therefore, the total sum of the market share does not always equal 100%.
- The revenue received by the service providers indicated in the report or indicators that use revenue values for the calculation are VAT excluded.
- The number of residents and households of a respective year used to calculate the penetration is provided in Annex 3 to the Report.
- The methodologies for the calculation of certain indicators are provided in Annex 4.

OVERVIEW OF THE COMMUNICATIONS SECTOR

Communications service providers	201
Major service provider	TEO LT, AB
Communications sector revenue, EUR million	746.7

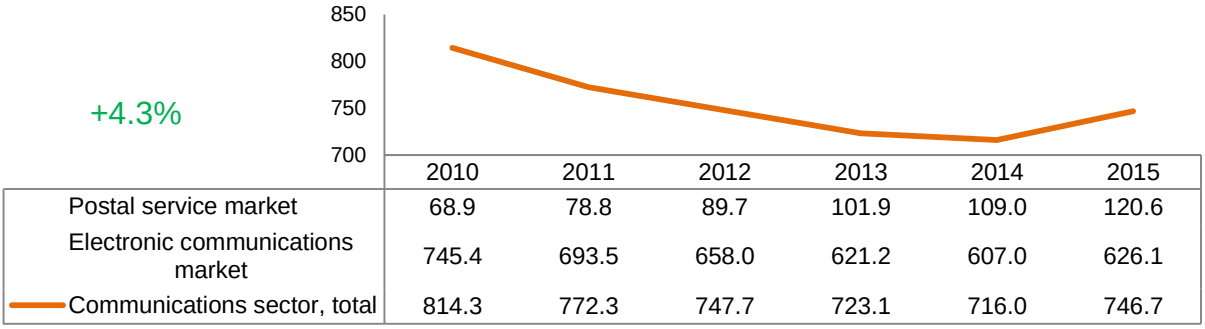
In 2015, the Lithuanian Communications Sector consisted of two service markets: the electronic communications market and postal service market. With a view to both of these markets, at the end of 2015, there were 201 undertakings having informed the Communications Regulatory Authority ("RRT") about the activities carried out in the communications sector, i.e. by 12 undertakings less than in 2014. The dynamics of the undertakings engaged in communications activities shows that the number of service providers has been decreasing (see Figure 1). This is mainly affected by the consolidation of the companies. In the electronic communications sector UAB Cgates acquired 5 service providers: UAB Ukmnet, UAB Kavamedia, UAB Alpha Komunikacijos, UAB Kava, and UAB Dinetas. Also, UAB Init purchased UAB Dokeda. 3 undertakings terminated the activity: A. Dvaranauskienės Individual Enterprise (Alneta), UAB Avoice, and UAB Digitela. In 2015, the postal services were launched by 5 undertakings, and 8 undertakings terminated this activity.

Table 1. **Number of undertakings operating in the communications sector by markets in 2010-2015, in units.**

		2010	2011	2012	2013	2014	2015
Electronic communications market	↓	153	150	142	144	144	135
Postal service market	↓	71	74	73	76	69	66
All providers	↓	**224**	**224**	**215**	**220**	**213**	**201**

Source: RRT

The revenue of the communications sector has raised for the first time since 2008 (see Fig. 1). The growth was low (4.3%), but it evoked the optimistic mood of the market players. It must be noted that the revenue of both markets went up as well. The revenue of the postal service market has been growing since 2010 already, but its growth failed to leverage the decrease of the revenue of the electronic communications service market till the beginning of 2015, as the share of the postal service market constituted a significantly smaller share in the total revenue of the communications sector between 2010 and 2015: in 2015, it stood at 16.2% (in 2010 – 8.5%).



	2010	2011	2012	2013	2014	2015
Postal service market	68.9	78.8	89.7	101.9	109.0	120.6
Electronic communications market	745.4	693.5	658.0	621.2	607.0	626.1
Communications sector, total	814.3	772.3	747.7	723.1	716.0	746.7

Fig. 1. **Revenue of the communications sector in 2010-2015, in EUR million.**
Source: RRT

During the period between 2010 and 2015, both the structure of the communications sector by revenue and the structure of the communications sector service providers by activities shows that the electronic communications service providers prevail in the sector (see Table 1 and Fig. 2). In 2015, the highest revenue was generated by TEO LT, AB (22.3%) out of 201 undertakings operating in the communications sector, although its market share shrank by 1.4 pp in 2015. AB Lietuvos Paštas remained the largest postal service market provider in 2015 and it generated 6.7% of all sectoral revenue in 2015.

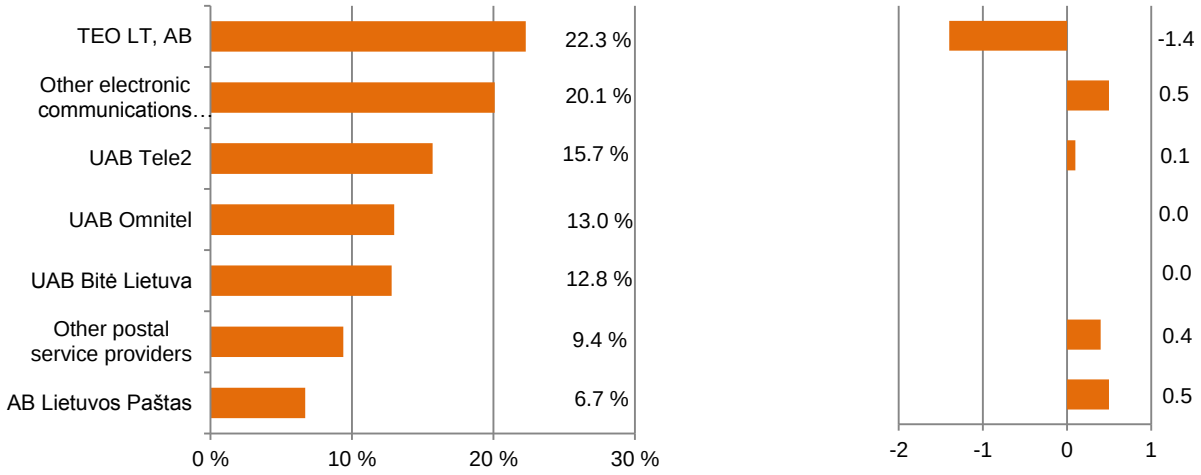
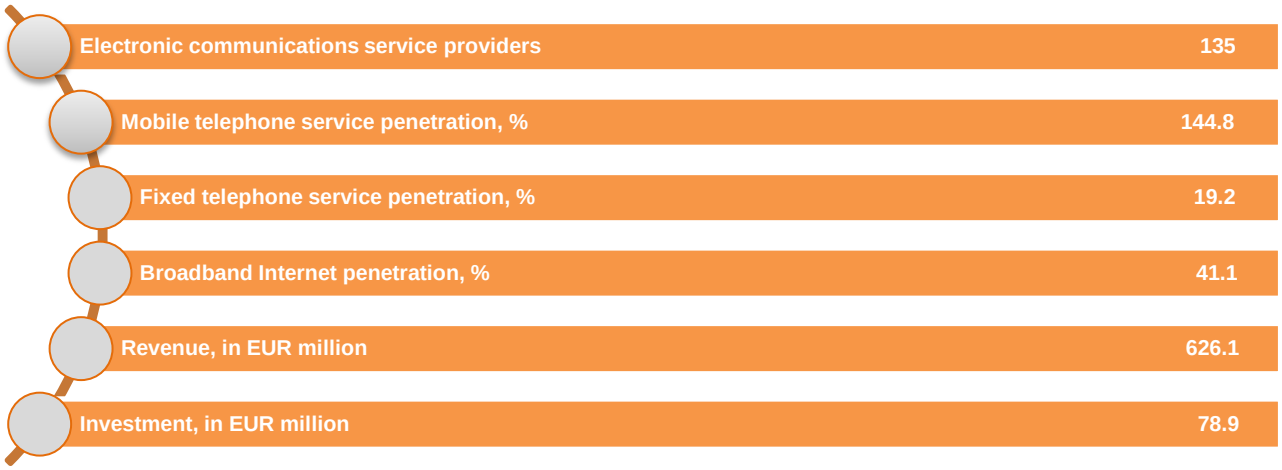


Fig. 2. **Market shares of the communications sector service providers by revenue, %, and annual changes of the market shares, pp, 2015.**
Source: RRT

In 2015, the competitive services were offered to yet increasing circle of the service users in many service segments by ensuring the high quality of provided services. This resulted in the growth of the annual revenue of the communications sector by 4.3%. A more active process of consolidation of both major and minor service providers shows the interest of the undertakings to increase the efficiency of their activities in the sector whose results will be experienced by users in the future.

MARKET OF ELECTRONIC COMMUNICATIONS SERVICES

1. General Overview of the Electronic Communications Market



The market of electronic communications services consists of 6 service groups:

- public mobile telephone services (retail voice services, SMS and MMS);
- public fixed telephone services (retail voice services);
- data transmission services (retail Internet access services, retail and wholesale services of leased lines, other data transmission services);
- television and radio services (retail pay-TV services, wholesale television and radio broadcasting transmission services);
- networks interconnection services (wholesale public mobile and fixed communications networks interconnection services (call origination, transit and termination), wholesale roaming services, where subscribers of foreign operators use roaming services when being in the Republic of Lithuania, etc.);
- access to physical infrastructure services (wholesale access to dark fibre, full unbundled and shared access to the local metallic twisted pair loop services)[1].

Service Providers. The number of undertakings engaged in the electronic communications activities decreased by 9 undertakings in 2015 and stood at 135 undertakings. The largest share was that of Internet access service providers as in the previous year (see Table 2).

Table 2. **Number of electronic communications service providers in 2010-2015, in units**

	2010	2011	2012	2013	2014	2015
Public mobile telephone services	13	14	13	14	14	14
Public fixed telephone services	51	52	48	45	43	40
Internet access	108	103	100	104	107	100
Television (pay)	55	50	45	46	45	42
All services	**153**	**150**	**142**	**144**	**144**	**135**

Source: RRT

[1] In 2015, the services of access to communications cable duct system and access to television and radio broadcasting means were provided in Lithuania as well; however, the information on the provision of such services in 2015 is not available to RRT; therefore, the information on the access to physical infrastructure services contained in this report does not cover the said services.

Service Recipients. With a view to the changes in the number of electronic communications service users, the following trends remained in 2015: the number of fixed and mobile telephone service subscribers went down and the number of Internet access and (pay) TV subscribers went up (see Table 3). The penetration indicators changed respectively (see Table 4).

Table 3. **Number of electronic communications service users by electronic communications services in 2010-2015, in thousands**

	2010	2011	2012	2013	2014	2015
Public mobile telephone services	4,891.0	4,938.0	4,997.3	4,494.1	4,264.6	4,184.1
Public fixed telephone services	753.4	711.9	675.4	624.8	585.5	560.8
Internet access	879.6	989.2	1,054.4	1,060.3	1,110.5	1,187.1
Television (pay)	638.3	664.1	723.6	729.9	723.0	722.3

Source: RRT

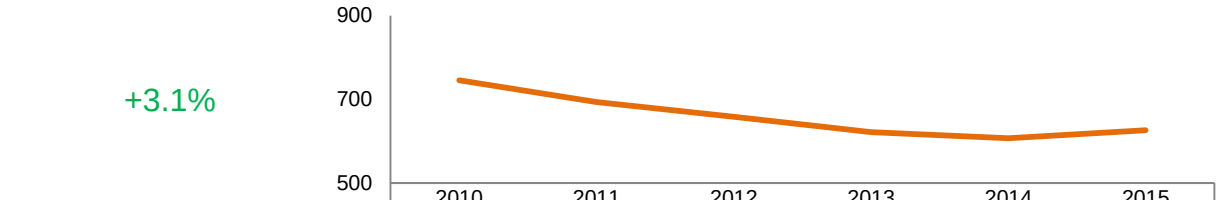
Table 4. **Penetration of electronic communications services in 2010-2015, %**

Per 100 residents:	2010	2011	2012	2013	2014	2015
Public mobile telephone services	160.2	164.4	168.2	152.7	146.0	144.8
Public fixed telephone services*	24.0	23.2	22.2	20.9	19.7	19.2
Internet access	28.8	32.9	35.5	36.0	38.0	41.1
Television (pay)	20.9	22.1	24.3	24.8	24.7	25.0
Per 100 households:						
Public fixed telephone services*	57.2	55.1	53.3	47.0	44.2	42.9
Internet access by means of fixed communications technologies	53.4	58.0	62.4	58.4	61.8	64.6
Television (pay)	49.8	52.6	58.4	55.8	55.7	56.0

***** The penetration of public fixed telephone lines is calculated

Source: RRT

Revenue. In 2015, the revenue of the electronic communications market had grown (3.1%) for the first time since 2008. The revenue amounting to EUR 626.1 million was earned when providing electronic communications services (see Fig. 3). The highest revenue was generated by providers of public mobile telephone services (36.3%), data transmission (23.8%) and networks interconnection (21.0%) services in 2015.



	2010	2011	2012	2013	2014	2015
Mobile telehone service	285.0	273.4	265.3	243.3	222.4	227.1
Fixed telephone service	87.6	78.5	70.9	63.6	54.5	48.5
Networks interconnection	159.1	123.9	101.2	92.5	111.0	131.4
Data transmission	153.1	153.0	150.7	150.0	148.7	149.2
Television and radio	54.8	58.8	63.0	64.9	64.4	64.6
Access to physical infrastructure*	5.7	5.8	6.8	6.8	6.0	5.4
Total	745.4	693.4	657.9	621.2	607.0	626.1

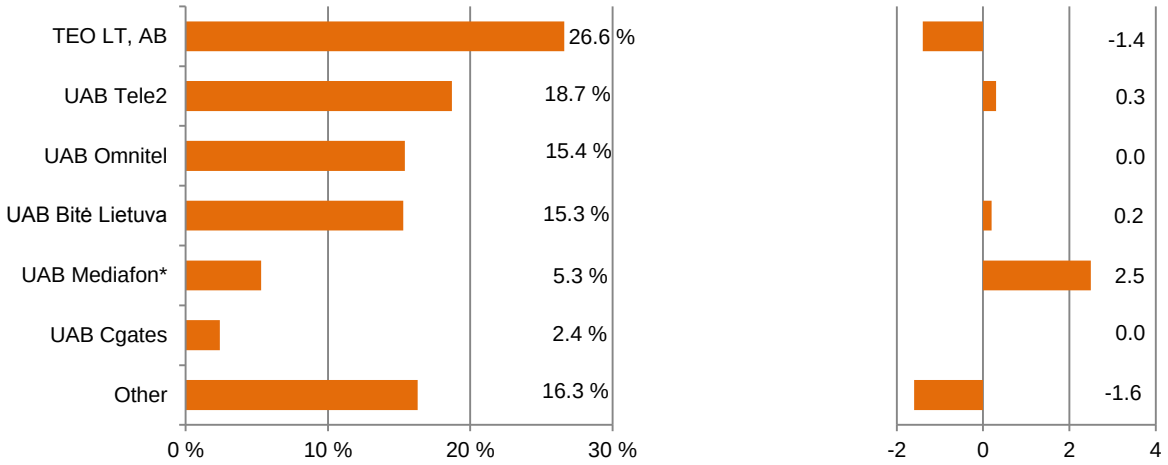
* Includes the revenue received only from the access to dark fibre services.

Fig. 3. **Structure of electronic communications market revenue by service groups in 2010-2015, in EUR million**

Source: RRT

With a view to the changes in the revenue received from individual service groups, it must be noted that the largest growth was observed in the revenue from networks interconnection services – 18.4% or EUR 20.4 million. The largest decrease was observed in the revenue from public fixed telephone services – 11.0% or EUR 6.0 million. The continuous decrease of such revenue was caused by the shrinking demand for fixed telephone services due to the increasing attractiveness of public mobile telephone services.

In 2015, the largest portion of the electronic communications market revenue was generated by TEO LT, AB (26.6%), but, compared to 2014, it shrank by 1.4 percentage point (see Fig. 4). UAB Mediafon made the sharpest leap in the structure of the market revenue: its market share grew by 2.5 percentage point.



* As of 1 October 2015 UAB Mediafon assigned a part of provided electronic communications services to its subsidiary UAB Mediafon Carrier Services; however, the chart illustrates the total revenue of UAB Mediafon and UAB Mediafon Carrier Services.

Fig. 4. **Structure of the electronic communications market revenue by service providers, %, and annual changes of the market shares, pp, 2015.**
Source: RRT

ARPU. Average revenue per user ("ARPU") for retail electronic communications services was decreasing in 2015, compared to 2014 (see Table 5), but in individual service groups ARPU was changing inconsistently. Internet access providers received the largest share of revenue from one service user (the same as in previous periods) – EUR 8.2, the smallest portion of revenue was received by public mobile telephone service providers (EUR 4.5).

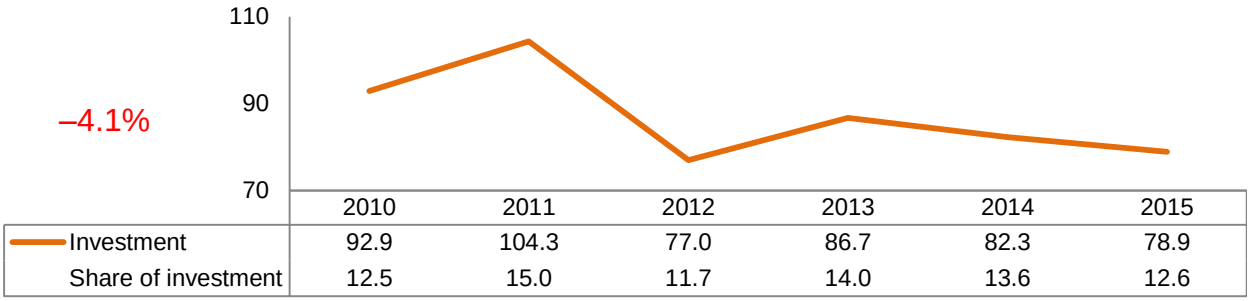
Table 5. **Average revenue per user per month (ARPU) by electronic communications services, in EUR per month, 2010-2015.**

	2010	2011	2012	2013	2014	2015
Public mobile telephone services	4.8	4.5	4.3	4.4	4.3	4.5
Public fixed telephone services	9.4	8.9	8.6	8.3	7.6	7.1
Internet access	10.1	9.0	8.6	8.6	8.3	8.2
Television (pay)	6.0	6.2	6.3	6.9	7.0	7.0

Source: RRT

Investments. In 2015, the service providers invested EUR 78.9 million in the electronic communications infrastructure and, compared to 2014, it was less by 4.1% (see Fig. 5). Investments were made mostly in broadband networks: mobile communications 4G networks (Long Term Evolution, LTE) and optical fibre communication line networks. While overviewing the opportunities of the development of the

electronic communications market, it is necessary to take account of the share of investment in the total revenue of this market. In 2015, it stood at 12.6% and was smaller by 1 pp, compared to 2014.



	2010	2011	2012	2013	2014	2015
Investment	92.9	104.3	77.0	86.7	82.3	78.9
Share of investment	12.5	15.0	11.7	14.0	13.6	12.6

Fig. 5. **Investments in the electronic communications infrastructure, in EUR million, and share of investments in the total revenue of the electronic communications market, %, 2010-2015.**
Source: RRT

The competition on the Lithuanian electronic communications service market provided the Lithuanian residents with the exceptional conditions to use high-quality services whose prices are one of the lowest in the European Union and ensured active investments, which only slightly decreased during the downtime, of the market players in both the services provided and the infrastructure of electronic communications.

2. Telephone Services

2.1. Public Mobile Telephone Voice Services

N.B.!

- In this chapter of the report other public mobile telephone voice service providers shall be all public mobile telephone voice service providers, except for UAB Bitė Lietuva, UAB Omnitel and UAB Tele2 ("other providers").

Public mobile telephone voice services consist of local[2], international[3] and roaming[4] calls via public mobile communications networks, where Lithuanian users of public mobile telephone services use roaming services in foreign countries ("roaming calls").

Service Providers. At the end of 2015, public mobile telephone voice services were provided by 14 undertakings: 7 operators were engaged in the provision of public mobile telephone communication services and were concluding contracts with service recipients and 7 undertakings were reselling services provided by other public mobile telephone communication service providers.

Service Recipients. At the end of 2015, public mobile telephone voice services were provided to 4.2 million service users[5] (see Table 3), i.e. by 1.9% less than at the end of 2014. The penetration of public mobile telephone service users went down by 1.2 pp in 2015 and at the end of 2015 there were 144.8 active SIM (Subscriber Identification Module) cards per 100 residents (see Table 4). However, the decrease of the number of service users is to be associated with their wish to use only one SIM card rather than to the decrease in general. This is also confirmed by call flows which are still growing due to the service plans offered by service providers which are attractive price-wise (see Fig. 6).

In 2015, the major share (60.9%) consisted of service users who paid for the services under invoices ("post-paid") rather than in advance ("pre-paid") (see Table 6). With a view to the period between 2010 and 2015, the continuous trend subject to the growth of the number of post-paid public mobile telephone service users came about. In 2015, the number of such service users increased by 3.5% or 87.1 thousand units and totalled 2,547.8 thousand. Accordingly, the use of pre-paid SIM cards was going down on the market. These trends could have been encouraged by attractive so-called "*flat rate*" service plans applied by the service providers, where a certain duration of local calls (or unlimited calls to all networks of

[2] Local calls shall mean the calls originated and terminated in Lithuanian public mobile and fixed communications operator networks.
[3] International calls shall mean the calls originated in Lithuanian public mobile and fixed communications operator networks and terminated in foreign operator networks.
[4] Roaming calls shall mean the calls originated by service users of Lithuanian public mobile communications network operators in foreign countries.
[5] The number of service users indicated in this part of the report corresponds to the number of active subscribers, and the latter corresponds to the number of active SIM cards. An active subscriber shall mean a subscriber who in the last 3 months has initiated a telecommunications event (originated a call, sent a short text message or used another service).

Lithuania) and a certain amount of additional services (SMS data transmission services) are offered for a regular charge.

Table 6. **Structure of the number of public mobile telephone service users by service providers and method of payment, in thousands, 2010-2015.**

	2010	2011	2012	2013	2014	2015
UAB Bitė Lietuva	1,046.8	1,066.8	1,033.1	1,023.2	1,007.7	1,041.7
Pre-paid	*539.8*	*521.8*	*465.3*	*422.6*	*399.9*	*386.6*
Post-paid	*507.0*	*545.0*	*567.8*	*600.6*	*607.8*	*655.1*
UAB Omnitel	1,940.5	1,918.5	1,948.7	1,512.5	1,334.6	1,278.8
Pre-paid	*1,128.5*	*1,045.9*	*1,058.8*	*633.7*	*439.3*	*351.3*
Post-paid	*812.0*	*872.6*	*889.9*	*878.8*	*895.3*	*927.5*
UAB Tele2	1,802.6	1,842.3	1,916.5	1,871.4	1,843.1	1,782.9
Pre-paid	*1,186.4*	*1,175.9*	*1,165.7*	*1,027.3*	*963.4*	*897.1*
Post-paid	*616.2*	*666.4*	*750.8*	*844.1*	*879.7*	*885.8*
Other providers	101.1	110.4	99.0	87.0	79.2	80.7
Pre-paid	*18.5*	*21.9*	*21.3*	*13.0*	*1.3*	*1.3*
Post-paid	*82.6*	*88.5*	*77.7*	*74.0*	*77.9*	*79.3*
All providers	**4,891.0**	**4,938.0**	**4,997.3**	**4,494.1**	**4,264.6**	**4,184.1**
Pre-paid	*2,873.2*	*2,765.5*	*2,711.1*	*2,096.6*	*1,803.9*	*1,636.3*
Post-paid	*2,017.8*	*2,172.5*	*2,286.2*	*2,397.5*	*2,460.7*	*2,547.8*

Source: RRT

With a view to the breakdown of the number of public mobile telephone service users by providers, the number of service users of UAB Omnitel and UAB Tele2 decreased in 2015 (see Table 6). The number of public mobile telephone service users of UAB Bitė Lietuva and other providers went up in 2015, compared to 2014. UAB Tele2, by the number of service users, held the largest share of the market (42.6%) in 2015, the same as in 2014.

Number Portability Service. In 2015, this service was used by 89.1 thousand service users, which constituted 2.1% of all public mobile telephone service users. In 2015, this service was used by 44.6% of service users less compared to 2014 (see Table 7). The significant decrease in the demand for the telephone number portability services shows the growing loyalty of the service users to their operators, which could have been caused by subsided “price wars” on the market of the public mobile telephone services.

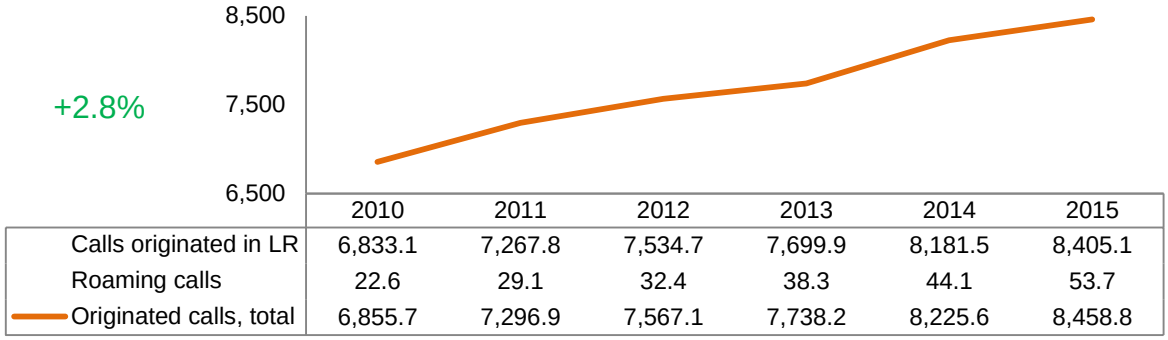
Table 7. **Number portability flows by service providers, in units, in 2015.**

	To	From	**Balance**
UAB Bitė Lietuva	25,602	30,009	**–4,407**
UAB Omnitel	26,886	26,066	**820**
UAB Tele2	30,239	28,632	**1,607**
UAB Teledema	3,249	1,880	**1,369**
UAB Eurocom plius	2,219	1,643	**576**
UAB CSC Telecom	837	820	**17**
UAB Mediafon	13	18	**–5**

Source: RRT

The major part of service users that used the number portability service came to UAB Tele2 network (33.9%), and UAB Bitė Lietuva network was left by most subscribers (33.7%) (see Table 7).

Call Duration. The duration of calls originated by Lithuanian public mobile telephone service users increased by 2.8% in 2015, compared to 2014, or by 233.2 million minutes and totalled 8,458.8 million minutes (see Fig. 6). In 2015, the Lithuanian public mobile telephone voice service users originated 99.4% of the calls by duration in Lithuania. Rest of the calls were originated in foreign countries, where the Lithuanian public mobile telephone service users used roaming services when being abroad.



	2010	2011	2012	2013	2014	2015
Calls originated in LR	6,833.1	7,267.8	7,534.7	7,699.9	8,181.5	8,405.1
Roaming calls	22.6	29.1	32.4	38.3	44.1	53.7
Originated calls, total	6,855.7	7,296.9	7,567.1	7,738.2	8,225.6	8,458.8

Fig. 6. **Duration of calls originated by Lithuanian public mobile telephone voice service users, in million minutes, 2010-2015.**
Source: RRT

With a view to the breakdown of the duration of calls originated by the Lithuanian public mobile telephone service users by providers, the longest duration (47.8%) was that of the calls originated by UAB Tele2 service users in 2015 (see Table 8).

Table 8. **Duration of calls originated by Lithuanian public mobile telephone voice service users by service providers, in million minutes, 2010-2015.**

	2010	2011	2012	2013	2014	2015
UAB Bitė Lietuva	1,574.1	1,642.9	1,720.3	1,761.7	1,930.7	1,947.3
UAB Omnitel	2,280.8	2,289.2	2,202.8	2,148.8	2,157.6	2,240.8
UAB Tele2	2,808.0	3,142.5	3,393.1	3,571.8	3,877.9	4,045.3
Other providers	170.3	193.2	218.5	217.6	215.3	225.3

Source: RRT

When assessing the call structure, the call destinations must be taken into account as well. The following destinations of the calls originated in the Lithuanian public mobile communications networks are singled out, where the calls are terminated: in own network, in other public mobile communications networks, in public fixed communications networks and in foreign operators' networks. The major share (59.1%) of all public mobile telephone calls were terminated in the own network in 2015 (see Table 9). In 2015, the duration of the public mobile telephone calls which were terminated in other public mobile and fixed communications networks increased by 13.0% and 21.0%, accordingly. The calls to other public mobile telephone networks (except for the calls which were terminated in the own network) constituted the major share (37.1%) of the whole duration of the calls originated in the Lithuanian public mobile communications networks.

Table 9. **Structure of the duration of calls originated in individual Lithuanian public mobile communications networks by call destination, in million minutes, 2010-2015.**

UAB Bitė Lietuva	2010	2011	2012	2013	2014	2015
Terminated in own network	1,104.1	1,078.3	1,086.5	1,059.9	1,035.4	989.2
Terminated in other public mobile communications networks	416.2	502.5	560.5	618.8	812.9	861.1
Terminated in public fixed communications networks	29.2	33.5	42.6	53.2	64.0	69.1
Terminated in foreign operators' networks	24.5	28.7	30.8	29.8	18.4	13.2
UAB Omnitel						
Terminated in own network	1,655.9	1,583.8	1,439.1	1,333.0	1,214.3	1,162.6
Terminated in other public mobile communications networks	558.9	633.3	689.8	740.9	862.0	965.8
Terminated in public fixed communications networks	44.6	50.4	52.6	54.7	62.5	70.6
Terminated in foreign operators' networks	21.5	21.7	21.4	20.2	18.8	18.7
UAB Tele2						
Terminated in own network	2,340.9	2,547.4	2,688.7	2,755.1	2,821.5	2,743.9
Terminated in other public mobile communications networks	414.9	521.8	635.0	735.6	948.7	1,147.8
Terminated in public fixed communications networks	38.6	48.1	53.3	63.6	89.0	122.1
Terminated in foreign operators' networks	13.6	25.1	16.1	17.5	18.7	18.3
Other providers						
Terminated in own network	64.9	73.7	79.0	78.7	73.6	73.6
Terminated in other public mobile communications networks	97.8	110.6	129.9	129.3	132.4	139.9
Terminated in public fixed communications networks	4.7	5.8	6.3	6.3	6.7	7.2
Terminated in foreign operators' networks	2.9	3.1	3.3	3.3	2.6	2.0
All providers						
Terminated in own network	5,165.7	5,283.1	5,293.2	5,226.7	5,144.7	4,969.3
Terminated in other public mobile communications networks	1,487.9	1,768.2	2,015.2	2,224.5	2,755.9	3,114.6
Terminated in public fixed communications networks	117.1	137.8	154.8	177.9	222.3	269.0
Terminated in foreign operators' networks	62.4	78.6	71.6	70.8	58.6	52.2

Source: RRT

Taking account of the call destinations, it must be noted that the largest call flow was generated inside the network of three major operators. In 2015, the same as in 2014, the longest calls were made between UAB Tele2 service users (see Table 9) – these calls accounted for 68.1% of the total duration of calls originated in UAB Tele2 network. However, the service users of other providers were mainly calling to other public mobile communications networks. This situation most likely occurred because the calls were usually terminated in the networks of major operators due to the low number of service users of other operators.

When analysing the call structure by the method of settlement, most calls in Lithuania were originated by service users (legal and natural entities) which paid for the services under invoices (*post-paid*)

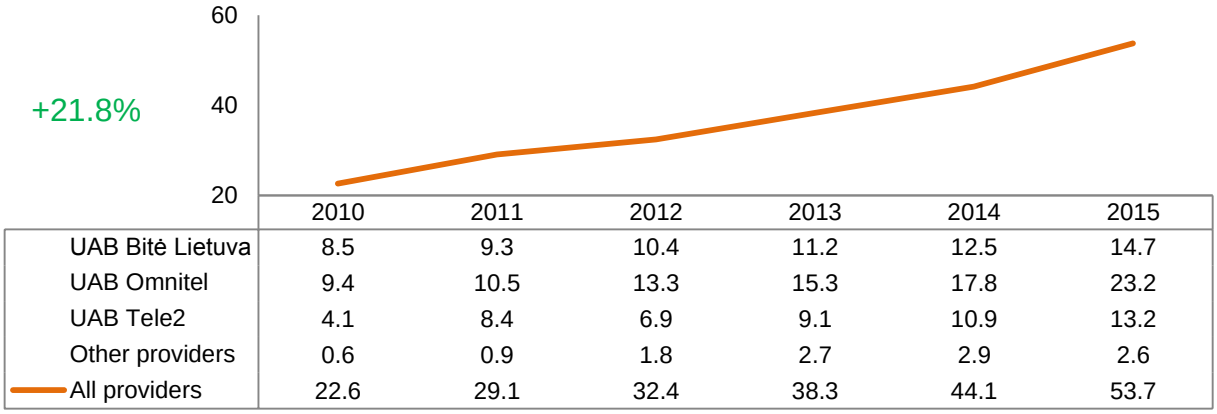
in 2015, i.e. 72.4% of the total duration of originated calls (see Table 10). The duration of such calls grew by 4.0% in 2015, compared to 2014. The average monthly call duration per post-paid service user was 199.0 minutes in 2015 (natural entity – 215.2 min., legal entity – 168.6 min.), and the duration per pre-paid service user (without differentiation between natural and legal entities) was 118.1 minutes.

Table 10. **Structure of the duration of calls of various destinations originated in Lithuanian public mobile communications networks by method of settlement and type of service users, in million minutes, 2014-2015.**

	2014			2015		
	Pre-paid	*Post-paid*		*Pre-paid*	*Post-paid*	
		Natural	Legal		Natural	Legal
Terminated in own network	1,938.0	2,280.5	926.1	1,739.9	2,302.4	926.9
Terminated in other public mobile communications networks	343.6	1,673.0	739.2	516.9	1,834.4	763.3
Terminated in public fixed communications networks	39.2	124.4	58.7	56.9	147.3	64.9
Terminated in foreign operators' networks	6.6	18.1	33.9	6.1	14.7	31.4
Total originated	**2,327.4**	**4,096.0**	**1,757.9**	**2,319.8**	**4,298.8**	**1,786.5**

Source: RRT

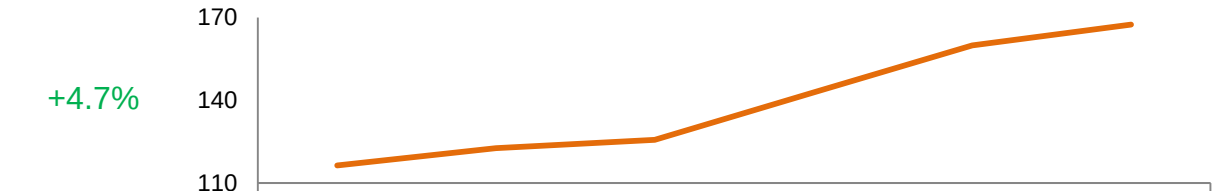
In 2015, UAB Omnitel remained the leader of roaming services, where service users of Lithuanian public mobile telephone service providers is calling while being abroad (see Fig. 7): in 2015, the service users of this operator originated 43.2% of all roaming calls in terms of the call duration. The duration of roaming calls originated by UAB Omnitel service users went up by 30.3% or by 5.4 million minutes in 2015.



	2010	2011	2012	2013	2014	2015
UAB Bitė Lietuva	8.5	9.3	10.4	11.2	12.5	14.7
UAB Omnitel	9.4	10.5	13.3	15.3	17.8	23.2
UAB Tele2	4.1	8.4	6.9	9.1	10.9	13.2
Other providers	0.6	0.9	1.8	2.7	2.9	2.6
All providers	22.6	29.1	32.4	38.3	44.1	53.7

Fig. 7. **Duration of calls originated by Lithuanian public mobile telephone service users using roaming services by service providers, in million minutes, 2010-2015.**
Source: RRT

With a view to the calls originated in Lithuanian public mobile communications networks, without differentiating call destinations, the average monthly call duration per service user was 167.4 minutes in 2015 (almost 3 hours), i.e. by 7.5 minutes longer than in 2014 (see Fig. 8). In 2015, the longest average call duration (230.2 minutes or almost 4 hours) was that of a service user of other service providers whose monthly call duration increased by 1.6% over the year.

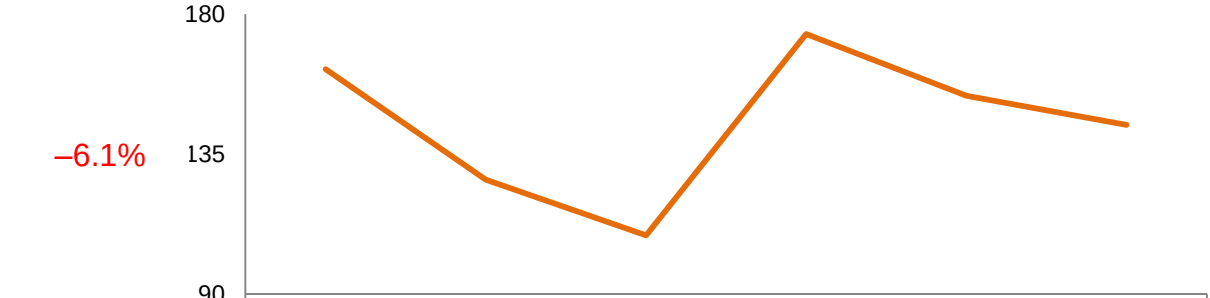


	2010	2011	2012	2013	2014	2015
UAB Bitė Lietuva	125.3	128.3	138.8	143.5	159.7	154.6
UAB Omnitel	98.0	99.4	94.2	118.4	134.4	144.5
UAB Tele2	129.8	142.1	147.5	159.0	175.3	188.5
Other providers	140.3	145.8	184.0	208.2	226.5	230.2
All providers	116.4	122.7	125.6	142.8	159.9	167.4

Fig. 8. **Average monthly duration of calls originated by a single Lithuanian public mobile telephone voice service user by service providers, in minutes, 2010-2015.**
Source: RRT

Revenue. In 2015, the revenue received from public mobile telephone voice services accounted for one of the largest portions of the revenue of the electronic communications service market (23.1%). In 2013, the leap in revenue (see Fig. 9) was caused by re-allocation of the revenue for public mobile communications services that took place due to the RRT's detailed methodology for revenue re-allocation for services. The trend of decreasing revenue has been further observed since 2013. In 2015, the revenue from public mobile telephone voice services went down by 6.1% or EUR 9.3 million.

In 2015, the largest market share (39.8%) by revenue from public mobile telephone voice services was held by UAB Tele2, the same as in 2014.



	2010	2011	2012	2013	2014	2015
UAB Bitė Lietuva	44.7	38.0	33.6	48.0	41.9	40.0
UAB Omnitel	61.9	41.7	36.5	55.1	48.2	45.0
UAB Tele2	51.5	42.9	34.8	67.3	61.2	57.5
Other providers	4.2	4.2	3.8	3.2	2.4	1.9
Total revenue	162.2	126.8	108.8	173.6	153.7	144.4

Fig. 9. **Structure of revenue from public mobile telephone voice services by service providers, in EUR million, 2010-2015.**
Source: RRT

Since one operator does not single out the revenue from local and international calls, the structure of the revenue received by public mobile telephone voice service providers by call destinations is very difficult to assess. However, with a view to the roaming call segment, it must be noted that the major portion of the revenue (45.3%) from roaming calls was generated by other providers in 2015, the smallest portion was that of UAB Tele2 (see Table 11).

Table 11. **Structure of revenue received by public mobile telephone voice service providers by call destinations, %, 2015.**

	Local calls	International calls	Roaming calls
UAB Bitė Lietuva	60.5	17.1	22.4
UAB Omnitel	67.8	16.7	15.5
UAB Tele2	87.1*		12.9
Other providers	30.0	24.7	45.3

***** UAB Tele2 does not single out the revenue from local and international calls

Source: RRT

ARPU. The average monthly revenue per subscriber (ARPU) from public mobile telephone voice services constituted EUR 3.2 in 2013 (see Table 12). In 2013, the ARPU leap was caused by re-allocation of the revenue for mobile communications services that took place due to the RRT's detailed methodology for revenue re-allocation for services. However, the trend of decreasing ARPU that has been observed since 2013 is to be related to the effective competition on the market. The latter results in the price drop, and the service users gain the opportunity to use high-quality public mobile telephone voice services. It must be noted that service providers earn more than 2.5 times from post-paid service users rather than from pre-paid ones. In spite of this, the growth of the number of post-paid public mobile telephone service users was recorded in 2015 (3.5%). This shows that in 2015, the difference between the service users' expenditure when paying under invoices or in advance most likely did not seem significant, and the choice was determined by "*flat rate*" service plans offered by service providers which corresponded to the service users' needs, because they were attractive as they helped forecast the expenses.

ARPU from public mobile telephone voice services went slightly down (EUR 0.1) and stood at EUR 2.9 per month in 2015. It comprised 64.4% of ARPU from all public mobile telephone services.

Table 12. **ARPU from public mobile telephone voice services by method of settlement, in EUR per month, 2010-2015.**

	2010	2011	2012	2013	2014	2015
ARPU from public mobile telephone voice services	2.8	2.1	1.8	3.2	3.0	2.9
From *post-paid*	*4.7*	*3.3*	*2.6*	*4.7*	*4.1*	*3.7*
From *pre-paid*	*1.4*	*1.3*	*1.2*	*1.5*	*1.5*	*1.6*
ARPU from all public mobile telephone services	4.8	4.5	4.4	4.4	4.3	4.5

Source: RRT

The comparison of ARPU received by major operators from public mobile telephone voice services shows that in 2015, the lowest ARPU was that of UAB Tele2 (EUR 2.7), the highest ARPU was generated by UAB Bitė Lietuva (EUR 3.2) (see Table 13).

Table 13. **ARPU from public mobile telephone voice services by providers, in EUR per month, 2010-2015.**

	2010	2011	2012	2013	2014	2015
UAB Bitė Lietuva	3.6	3.0	2.7	3.9	3.5	3.2
UAB Omnitel	2.7	1.8	1.6	2.9	3.0	2.9
UAB Tele2	2.4	1.9	1.5	3.0	2.8	2.7
Other providers	3.4	3.2	3.2	3.1	2.5	2.0

Source: RRT

Prices. In Lithuania, the so-called "*flat rate*" service plans are prevailing, where a certain duration of local calls (or unlimited calls to all networks of Lithuania) and a certain amount of additional services (SMS data transmission services) are offered for a certain regular charge. Where different mobile telephone service "*flat rate*" service plans are offered on the market, it is difficult to exclude the price of public mobile telephone voice services from the total price offered in the plan. However, having calculated the average prices of voice services (the ratio between revenue from such services and duration of respective calls subject to received revenue), the slight trend of the price decrease characteristic to all operators has been observed since 2014. Over the last three years, the sharpest drop of the calculated average voice service price of UAB Bitė Lietuva was recorded (0.7 euro cent per minute). The average prices of the same services provided by UAB Omnitel and UAB Tele2 calculated at the same time were decreasing at the same pace – by 0.5 euro cent per minute. In 2015, the calculated average price per other providers' call minute stood at 0.8 euro cent per minute (see Table 14).

Table 14. **Calculated average public mobile telephone voice service prices by service providers, in euro cents per minute, 2010-2015.**

	2010	2011	2012	2013	2014	2015
UAB Bitė Lietuva	2.8	2.3	1.9	2.7	2.2	2.0
UAB Omnitel	2.7	1.8	1.6	2.5	2.2	2.0
UAB Tele2	1.8	1.4	1.0	1.9	1.6	1.4
Other providers	2.4	2.2	1.7	1.4	1.1	0.8
All providers	**2.4**	**1.7**	**1.4**	**2.2**	**1.8**	**1.7**

Source: RRT

In 2015, the prices applied by roaming voice service providers were going down as well. In 2015, the roaming prices stood at EUR 0.23 per minute (incl. VAT). On 25 November 2015 Regulation (EU) 2015/2120 of the European Parliament and of the Council on roaming on public mobile communications networks within the European Union that entrenched the reduction of roaming prices in the European Union[6] as of 30 April 2016 was adopted. Moreover, as of 15 June 2017 the roaming prices paid by consumers will have to be the same as in their own country. Taking account of such amendments, the roaming prices are likely to further decrease in the future and this will enhance the growth of the demand for roaming calls.

Quality. In order to inform on the quality of electronic communications services RRT carries out the evaluation tests of the public mobile telephone service quality indicators[7] in relation to UAB Bitė Lietuva, UAB Omnitel and UAB Tele2 public mobile communications networks operating in Lithuania. The following criteria are taken into account when carrying out the tests: share of unsuccessful calls of voicetelephony, call setup time, voice transmission quality[8] and share of uninterrupted calls. When analysing the voice transmission quality indicator MOS-LQO by different service providers, it is observed that it is high and differs insignificantly (see Table 15). In 2015, the highest voice transmission quality value recorded during a test call was 3.85 MOS-LQO scores. It must be noted that the higher the score, the higher the quality of the service.

[6] http://www.rrt.lt/lt/vartotojui/telefono-rysys/tarptautinis-tarptinklinis-rysys.html
[7] For more information, see RRT website at: http://www.rrt.lt/lt/apzvalgos-ir-ataskaitos/viesuju-judriojo-telefono-rj7y.html.
[8] Voice transmission quality is a figure which shows the quality of a voice transmitted over the network during a successful call expressed in MOS-LQO scores (5 is the maximum score). MOS-LQO assessment is carried out by means of specific software installed in RRT measurement equipment. The higher the MOS-LQO score, the better the assessment of the voice transmission quality.

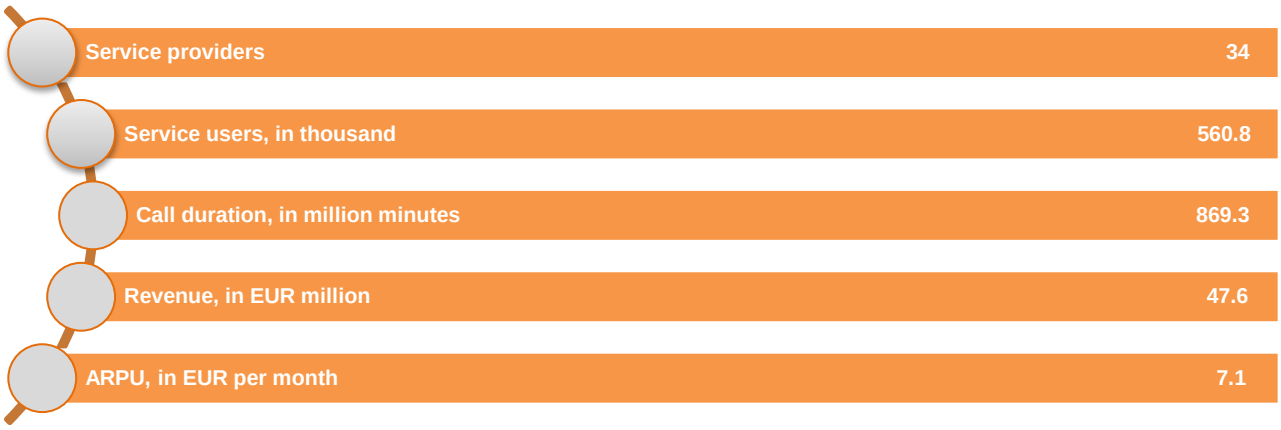
Table 15. **Average MOS-LQO value of transmission quality of mobile telephone voice services by service providers, in scores, 2011-2015.**

	2011	2012	2013	2014	2015
UAB Bitė Lietuva	3.25	3.24	3.16	3.25	3.25
UAB Omnitel	3.42	3.47	3.44	3.60	3.57
UAB Tele2	3.21	3.22	3.16	3.32	3.32

Source: RRT

Effective competition on the market of public mobile telephone voice services encouraged the service providers to offer attractive service plans which provided the service users with the opportunity to use high-quality services almost without limits and pay a little less for such services than last year. The *"flat rate"* service plans offered by service providers allowed the service users to receive various public mobile telephone services for a fixed price, to pay a single invoice and forecast their expenses in terms of such services. *"Flat rate"* service plans and functionality of smart terminal equipment promoted the convergence processes of public mobile telephone services.

2.2. Public Fixed Telephone Voice Services



N.B.!

- In this chapter of the report other public fixed telephone voice service providers shall be all public fixed telephone voice service providers, except for TEO LT, AB ("other providers").

Public fixed telephone voice services consist of local and international calls via public fixed communications networks.

Service Providers. At the end of 2015, the public fixed telephone voice services were provided by 34 undertakings, i.e. by 3 undertakings less than at the end of 2014. As many as 31 (at the end of 2014 – 33) undertakings indicated that they provided public fixed telephone services by means of technology of Internet Protocol.

Service Recipients. The total number of public fixed telephone service users decreased by 4.2% or 24.7 thousand in 2015 and at the end of 2015, it stood at 560.8 thousand service users (see Table 16). The service users received public fixed telephone voice services via public fixed telephone lines by means of PSTN (Public Switched Telephone Network), ISDN (Integrated Services Digital Network) and VoIP (Voice Over IP) technologies. The number of service users does not correspond to the number of lines as public fixed telephone voice services may be provided to several service users via a single line provided by means of different technologies. In 2015, compared to 2014, the number of used public fixed telephone lines decreased by 3.7% or by 21.1 thousand lines and the total number equalled 553.4 thousand lines. Due to the shrinking number of lines, the penetration of communications lines via which the public fixed telephone services were provided decreased as well. At the end of 2015, as many as 19.2 lines per 100 residents were available.

Table 16. **Number of public fixed telephone service users and of used lines, in thousands, and penetration (per 100 residents and 100 households), %, 2010-2015.**

	2010	2011	2012	2013	2014	2015
Number of lines, in thousand units	**733.7**	**695.8**	**659.8**	**614.5**	**574.5**	**553.4**
Line penetration (per 100 residents), %	*24.0*	*23.2*	*22.2*	*20.9*	*19.7*	*19.2*
Line penetration (per 100 households), %	*57.2*	*55.1*	*53.3*	*47.0*	*44.2*	*42.9*
Number of service users, in thousand units	**753.4**	**711.9**	**675.4**	**624.8**	**585.5**	**560.8**
Natural entities	*555.0*	*520.5*	*482.1*	*449.8*	*416.3*	*396.8*
Legal entities	*198.4*	*191.4*	*193.3*	*175.0*	*169.2*	*164.0*
Service users' penetration (per 100 residents), %	*24.7*	*23.7*	*22.7*	*21.2*	*20.0*	*19.4*
Service users' penetration (per 100 households), %	*58.7*	*56.4*	*54.5*	*47.8*	*45.1*	*43.5*

Source: RRT

The greatest share of the number of public fixed telephone service users (70.8%) was represented by natural entities in 2015 (see Table 16). In 2015, compared to 2014, the number of natural entities using public fixed telephone services dropped by 4.7% or by 19.5 thousand. The number of legal entities has been decreasing since 2009 as well: in 2015, their number shrank by 3.1% or by 5.2 thousand.

The number of users of public fixed telephone services provided by TEO LT, AB went down by 4.8% or by 25.4 thousand in 2015, compared to 2014 (see Table 17). The number of users of services provided by other providers increased by 1.0% or by 0.6 thousand in 2015. In 2015, the largest undertakings out of other providers (by the number of service users at the end of 2015) were the following undertakings: UAB CSC Telecom, UAB Baltnetos Komunikacijos and UAB Cgates – their total market share constituted 6.8%.

Table 17. **Number of public fixed telephone service users by service providers, in thousands, and by types of service users, %, 2010-2015.**

	2010	2011	2012	2013	2014	2015
TEO LT, AB	**689.2**	**646.2**	**604.2**	**564.1**	**524.7**	**499.3**
Natural entities	*79.0*	*78.3*	*77.5*	*77.1*	*76.3*	*75.9*
Legal entities	*21.0*	*21.7*	*22.5*	*22.9*	*23.7*	*24.1*
Other providers	**64.2**	**65.7**	**71.2**	**60.7**	**60.8**	**61.4**
Natural entities	*16.8*	*22.0*	*19.5*	*24.4*	*26.2*	*28.6*
Legal entities	*83.2*	*78.0*	*80.5*	*75.6*	*73.8*	*71.4*

Source: RRT

The decreasing overall number of service users resulted in the changes in the market structure by type of service users (see Table 17). The number of natural entities using public fixed telephone services provided by TEO LT, AB dropped by 5.3% and stood at 379.2 thousand in 2015. For this reason, the market share held by TEO LT, AB in the segment of services provided to natural entities decreased by 0.6 pp and stood at 95.6% of the overall market. The number of natural entities using public fixed telephone services provided by other providers grew by 10.4% and stood at 17.6 thousand service users in 2015, compared to 2014.

The number of legal entities using public fixed telephone services provided by TEO LT, AB and other providers dropped by 3.3% (4.1 thousand) and 2.3% (1.0 thousand), respectively, in 2015. TEO LT, AB whose public fixed telephone services were used by 120.1 thousand legal entities at the end of 2015 held 73.3% of the market of public fixed telephone services provided to legal entities.

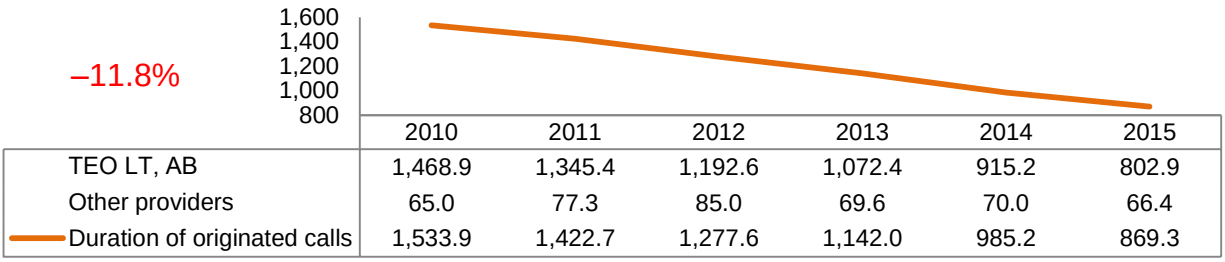
Number Portability Service. In 2015, this service was used 6.4 thousand times, i.e. by 4.9% more than in 2014 (see Table 18). A major share (62.5%) of telephone numbers were ported to another network from TEO LT, AB network – this accounted for 4.0 thousand telephone numbers. As many as 1.7 thousand telephone numbers were ported from the networks of other providers to TEO LT, AB network. Almost half (49.3%) of all ported telephone numbers were attracted by UAB Nacionalinis Telekomunikacijų Tinklas.

Table 18. **Number portability flows by service providers, in units, in 2015.**

	To	From	Balance
TEO LT, AB	1,730	3,984	**–2,254**
UAB Nacionalinis Telekomunikacijų Tinklas	3,154	1,250	**1,904**
UAB Mediafon	751	275	**476**
UAB CSC Telecom	326	590	**–264**
UAB Telekomunikacijų Grupė	12	56	**–44**
AB Lietuvos Radijo ir Televizijos Centras	47	66	**–19**

Source: RRT

Call Duration. The size of the market of public fixed telephone voice services, in terms of the duration of originated calls, was gradually decreasing. In 2015, the duration of calls originated by public fixed telephone voice service users dropped by 11.8%, and since 2010 it had decreased by 43.3% (see Fig. 10). The market of public fixed telephone voice services, in terms of the duration of calls originated in the networks of different providers, maintained the same positions in 2015 as in the previous year: the major market share (92.4%) was held by TEO LT, AB; however, its market share had shrunk by 3.4 pp since 2010.



	2010	2011	2012	2013	2014	2015
TEO LT, AB	1,468.9	1,345.4	1,192.6	1,072.4	915.2	802.9
Other providers	65.0	77.3	85.0	69.6	70.0	66.4
Duration of originated calls	1,533.9	1,422.7	1,277.6	1,142.0	985.2	869.3

Fig. 10. **Duration of calls originated by public fixed telephone voice service users by service providers, in million minutes, 2010-2015.**
Source: RRT

The dynamics of the duration of calls originated by the users of services provided by TEO LT, AB by call destinations during the period between 2010 and 2015 shows that the trend of the indicator changes by call destinations remains stable: the users of services provided by TEO LT, AB make fewer calls in own network and tend to make more calls to other public fixed and mobile communications networks (see Table 19). In 2015, the duration of calls in own TEO LT, AB network went down by 18.5% or 134.4 million minutes.

Table 19. **Structure of the duration of calls originated in individual public fixed communications networks by call destination, in million minutes, 2010-2015.**

TEO LT, AB	2010	2011	2012	2013	2014	2015
Terminated in own network	1,370.3	1,238.5	1,078.7	914.1	726.2	591.8
Terminated in other public fixed communications networks	11.2	14.4	17.8	19.6	21.0	22.5
Terminated in public mobile communications networks	53.1	60.4	67.1	111.2	144.1	167.3
Terminated in foreign operators' networks	34.3	32.1	29.0	27.5	23.9	21.3
Other providers						
Terminated in own network	14.0	14.2	12.6	13.1	12.8	13.7
Terminated in other public fixed communications networks	20.2	23.5	29.9	22.4	23.8	22.5
Terminated in public mobile communications networks	13.1	15.6	18.6	21.2	20.5	20.5
Terminated in foreign operators' networks	17.7	24.0	23.9	12.9	12.9	9.7

Source: RRT

The structure of calls originated by the users of services provided by other providers by call destinations remained stable during the period between 2010 and 2015. Contrary to TEO LT, AB, the duration of calls originated by other providers' service users and terminated in own network constituted one of the smallest shares (in 2015 – 20.6%), call flows to other public fixed communications networks were almost the same, and call flows to foreign networks maintained the decreasing trend (see Table 19).

Revenue. In 2015, the revenue from public fixed telephone voice services went down by 11.2% or EUR 6.0 million (see Fig. 11).

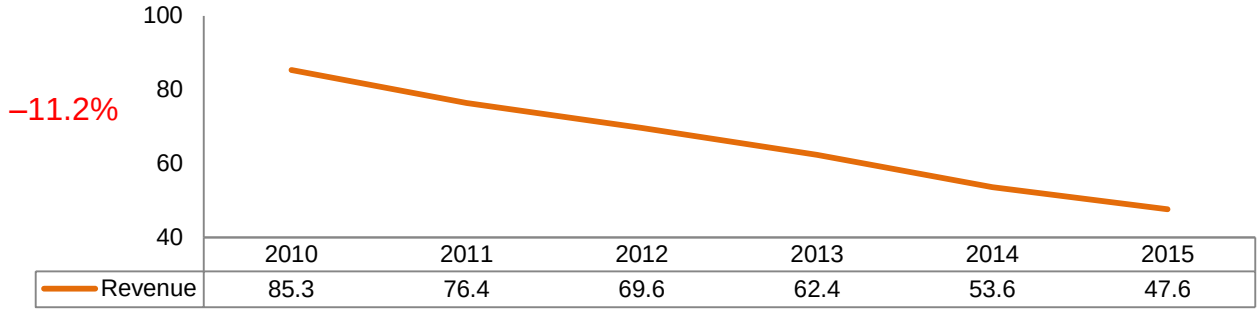


Fig. 11. **Revenue from public fixed telephone voice services, in EUR million, 2010-2015.**
Source: RRT

With a view to the structure of the revenue from public fixed telephone voice services by providers, the decreasing trend of the revenue received by all service providers from public fixed telephone voice services has been observed since 2010. In 2015, compared to 2014, the revenue received by TEO LT, AB from the provision of public fixed telephone voice services dropped by 11.7%. TEO LT, AB, having received the revenue of EUR 44.9 million, held 94.4% of the overall market of public fixed telephone voice services in 2015. The revenue of other providers received from public fixed telephone services went down by 2.2% or by EUR 59.0 thousand in 2015, compared to 2014.

ARPU. The average revenue from public fixed telephone voice services per subscriber per month (ARPU) dropped by 6.6% and accounted for EUR 7.1 in 2015, compared to 2014 (see Table 20). In 2015, ARPU decreased both in the segments of legal and natural entities. During the period between 2010 and 2015, ARPU from the services provided to legal entities dropped sharper (33.6%) compared to natural entities (21.1%). This may be associated with more favourable conditions in the segment of legal entities than in the segment of natural entities in terms of competition.

Table 20. **ARPU from public fixed telephone voice services by service providers and type of service users, in EUR per month, 2010-2015.**

ARPU by users	2010	2011	2012	2013	2014	2015
ARPU from public fixed telephone voice services*	9.4	8.9	8.6	8.3	7.6	7.1
Natural entities	*7.6*	*7.5*	*7.4*	*7.1*	*6.5*	*6.0*
Legal entities	*14.6*	*12.8*	*11.6*	*11.5*	*10.4*	*9.7*
ARPU by providers						
TEO LT, AB	*9.8*	*9.3*	*9.1*	*8.8*	*8.1*	*7.5*
Other providers	*5.7*	*5.3*	*4.5*	*4.0*	*3.7*	*3.6*

***** Including the revenue from loops.

Source: RRT

In 2015, ARPU from public fixed telephone voice services exceeded ARPU from public mobile telephone voice services by 2.5 times. As ARPU does indirectly reflect average monthly expenses of a single service

user as well, besides the differences in functionality of fixed and mobile telephone voice services, the difference of ARPU in terms of such services also contributes to higher attractiveness of public mobile telephone voice services to service users and this may be defined as one of the reasons for the market of public fixed telephone voice services to have been rapidly shrinking.

Prices. In 2015, the calculated average prices of different public fixed telephone voice service providers (ratio between revenue from such services and duration of calls that revenue was generated from) per minute of a local call differed insignificantly (see Table 21). In 2015, compared to 2014, the calculated average price per minute of a call originated in the network of TEO LT, AB increased by 0.1 euro cent or by 4.5%, while the calculated average prices of the said services provided by other providers remained the same.

Table 21. **Calculated average public fixed telephone voice service prices by service providers, in euro cents per minute, 2010-2015.**

Local call	2010	2011	2012	2013	2014	2015
TEO LT, AB	1.7	1.5	1.8	2.0	2.2	2.3
Other providers	4.3	3.0	2.1	2.1	2.0	2.0
All providers	1.7	1.5	1.9	2.0	2.2	2.3
International call						
TEO LT, AB	14.8	13.4	13.8	12.7	12.1	11.8
Other providers	9.3	7.0	5.8	8.0	7.1	8.3
All providers	12.9	10.7	10.1	11.2	10.4	10.7

Source: RRT

When analysing the calculated average prices per local call minute by service providers, the lowest calculated average prices were those of other providers (8.3 euro cent) in 2015 as in the previous year. The prices of respective services provided by TEO LT, AB stood at 11.8 euro cent (see Table 21).

In 2015, the market of public fixed telephone voice services was further shrinking in terms of both the number of service users and call duration, and revenue. Probably the only positive change was the growth of the number of service users of other providers in the segment of natural entities. The service users continue to replace public fixed telephone voice services with public mobile telephone voice and other services.

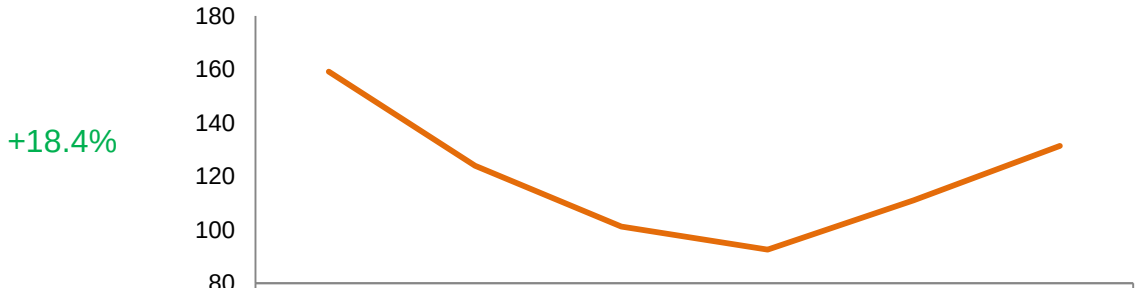
2.3. Networks Interconnection Services

2.3.1. General Overview of the Market of Networks Interconnection Services

Service providers	15
Major service provider	UAB Mediafon
Revenue, in EUR million	131.4

Networks interconnection services are wholesale services necessary to enable the provision of retail public telephone services. Networks interconnection services include the following services provided to other service providers: call origination, call transit and call termination provided in public fixed and/or mobile communications networks, also roaming services provided to foreign public mobile telephone service providers so that their service users are able to use public mobile telephone services while being in Lithuania.

The revenue from the networks interconnection activities that had been decreasing till 2013 started to grow in 2014. In 2015, compared to 2014, it increased by 18.4% and equalled EUR 131.4 million (see Fig. 12). The higher revenue received from networks interconnection services constituted a larger share in the structure of the total revenue of the electronic communications service market – 21.0%, i.e. by 2.7 pp more than in 2014.

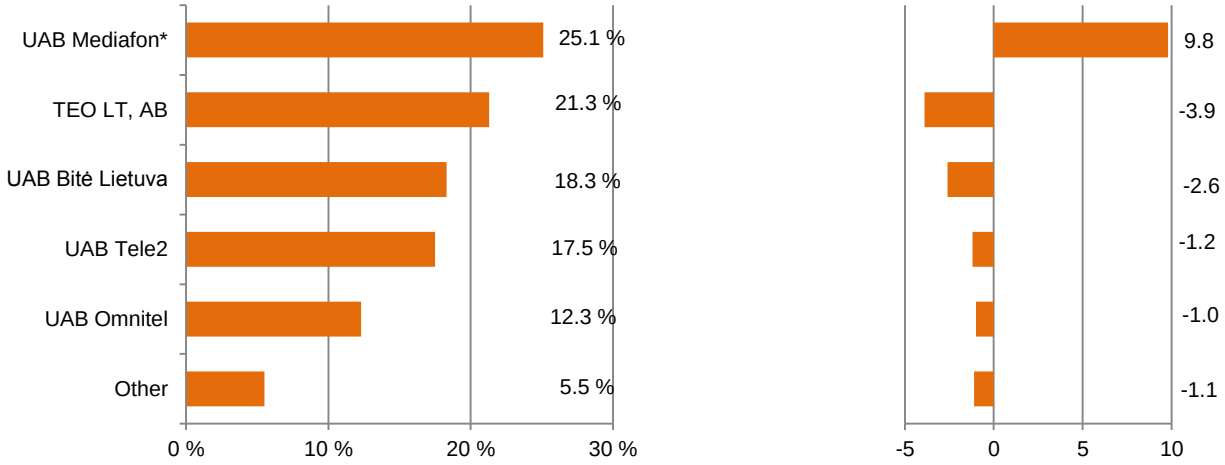


	2010	2011	2012	2013	2014	2015
Total revenue	159.1	123.9	101.2	92.5	111.0	131.4
Termination in mobile communications networks	77.2	61.9	41.6	33.7	37.7	41.3
Termination in fixed communications networks	6.3	4.9	3.9	3.0	3.0	3.1
Call transit	57.6	41.8	42.3	40.2	51.9	67.5
Roaming	11.1	7.5	5.8	5.0	4.5	4.6
Other revenue	7.0	7.8	7.7	10.6	13.8	14.8

Fig. 12. **Structure of revenue received from networks interconnection services by service groups in 2010-2015, in EUR million.**
Source: RRT

The revenue from call transit services has accounted for the major portion of the revenue from networks interconnection services since 2012. In 2015, the revenue grew by 30.1% and accounted for 51.4% of the total revenue of networks interconnection services. Its portion in the total revenue from networks interconnection services increased by 4.6 pp.

In 2015, UAB Mediafon generated the largest portion of revenue (25.1%) from networks interconnection activities (as of 1 October 2015 UAB Mediafon assigned the activity of the provision of networks interconnection services to its subsidiary UAB Mediafon Carrier Services) (see Fig. 13). The revenue received by this undertaking from networks interconnection activities increased twice in 2015 and this way it outperformed the up till then leading company TEO LT, AB.



* As of 1 October 2015 UAB Mediafon assigned networks interconnection services to its subsidiary UAB Mediafon Carrier Services.

Fig. 13. **Structure of the networks interconnection services market in terms of revenue by service providers, %, and annual changes of the market shares, pp, 2015.**
Source: RRT

Networks interconnection services ensure the opportunity for all service users to connect to and communicate with voice service users in all networks. The revenue received from networks interconnection services accounted for 21.0% of the total revenue of the electronic communications market in 2015 and its annual growth was the largest (18.4%) compared to other electronic communications service groups.

2.3.2. Call Transit Services

N.B.!

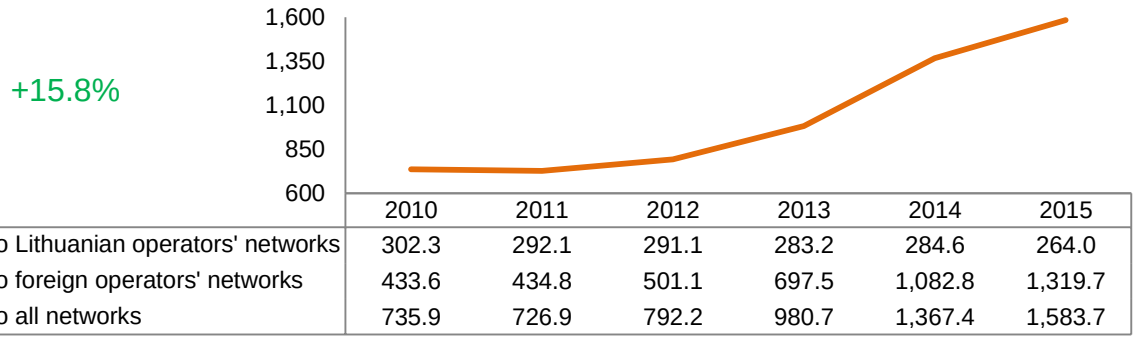
- The call transit services discussed in this section include pure transit only, i.e. where the calls are not originated or terminated in the network where a transit service is provided.

The call transit service is significant to public telephone service providers for the purpose of making a more effective use of available network and financial resources and have alternative ways of sending calls. Call transit services make it possible to transfer calls inside the country, send calls originated inside the country to foreign countries, as well as to transfer calls from abroad to a specific public communications network in Lithuania. Calls which are neither originated nor terminated in Lithuania may be also forwarded by transit.

Service Providers. At the end of 2015, call transit services were provided by 10 undertakings[9] – the same as at the end of 2014.

Call Duration. With a view to the duration of calls forwarded by transit, the following services may be singled out: call transit services, where calls are forwarded to public communications networks of Lithuanian operators; call transit services, where calls are forwarded to public communications networks of foreign operators.

The largest share (83.3%) of calls forwarded by transit in 2015 was forwarded to public communications networks of foreign operators (see Figure 14). The duration of such calls went up by 21.9% or by 236.9 million minutes in 2015. The duration of calls forwarded by transit to public communications networks of Lithuanian operators went down by 7.2% or by 20.6 million minutes in 2015.

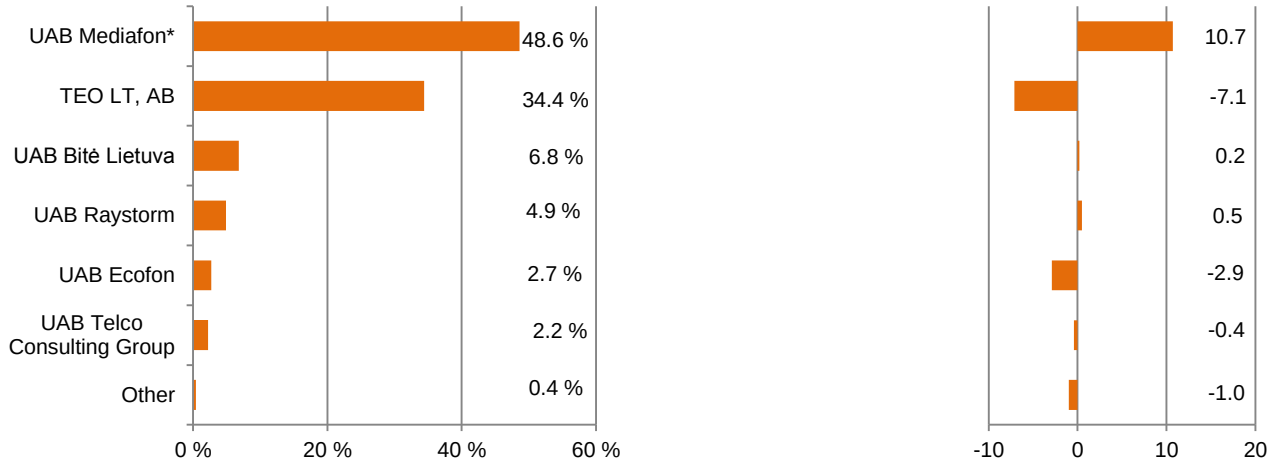


	2010	2011	2012	2013	2014	2015
To Lithuanian operators' networks	302.3	292.1	291.1	283.2	284.6	264.0
To foreign operators' networks	433.6	434.8	501.1	697.5	1,082.8	1,319.7
To all networks	735.9	726.9	792.2	980.7	1,367.4	1,583.7

Fig. 14. **Duration of calls forwarded by transit to public communications networks of Lithuanian and foreign operators, in million minutes, 2010-2015.**
Source: RRT

[9] TEO LT, AB, UAB Bitė Lietuva, UAB CSC Telecom, UAB Ecofon, UAB Mediafon (UAB Mediafon Carrier Services), UAB Nacionalinis Telekomunikacijų Tinklas, UAB Peoplefone, UAB Raystorm, UAB Telco Consulting Group, SA Voxbone.

The largest share on the market of call transit by duration of forwarded calls (48.6%) was held by UAB Mediafon in 2015 and its share increased by 10.7 pp over the year (see Fig. 15). TEO LT, AB lost ground on the market for the first time, as its market share by duration of calls forwarded by transit shrank by 7.1 pp. The significant increase in the flow of calls forwarded by transit to foreign operators' networks had an impact on the growth of the market share of UAB Mediafon (62.0%).



* As of 1 October 2015 UAB Mediafon assigned networks interconnection services to its subsidiary UAB Mediafon Carrier Services.

Fig. 15. **Structure of the market of call transit services by duration of forwarded calls, %, and annual changes of the market shares, pp, 2015.**
Source: RRT

Revenue. The revenue received from call transit services stood at EUR 67.5 million in 2015 and, compared to 2014, it grew by 31.6% (see Fig. 16). The growth of call transit services was influenced by the longer duration of calls forwarded by transit in 2015 (15.8%) (see Fig. 14).

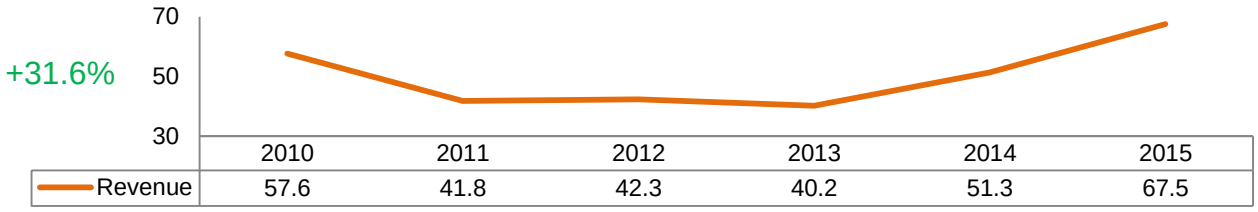
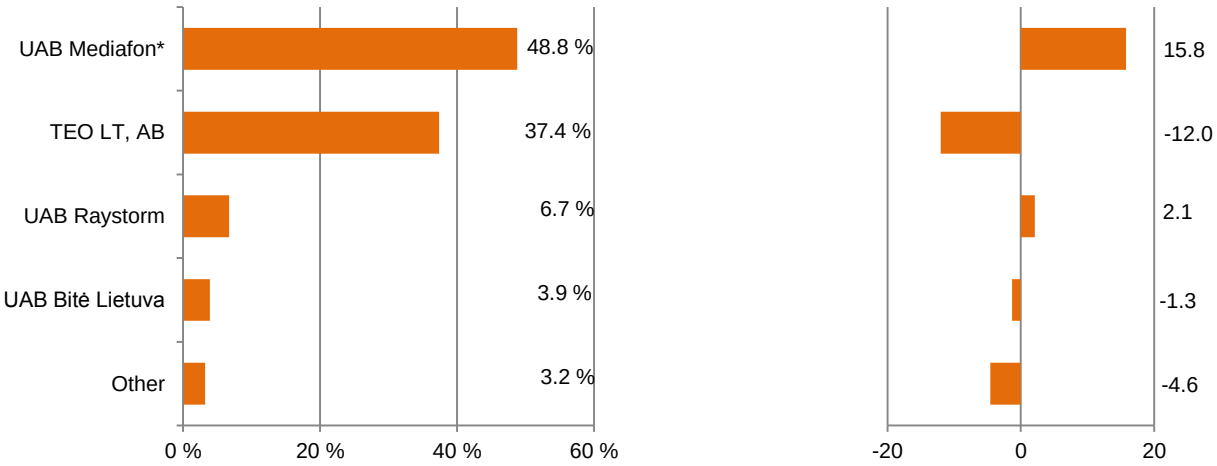


Fig. 16. **Revenue from call transit services, in EUR million, 2010-2015.**
Source: RRT

With a view to the market of call transit services by revenue, the major portion (48.8%) of the revenue was generated by UAB Mediafon in 2015 (see Fig. 17). Over the year its market share increased by 15.8 pp and for the first time it outperformed the up till then leader TEO LT, AB. The market share of the latter in terms of revenue shrank by 12.0 pp.



* As of 1 October 2015 UAB Mediafon assigned networks interconnection services to its subsidiary UAB Mediafon Carrier Services.

Fig. 17. **Structure of the market of call transit services by revenue, %, and annual changes of the market shares, pp, 2015.**

In 2015, the market of call transit services grew by 31.6% in terms of revenue. The growth was influenced by the increased flow (21.9%) of calls forwarded to public communications networks of foreign operators. The largest share of the call transit service market (48.6%) by call duration was held by UAB Mediafon in 2015 and its share grew by 10.7 pp over the year.

2.3.3. Call Termination Services

2.3.3.1. Call Termination in Public Mobile Communications Networks

N.B.!

- The services of call termination in public mobile communications networks discussed in this section include the termination of calls originated only in other networks, whereas calls which were originated and terminated in the same network are not assessed.
- In this section of the report other service providers of call termination in public mobile communications network shall be all service providers of call termination in public mobile communications network, except for UAB Bitė Lietuva, UAB Omnitel and UAB Tele2 ("other providers").

The services of call termination in public mobile communications services consist of calls originated in Lithuanian and foreign operators' networks and terminated in public mobile communications networks of Lithuanian operators.

Service Providers. In 2015, the services of call termination in public mobile communications networks were provided by 5 operators[10].

Call Duration. In 2015, the overall duration of calls terminated in public mobile communications networks was 3,602.1 million minutes, i.e. by 13.1% more than in 2014. The trend of increasing duration of terminated calls is observed in public mobile communications networks of all operators. In 2015, the greatest growth of calls terminated in public mobile communications networks (almost 3.5 times) took place in the networks of other providers. In 2015, the largest share of calls terminated in public mobile communications networks (85.3%) by call duration was originated in public mobile communications networks. In 2015, most calls were terminated in UAB Tele2 network (see Table 22) and this accounted for 40.4% of all calls terminated in public mobile communications networks.

Table 22. **Duration of calls terminated in public mobile communications networks by service providers, in million minutes, and call origination network, %, 2010-2015.**

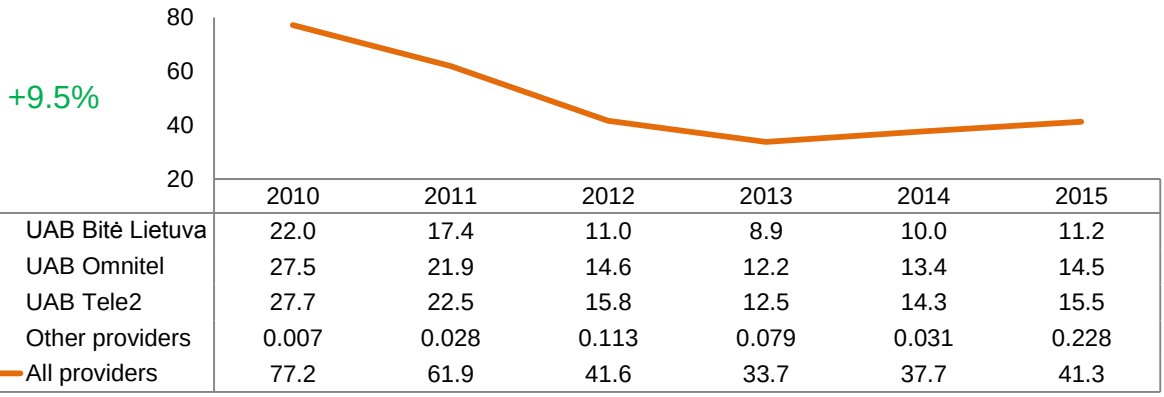
UAB Bitė Lietuva	2010	2011	2012	2013	2014	2015
Originated in public mobile communications networks	88.3	88.2	89.6	88.7	88.6	88.9
Originated in public fixed communications networks	4.2	5.6	6.7	8.3	8.8	7.7
Originated in foreign operators' networks	7.5	6.2	3.7	2.8	2.6	3.4
Total originated	**481.6**	**567.8**	**626.4**	**703.1**	**880.2**	**979.8**

[10] UAB Omnitel, UAB Bitė Lietuva, UAB Tele2, UAB CSC Telecom, UAB Mediafon (as of 1 October 2015 UAB Mediafon Carrier Services)

UAB Omnitel						
Originated in public mobile communications networks	85.2	85.1	84.9	82.6	83.8	84.0
Originated in public fixed communications networks	3.9	4.4	4.1	5.0	4.7	4.8
Originated in foreign operators' networks	10.9	10.5	11.0	12.4	11.5	11.2
Total originated	**565.0**	**651.6**	**742.0**	**830.1**	**1,012.6**	**1,129.8**
UAB Tele2						
Originated in public mobile communications networks	90.2	88.3	87.2	86.5	80.7	83.7
Originated in public fixed communications networks	3.2	2.7	2.7	4.7	6.6	5.3
Originated in foreign operators' networks	6.6	9.0	10.1	8.8	12.7	11.0
Total originated	**628.4**	**742.8**	**872.9**	**1,000.7**	**1,280.7**	**1,455.1**
Other providers						
Originated in public mobile communications networks	88.1	95.7	95.9	96.3	92.8	93.0
Originated in public fixed communications networks	8.8	2.5	3.0	1.9	4.8	5.0
Originated in foreign operators' networks	3.1	1.8	1.1	1.8	2.4	2.0
Total originated	**4.1**	**1.5**	**10.3**	**4.8**	**11.0**	**37.5**
Originated of all providers	**1,679.1**	**1,963.7**	**2,251.6**	**2,538.7**	**3,184.5**	**3,602.1**

Source: RRT

Revenue. The revenue received from call termination in public mobile communications networks has maintained an insignificantly increasing trend since 2013. In 2015, the revenue went up by 9.5% and stood at EUR 41.3 million (see Fig. 18). The major portion of the revenue (37.5%) was generated by UAB Tele2 whose revenue from call termination grew by 8.4% over the year in 2015.



	2010	2011	2012	2013	2014	2015
UAB Bitė Lietuva	22.0	17.4	11.0	8.9	10.0	11.2
UAB Omnitel	27.5	21.9	14.6	12.2	13.4	14.5
UAB Tele2	27.7	22.5	15.8	12.5	14.3	15.5
Other providers	0.007	0.028	0.113	0.079	0.031	0.228
All providers	77.2	61.9	41.6	33.7	37.7	41.3

Fig. 18. **Revenue from call termination in public mobile communications networks by service providers, in EUR million, 2010-2015.**
Source: RRT

Prices. In 2015, the price of call termination in public mobile communications networks did not change, i.e. the same price of 1.04 euro cent per minute (excl. VAT) for call termination was applied as in 2014. However, RRT, having carried out the market analysis, determined that as of 1 April 2016 the price of call termination in public mobile communications networks will decrease, where calls are originated in the Member States of the European Economic Area[11], and it cannot exceed 0.94 euro cents per minute (VAT excl.).

[11] Norway, Island and Liechtenstein are not the Member States of the European Union; however, the said three countries and the Member States of the European Union constitute the European Economic Area.

2.3.3.2. Call Termination in Public Fixed Communications Networks

N.B.!

- In this section of the report other service providers of call termination in public fixed communications network shall be all service providers of call termination in public fixed communications network, except for TEO LT, AB ("other providers").

The services of call termination in public fixed communications services cover calls originated in Lithuanian and foreign operators' networks and terminated in public fixed communications networks of Lithuanian operators.

Service Providers. In 2015, the services of call termination in public fixed communications networks were provided by 8 operators[12].

Call Duration. In 2015, the largest share of calls terminated in public fixed communications networks (63.1%) by call duration was originated in public mobile communications networks (see Table 23). The duration of such calls went up by 12.0% or by 28.6 million minutes in 2015.

Table 23. **Structure of the duration of calls terminated in individual public fixed communications networks by call origination network, in million minutes, 2010-2015.**

TEO LT, AB	2010	2011	2012	2013	2014	2015
Originated in public mobile communications networks	120.6	128.3	139.6	161.3	212.9	235.6
Originated in public fixed communications networks	61.5	68.8	72.7	81.5	55.9	43.6
Originated in foreign operators' networks	98.8	96.2	89.2	72.6	54.6	81.3
Total originated	**280.9**	**293.3**	**301.5**	**315.4**	**323.4**	**360.5**
Other providers						
Originated in public mobile communications networks	7.2	8.4	15.3	18.7	25.9	31.8
Originated in public fixed communications networks	14.5	26.0	26.8	23.5	24.9	26.0
Originated in foreign operators' networks	11.8	6.1	7.8	4.8	4.9	5.6
Total originated	**33.5**	**40.5**	**49.9**	**47.0**	**55.7**	**63.4**
Duration of terminated calls	**314.4**	**333.8**	**351.4**	**362.4**	**379.1**	**423.9**

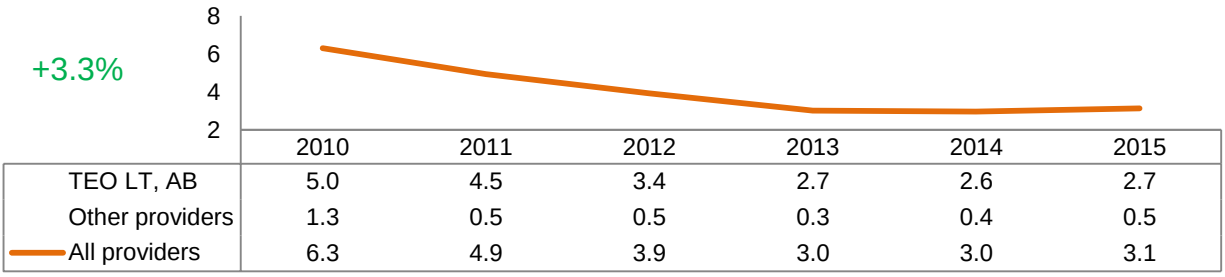
Source: RRT

[12] TEO LT, AB, AB Lietuvos Geležinkeliai, AB Lietuvos Radijo ir Televizijos Centras, UAB CSC Telecom, UAB Ecofon, UAB Mediafon (UAB Mediafon Carrier Services), UAB Nacionalinis Telekomunikacijų Tinklas, UAB Telekomunikacijų Grupė

With a view to the structure of the market of call termination in public fixed communications networks by service providers, most calls (85.0%) were terminated in TEO LT, AB public fixed communications network in 2015 (see Table 23). The largest share (65.4%) of calls terminated in TEO LT, AB network was comprised of the calls originated in public mobile communications networks.

The duration of calls terminated in the networks of other providers, as in the case of TEO LT, AB, grew by 13.8% or by 7.7 million minutes in 2015. The overall duration of calls terminated in the networks of other providers stood at 63.4 million minutes in 2015 (see Table 23). The largest share (50.2%) of calls terminated in the networks of other providers was comprised of the calls originated in public mobile communications networks.

Revenue. The revenue gained from call termination in public fixed telephone networks increased for the first time after a 5-year break: the growth accounted for 3.3% (see Fig. 19). The largest portion of the revenue from call termination in public fixed communications networks was generated by TEO LT, AB (85.3%).



	2010	2011	2012	2013	2014	2015
TEO LT, AB	5.0	4.5	3.4	2.7	2.6	2.7
Other providers	1.3	0.5	0.5	0.3	0.4	0.5
All providers	6.3	4.9	3.9	3.0	3.0	3.1

Fig. 19. **Revenue from call termination in public fixed communications networks by service providers, in EUR million, 2010-2015.**
Source: RRT

Prices. In 2015, the price of call termination in public fixed communications networks did not change, i.e. the same price of 0.61 euro cent per minute (excl. VAT) for call termination was applied as in 2014. This price has been applicable since 1 April 2013. However, RRT, having carried out the market analysis, determined that as of 01 January 2016 the price of call termination in public fixed communications networks will decrease, where calls are originated in the Member States of the European Economic Area[13], and it cannot exceed 0.13 euro cents per minute (VAT excl.).

In 2015, the market of call termination services grew by 9.1% in terms of revenue. The growth was naturally enhanced by increasing flow of retail public mobile telephone calls (2.8%). With a view to the structure of the market of call termination services by termination destination, it must be noted that 89.5% (by call duration) or 93.0% (by revenue) of the market was represented by calls terminated in public mobile communications networks.

[13] Norway, Island and Liechtenstein are not the Member States of the European Union; however, the said three countries and the Member States of the European Union constitute the European Economic Area.

2.3.4. Call Origination Service

N.B.!

- The call origination service was provided only in public fixed communications networks in 2015. The wholesale call origination service provided to other service providers (in the event of call origination service – to service users) consists of call transmission from the network termination point (terminal equipment in a fixed location used by the end service user[14]) to the network telephone station nearest to the end service user.

Service Providers. In 2015, the call origination service in own network was provided by a single undertaking in 2015 – TEO LT, AB.

Service Recipients. Call origination services are received by public telephone service providers whose retail fixed telephone voice services may be received by end service users by an individual choice or preselection. At the end of 2015, there were 9 call origination service users, i.e. by 6 users (or 40.0%) less than at the end of 2014. The number of end service users which used individual choice or preselection of a public telephone service provider dropped by almost 8 times over the year: from 4,413 to 555.

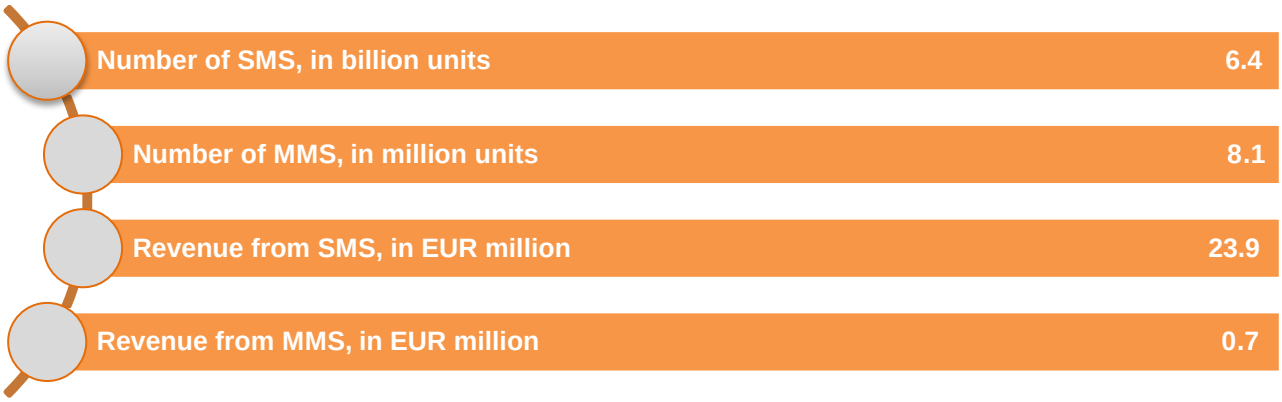
Call Duration. In 2015, the duration of calls originated by end service users which used individual choice or preselection of a public telephone service provider stood at 1.6 million minutes and decreased by 31.9% over the year. 69.8% of all these calls, by duration, were originated by preselection.

Revenue. In 2015, the revenue received from call origination decreased by 43.5% and equalled EUR 9,0 thousand.

Due to high diversity of electronic communications services which stand as an alternative to calls in a public fixed communications network, the market of call origination service was shrinking in 2015: due to the lower number of call origination service users (by 40.0%), the scope of provided services naturally decreased (69.8%), as well as the revenue (43.5%).

[14] An end service user is a service user which does not provide public communications networks or public electronic communications services.

2.4. SMS and MMS



N.B.!

- In this chapter of the report other public mobile telephone voice service providers shall be all public mobile telephone voice service providers, except for UAB Bitė Lietuva, UAB Omnitel and UAB Tele2 ("other providers").

Short Message Service remained one of the most popular means of communication in 2015 ("SMS"). This alternative of information exchange, the same as a call, has the feedback option; however, SMS does not always reach the addressee on time. Multimedia Messaging Service ("MMS") is a short text message with more options allowing sending a video message which may be supplemented by audio features and text. Despite greater possibilities of MMS, the popularity of this service, although growing, is still lower than that of SMS.

Number of SMS and MMS. Since 2010, the number of SMS has been going down (see Table 24). In 2015, the decrease accounted for 10.7%. A single public mobile telephone service user sent 126 SMS per month on an average in 2015 (by 8 SMS less than in 2014). A service user sent 4 SMS per day on an average in 2015.

Table 24. ***Number of sent SMS, in million units, and MMS, in thousand units, and market shares of service providers, %, 2010-2015.***

	2010	2011	2012	2013	2014	2015
Number of sent SMS, in million units	**8,439.7**	**7,914.7**	**7,591.3**	**7,068.3**	**7,107.9**	**6,350.2**
UAB Bitė Lietuva	*31.0*	*32.3*	*32.1*	*31.4*	*28.5*	*25.1*
UAB Omnitel	*29.0*	*26.7*	*26.2*	*25.9*	*22.8*	*22.5*
UAB Tele2	*39.7*	*40.7*	*41.3*	*42.2*	*48.0*	*51.3*
Other providers	*0.3*	*0.3*	*0.4*	*0.5*	*0.7*	*1.1*
Number of sent MMS, in thousand units	**5,965.4**	**5,801.8**	**5,868.4**	**6,229.6**	**6,785.3**	**8,071.5**
UAB Bitė Lietuva	*16.0*	*15.9*	*17.1*	*17.7*	*19.8*	*16.5*
UAB Omnitel	*20.0*	*28.8*	*27.9*	*27.9*	*28.4*	*30.3*
UAB Tele2	*62.9*	*54.0*	*53.2*	*52.3*	*47.7*	*47.4*
Other providers	*1.1*	*1.3*	*1.8*	*2.1*	*4.1*	*5.8*

Source: RRT

The popularity of MMS sent in public mobile communications networks reached its peak in 2015 in Lithuania: during the period in question almost 8.1 million MMS were sent (see Table 24). In 2015, the number of sent MMS was higher by 19.0% than in 2014. Despite the growing number of sent MMS, the

number of MMS per subscriber is low – a single public mobile telephone service user sent 1.9 MMS on an average in 2015.

While analysing the structure of SMS and MMS services by the number of sent messages and their breakdown by service providers, it is obvious that service users of UAB Tele2 have been sending the largest number of SMS and MMS for six consecutive years (see Table 24).

Revenue. In 2015, the revenue received from sent SMS decreased by 8.1% and equalled EUR 23.9 million (see Table 25). Compared to all revenue from public mobile telephone services, the revenue from SMS accounted for 12.0% of the total revenue from public mobile telephone services[15]. In 2013, the leap of revenue from SMS was caused by re-allocation of the revenue for mobile communications services that took place due to RRT's detailed methodology for revenue re-allocation for services.

Table 25. **Revenue from SMS, in EUR million, and from MMS, EUR thousand, and their structure by service providers, %, 2010-2015.**

	2010	2011	2012	2013	2014	2015
Revenue from SMS, in EUR million	**27.6**	**22.9**	**19.6**	**28.6**	**26.0**	**23.9**
UAB Bitė Lietuva	*24.2*	*27.3*	*28.6*	*23.2*	*23.7*	*22.4*
UAB Omnitel	*34.5*	*25.9*	*19.8*	*27.8*	*23.3*	*16.8*
UAB Tele2	*39.1*	*44.3*	*48.2*	*47.2*	*51.4*	*59.0*
Other providers	*2.2*	*2.5*	*3.4*	*1.8*	*1.6*	*1.8*
Revenue from MMS, in EUR thousand	**390.5**	**411.1**	**441.9**	**532.0**	**576.4**	**672.1**
UAB Bitė Lietuva	*47.5*	*50.0*	*49.5*	*42.3*	*41.9*	*40.2*
UAB Omnitel	*13.6*	*11.1*	*7.9*	*14.0*	*14.3*	*14.3*
UAB Tele2	*35.3*	*34.8*	*38.8*	*41.4*	*42.7*	*44.7*
Other providers	*3.6*	*4.1*	*3.8*	*2.3*	*1.1*	*0.8*

Source: RRT

Prices. The calculated average price of SMS services (ratio between revenue from such services and number of sent SMS) stood at 0.38 euro cent in 2015, i.e. by 0.02 euro cent less than in 2014. The calculated average SMS prices of UAB Bitė Lietuva, UAB Omnitel and UAB Tele2 differed in 2015: the difference between the highest and lowest calculated average SMS prices on the market amounted to 0.15 euro cent. Service users of UAB Tele2 had to pay the highest price for sending SMS, i.e. 0.43 euro cent. Service users of UAB Bitė Lietuva had to pay 0.34 euro cent per sent SMS, and the lowest price (0.28 euro cent) for sending SMS was applied by UAB Omnitel in 2015. In 2015, the average revenue received by other providers per sent SMS stood at 0.61 euro cent.

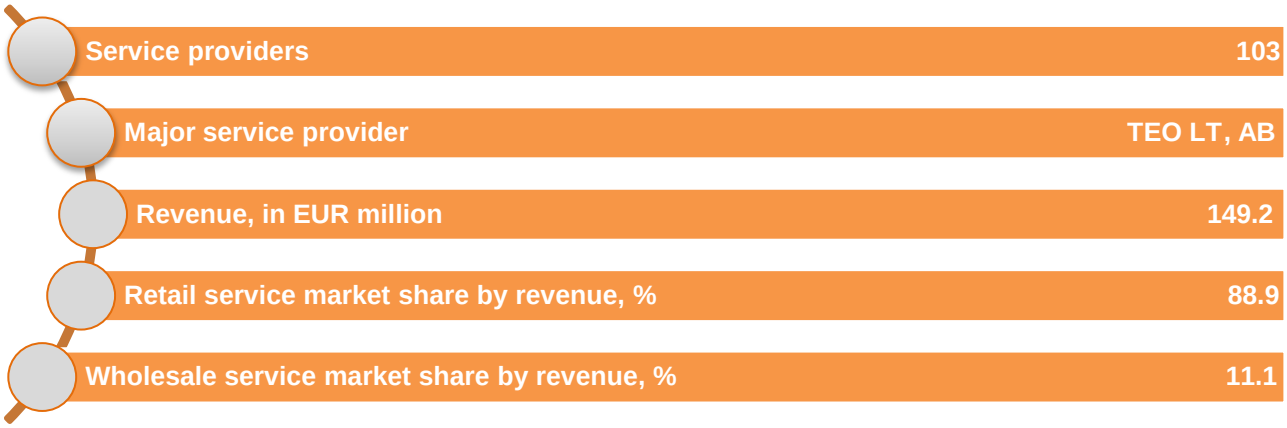
The average calculated price of sending MMS (ratio between services and number of sent MMS) was 8.3 euro cent in 2015. The largest difference between the highest and lowest calculated average MMS price applied by the major mobile communications operators stood at 16.4 euro cent. UAB Bitė Lietuva service users had to pay the highest price for sending an MMS, i.e. 20.3 euro cent; the lowest price was paid by UAB Omnitel service users – 3.9 euro cent. UAB Tele2 service users had to pay 7.9 euro cent for sending MMS in 2015. The calculated average price of other providers per sent MMS equalled 1.1 euro cent.

[15] All revenue from public mobile telephone services consists of revenue received from calls, SMS, MMS, provision of data transmission services, except for revenue gained from the provision of Internet access services, where subscribers connect to the Internet via their computers based on fixed payment plans for the settlement for Internet access services, and other revenue.

Even the decrease of relative SMS and MMS prices did not encourage sending more messages of these types. The comparison of the calculated average SMS and MMS prices of 2015 shows that the MMS price exceeded the price of SMS by almost 22 times. This may explain the significantly lower popularity of MMS in comparison with SMS. Service users were most likely replacing such services with other alternatives to electronic communications services, such as less expensive voice services, e-mails, Over-the-Top (OTT) services, such as “Skype”, “Viber”, “Facebook”, etc. whose attractiveness and popularity were promoted by a greater use of smart terminal equipment.

3. Data Transmission

3.1. General Overview of the Market of Data Transmission Services



N.B.!

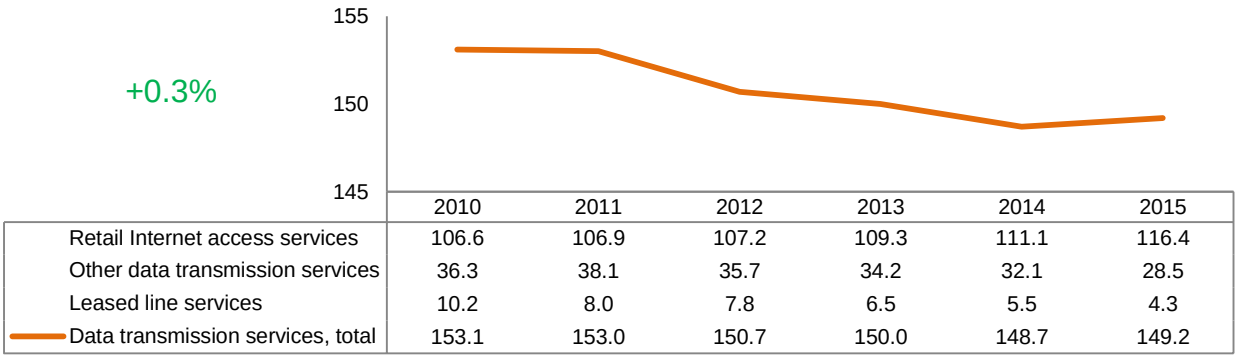
- In this section of the report other data transmission service providers shall be all data transmission service providers, except for UAB Bitė Lietuva, UAB Cgates, AB Lietuvos Radijo ir Televizijos Centras, UAB Omnitel, UAB Satgate and TEO LT, AB ("other providers").

In 2015, data transmission services provided in Lithuania may be divided into retail Internet access services, leased line services (retail leased line services and wholesale leased line services) and other data transmission services (other retail data transmission services, other wholesale data transmission services and wholesale Internet access services[16]).

Service Providers. The market of data transmission services is quite stable with a view to the number of providers. At the end of 2015, the data transmission services were provided by 103 undertakings, i.e. by 7 undertakings less than at the end of 2014. Data transmission service providers represented more than three fourths or 75.3% of all 135 undertakings engaged in electronic communications activities. The majority of data transmission service providers were providing retail Internet access services in 2015 as in the previous periods – their number stood at 99 (in 2014 – 105).

Revenue. In 2015, the revenue gained from data transmission services amounted to EUR 149.2 million, i.e. by 0.3% more than in 2014 (see Fig. 20). The activity of the provision of data transmission services remains one of the most important components of the electronic communications sector generating almost one fourth (23.8%) of the total revenue of the electronic communications market. It must be noted that during the period between 2010 and 2015 the revenue increase was recorded only in 2015. Nevertheless, the revenue decrease in 2010-2014 is to be related to the increasing competition on the market of data transmission services and falling prices of the services rather than to the lower demand in general.

[16] Such services include wholesale central access to mass market products in a fixed location, services of direct and/or shared connection to the Internet and Internet transit services.



	2010	2011	2012	2013	2014	2015
Retail Internet access services	106.6	106.9	107.2	109.3	111.1	116.4
Other data transmission services	36.3	38.1	35.7	34.2	32.1	28.5
Leased line services	10.2	8.0	7.8	6.5	5.5	4.3
Data transmission services, total	153.1	153.0	150.7	150.0	148.7	149.2

Fig. 20 **Structure of revenue received from data transmission services by service groups in 2010-2015, in EUR million.**
Source: RRT

Throughout the entire period between 2010 and 2015, the largest portion of the revenue (78.0%) was comprised of the revenue from retail Internet access services (see Fig. 21). In 2015, compared to 2014, a portion of the revenue from retail Internet access services grew by 3.3 percentage point in the total revenue of data transmission services. This was mainly influenced by a large and continuously growing demand for retail Internet access services, which allowed generating higher revenue compared to the provision of other services on the market of data transmission services.

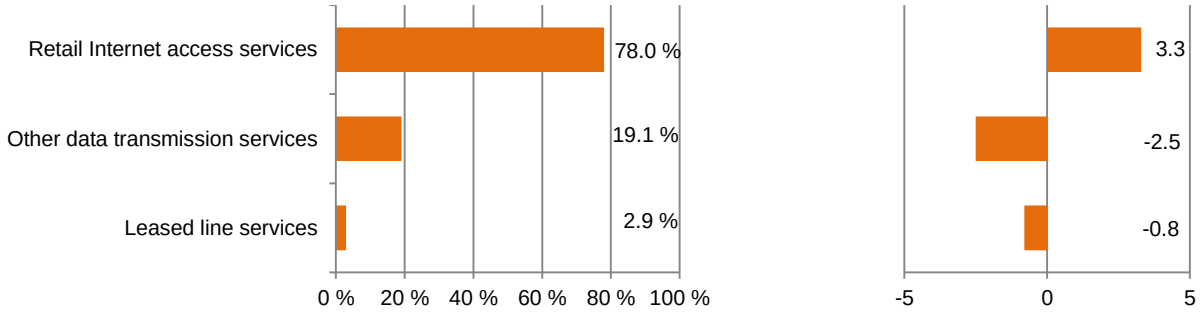


Fig. 21. **Structure of revenue from data transmission services by service groups, %, and annual changes of the revenue structure, pp, 2015.**
Source: RRT

The structure of the market of data transmission services by revenue generated by individual undertakings shows that TEO LT, AB earned the largest portion of revenue in 2015 as in 2014 and previous periods on the market of data transmission services (see Fig. 22), although its portion of the revenue in 2015 from data transmission services was by 0.1% lower than that in 2014. Nevertheless, the revenue of TEO LT, AB gained from data transmission services was higher by 0.04% and stood at EUR 72.5 million in 2015, compared to 2014.

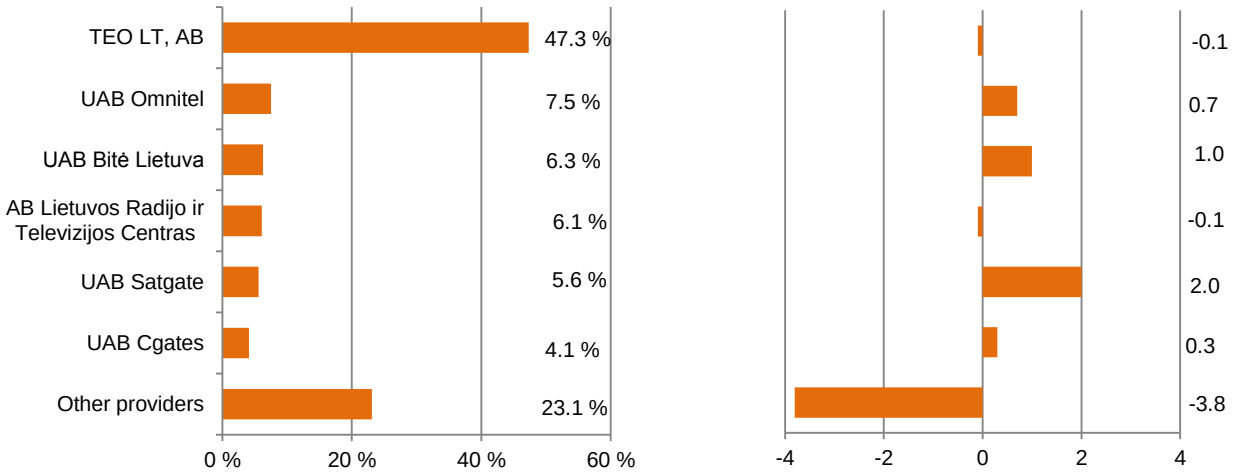
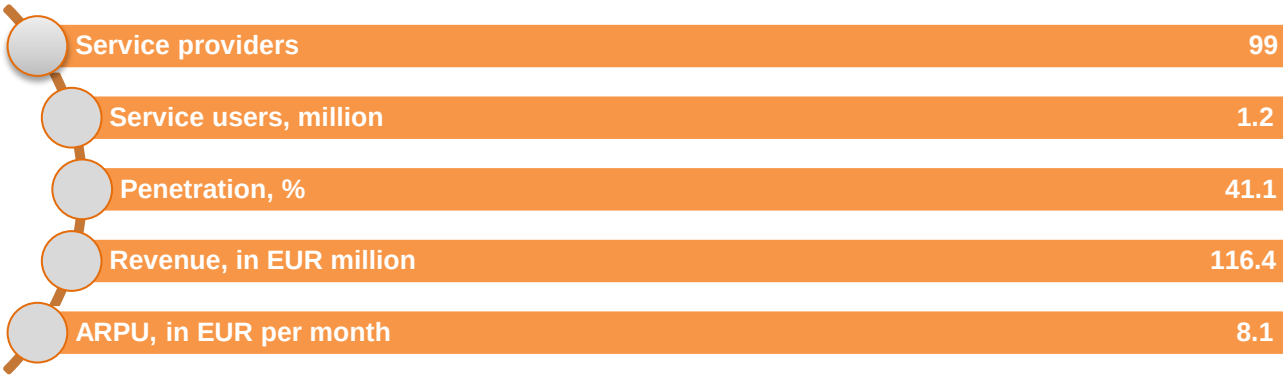


Fig. 22. **Structure of revenue from data transmission services by service providers, %, and annual changes of the market shares, pp, 2015.**
Source: RRT

Shrinking of the market of data transmission services in terms of revenue observed during the period between 2010 and 2014 stopped in 2015. In 2015, the market expanded by 0.3%. This growth was caused by the increase of revenue from both retail and wholesale Internet access services. As many as 78.0% of the total revenue from data transmission services were accounted for the revenue from the provision of retail Internet access services. TEO LT, AB remains the largest market player in terms of data transmission services which generated 47.3% of the total revenue of the market of data transmission services in 2015.

3.2. Retail Internet Access Services



N.B.!

- In this section of the report other retail Internet access service providers shall be all retail Internet access service providers, except for TEO LT, AB in Figure 27, UAB Bitė Lietuva, UAB Omnitel, UAB Tele2 in Table 27 and Figure 30, and AB Lietuvos Radijo ir Televizijos Centras, TEO LT, AB, UAB Balticum TV, UAB Bitė Lietuva, UAB Cgates, UAB Omnitel in Figure 32 ("other providers").

Methods of the Service Provision. In 2015, the retail Internet access services were provided by means of fixed communications or mobile communications technologies in Lithuania.

In 2015, retail Internet access services were provided by means of fixed communications technologies using 5 methods in Lithuania:

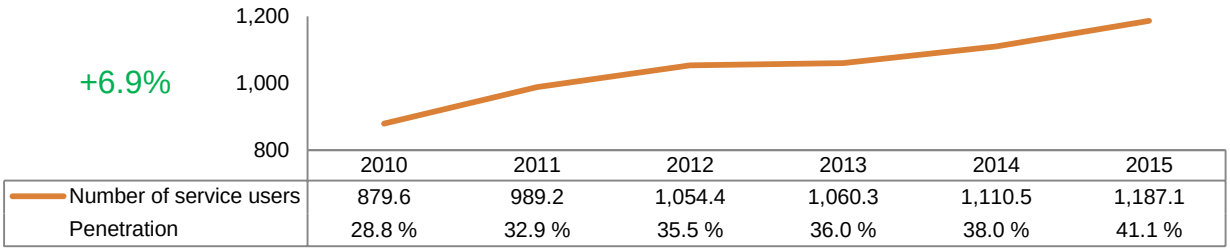
- metallic twisted pair loops using xDSL technology (xDSL loops);
- wireless communication lines using WiMAX (Worldwide Interoperability Microwave Access), Wi-Fi (Wireless Fidelity) and other wireless communication technologies ("wireless communication lines");
- coaxial cable lines ("CTV networks");
- optical fibre lines using FTTB[17] (Fibre to the Building) and FTTH[18] (Fibre to the Home) technologies ("FTTH lines and FTTB lines", together to be referred to as FTTx lines);
- shielded twisted pair (STP) and/or unshielded twisted pair (UTP) loops in the case of LAN networks (Local Area Network) ("LAN lines").

The retail Internet access services are provided by means of the following mobile communications technologies: GPRS, EDGE, UMTS, UMTS HSDPA, UMTS HSUPA, LTE[19] and faster technologies. Retail Internet access services may be provided by other means as well, for instance: leased lines, power transmission lines, public satellite communication network and other means. In 2015, only leased lines out of the afore-mentioned methods were used.

Service Providers. The Lithuanian market of retail Internet access services was characteristic of the high number of service providers in 2015 as in the previous periods. At the end of 2015, the Internet access services were provided by 99 undertakings, i.e. by 6 undertakings less than in 2014, where there were only 105 of them.

[17] Fibre to the Building
[18] Fibre to the Home
[19] GPRS (General Packet Radio Service), EDGE (Enhanced Data Rates for GSM Evolution), UMTS (Universal Mobile Telecommunications System), UMTS HSDPA (Universal Mobile Telecommunications System High-Speed Download Packet Access), UMTS HSUPA (Universal Mobile Telecommunications System High-Speed Uplink Packet Access), LTE (Long-Term Evolution)

Service Recipients. The number and penetration of the retail Internet access service users was further increasing in 2015 as in the previous periods (see Fig. 23). The growth of the number of service users in 2015 had been the highest since 2012. In 2015, it accounted for 6.9%, i.e. by 2.2 pp more than in 2014, where it equalled 4.7%. The absolute growth of the number of service users in 2015 constituted 76.6 thousand. The penetration of these services (number of service users per 100 residents), the same as the number of retail Internet access service users, continued to grow in 2015. At the end of 2015, 41.1% of the residents of the Republic of Lithuania were the Internet access service users, where 5 years ago this indicator was lower by 12.3 percentage point and stood at 28.8%.



	2010	2011	2012	2013	2014	2015
Number of service users	879.6	989.2	1,054.4	1,060.3	1,110.5	1,187.1
Penetration	28.8 %	32.9 %	35.5 %	36.0 %	38.0 %	41.1 %

Fig. 23 **The number of retail Internet access service users, in thousands, and penetration (number of service users per 100 residents), %, 2010-2015.**
Source: RRT

According to the data of the European Commission, in 2015 the use of retail Internet access services[20] in Lithuanian households grew by 1.9 pp, compared to 2014, i.e. from 65.4% to 67.3%[21] (see Fig. 24). The overall average of the use of the Internet by the EU Member States grew by 1.6 pp and stood at 79.9% in 2015, compared to 2014, which is by 12.6 pp more than in Lithuania. In spite of the annually increasing penetration of retail Internet access services, Lithuania continues to hold lower positions in the European Union in terms of the use of such services in households. The Lithuanian indicator is the lowest compared to the neighbouring countries of the European Union – Estonia, Latvia and Poland, where this indicator, respectively, totalled 86.9%, 74.4% and 71.0. The most widespread use of retail Internet access services is in Luxembourg, and the least widespread – in Bulgaria. In these countries, the share of households using the Internet accounted for 95.1% and 58.8%, respectively, in 2015.

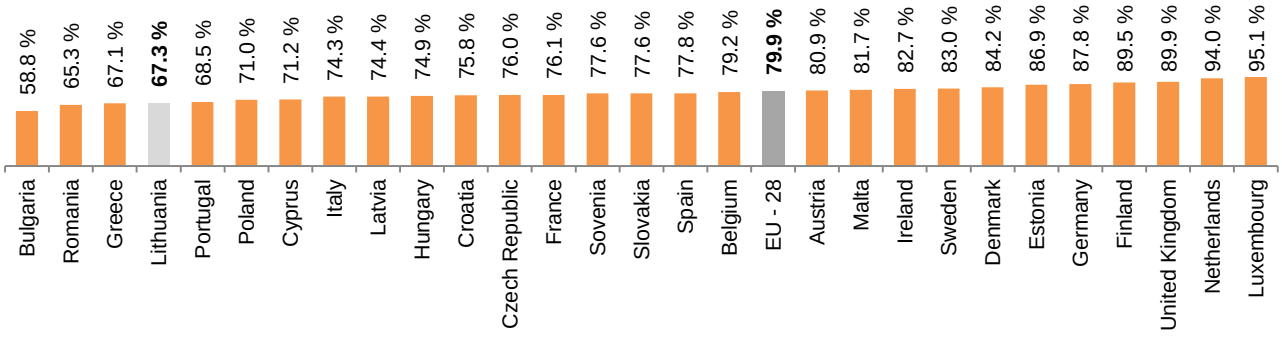


Fig. 24. **Share of households using Internet access service in the EU Member States, %, 2015.**
Source: European Commission[22]

[20] Including retail Internet access services provided via xDSL loops, wireless communication lines, CTV networks, FTTx lines, LAN lines and mobile communications technologies.
[21] Calculated based on Eurostat "Community Survey on ICT Usage in Households and by Individuals".
[22] http://digital-agenda-data.eu/charts/analyse-one-indicator-and-compare-countries

According to the data of the Statistics Department[23], in 2015 the absence of the need to use the Internet was indicated as the main reason for failing to use retail Internet access services at home in Lithuania. This was indicated by as many as two thirds (67.0%) of households without access to the Internet at home. Other reasons which were rarer indicated were the absence of required skills (34.5%), expensive equipment (25.4%), high service tariffs (23.8%) or an opportunity to use the Internet elsewhere (7.6%). The absence of supply in a place of residence was the least frequent reason for not using the Internet at home. In other words, the main obstacle for the growth of the Internet penetration in Lithuania is insufficient demand for this service.

The structure of the market of retail Internet access services by fixed and mobile communications technologies used by service users maintained the similar proportions in 2015 as in the previous periods (see Table 26). At the end of 2015, 57.6% (297.7 thousand) of all users of retail Internet access services provided via FTTx lines used the Internet access services provided via FTTB lines, and 42.4% (219.4 thousand) – FTTH lines; in 2010, these indicators were 70.4% and 29.6%, respectively. During the period between 2010 and 2015 the number of users of retail Internet access services provided via both FTTB and FTTH lines was growing. However, the number of users of retail Internet access services provided via FTTH lines was increasing more rapidly than the number of users of retail Internet access services provided via FTTB lines. Therefore, the gap between the number of users of retail Internet access services provided via FTTB and FTTH lines is decreasing. The least frequent provision of retail Internet access services was that via leased lines – the number of their users did not even reach 0.1% of all retail Internet access service users. In 2015, the number of users of retail Internet access services provided by means of CTV networks, LAN lines, xDSL lines and by other means continued to go down.

Table 26. **Structure of service users by used fixed and mobile communications technologies to receive retail Internet access services, %, 2010-2015.**

	2010	2011	2012	2013	2014	2015
FTTx	35.0	36.4	38.2	41.3	43.0	43.6
Mobile communications	22.1	26.0	26.7	27.9	27.8	29.8
xDSL	24.2	20.0	17.4	16.6	15.3	13.9
Wireless communication lines	10.1	10.8	12.2	9.2	9.5	9.2
CTV network	5.6	4.6	4.0	3.6	3.3	2.7
LAN	2.8	2.1	1.4	1.3	1.0	0.8
Leased line	0.1	0.1	0.1	0.1	0.1	0.0
Switched line	0.1	-	-	-	-	-

Source: RRT

The popularity of retail Internet access services provided by different means varies. Two groups of factors determining the choice are to be singled out: differences between functionality and features of technologies and impact of competition factors on the market of retail Internet access services.

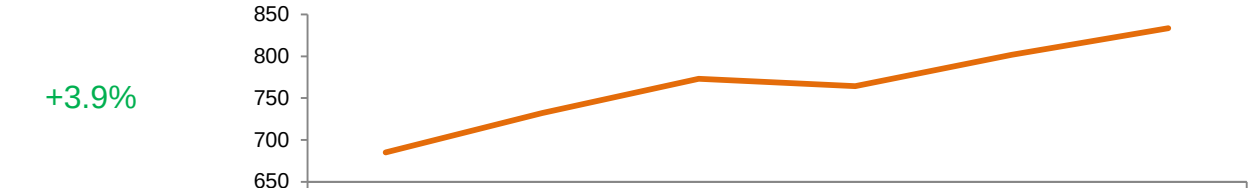
Several trends determined by the differences between technologies are to be mentioned. Retail Internet access services provided via public mobile communications networks and wireless communication lines are more popular in the populated areas where the opportunities to use fixed communications technologies are not available. The development of 4G (by means of LTE and faster technologies) and

[23] Information Technologies in Lithuania 2015: http://osp.stat.gov.lt/services-portlet/pub-edition-file?id=21180

wireless communication networks ensures a speed rate which is close to that provided by fixed communications technologies.

As for competitive factors affecting the popularity of retail Internet access services, the attractive Internet access service plans offered by mobile communications service providers or "*flat-rate*" service plans, where a certain amount of services (frequently, together with other services provided via the public mobile communications network) is offered for an attractive fixed price, are worth mentioning. In the events where service users may choose technology or a method of the service provision, they tend to use Internet access services provided via FTTx lines as the prices of such services are lower than the prices of services provided via xDSL line, which was the most popular method in 2009 (see Fig. 33). Moreover, the popularity of retail Internet access services provided via FTTx lines is increasing due to their high speed rate.

Retail Internet access services provided by means of fixed communications technologies. In 2015, retail Internet access services were provided by 99 undertakings, of which 94 undertakings were providing such services by means of fixed communications technologies: xDSL lines, FTTx lines, wireless communication lines, CTV networks, LAN lines and leased lines. In 2015, the number of users of retail Internet access services provided by means of fixed communications technologies grew by 31.4 thousand or by 3.9% (see Fig. 25). It must be noted that this is the slower growth than in the previous periods. The penetration of retail Internet access services provided by means of fixed communications technologies (number of service users per 100 residents) (28.8%) went up by 1.4 pp in 2015, i.e. less than in the previous year.



	2010	2011	2012	2013	2014	2015
Number of service users	685.2	732.3	772.9	764.4	801.9	833.3
Penetration	22.4 %	24.4 %	26.0 %	26.0 %	27.4 %	28.8 %

Fig. 25 **The number of users of retail Internet access services provided by means of fixed communications technologies, in thousands, and penetration (number of service users per 100 residents), %, 2010-2015.**
Source: RRT

According to the data of the European Commission, the penetration of retail Internet access services provided by means of fixed communications technologies stood at 27.9% in the middle of 2015 in Lithuania[24] (see Fig. 26). The average penetration of the Member States of the European Union amounted to 31.6% in the middle of 2015. According to the data of the European Commission, Lithuania is ranked 9th in terms of the penetration of Internet access services provided by means of fixed communications technologies. Based on this indicator, Lithuania outperforms two neighbouring countries – Latvia and Poland (25.1% and 18.8%, respectively). Estonia where the penetration of the said services stood at 29.9% in the middle of 2015 is still ahead of Lithuania. The highest penetration of Internet access services provided by means of fixed communications technologies in the European Union was recorded in the Netherlands (42.6%) and Denmark (42.2%).

[24] The penetration of Lithuanian retail Internet access services provided by means of fixed communications technologies in Figure 26 differs from that in Figure 25 because of the different calculation methodology applied by the European Commission.

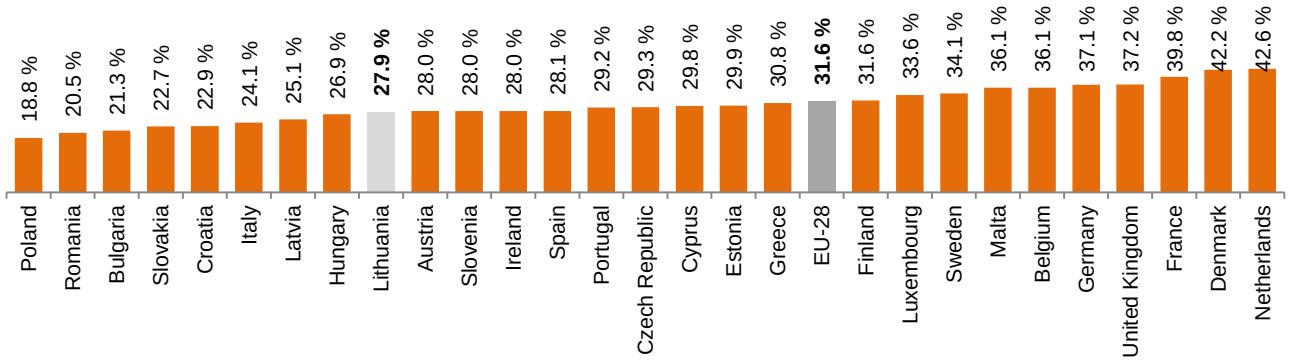
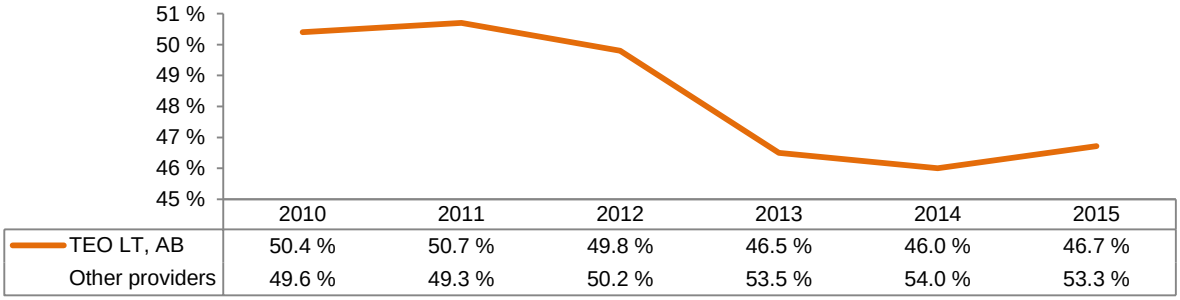


Fig. 26. **The number of users of retail Internet access services provided by means of fixed communications technologies per 100 residents, in the EU Member States, %, June 2015.**
Source: European Commission[25]

In 2015, retail Internet access services by means of fixed communications technologies were provided by 94 undertakings in Lithuania. As many as 46.7% of all users of retail Internet access services provided by means of fixed communications technologies were choosing the services provided by TEO LT, AB (see Fig. 27). Over the year, the market share of this operator grew by 0.7 pp. The growth of the market share of TEO LT, AB was driven by the fact that the number of users of retail Internet access services provided by other providers by means of fixed communications technologies was increasing slower in 2015, compared to 2014, than the number of users of respective services provided by TEO LT, AB. In 2015, compared to 2014, the growth equalled, respectively, 2.6% and 5.5%.



	2010	2011	2012	2013	2014	2015
TEO LT, AB	50.4 %	50.7 %	49.8 %	46.5 %	46.0 %	46.7 %
Other providers	49.6 %	49.3 %	50.2 %	53.5 %	54.0 %	53.3 %

Fig. 27. **Structure of the market of retail Internet access services provided by TEO LT, AB and other providers by means of fixed communications technologies by service providers, %, 2010-2015.**
Source: RRT

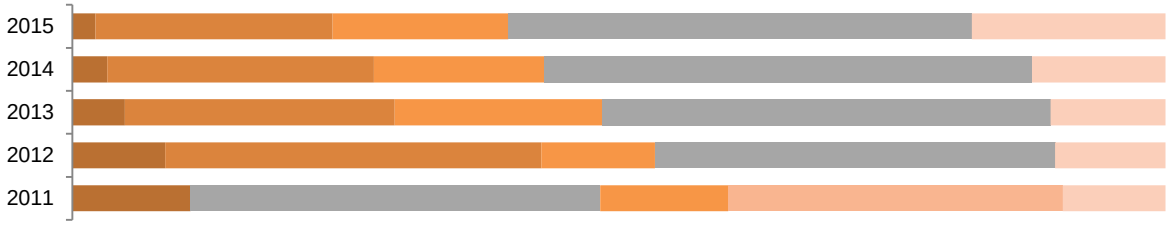
With a view to the breakdown of the number of users of retail Internet access services provided by TEO LT, AB and other providers in terms of fixed communications technologies by means whereof they are provided with retail Internet access services, it is obvious that the trend remains the same. In 2015, as in the previous year, TEO LT, AB was dominating in the provision of retail Internet access services via xDSL lines. In 2014 and 2015, 99.2% of all such service users were using the services provided by TEO LT, AB. In 2015, other providers were prevailing in the provision of retail Internet access services via wireless communication lines (99.9%), CTV networks (100%), LAN lines (100%) and leased lines (98.7%). In 2015, the same as in the previous periods, more service users (56.4%) inclined to prefer retail Internet access services provided by other providers via FTTx lines to TEO LT, AB (43.6%).

The popularity of retail Internet access services provided via xDSL lines was further decreasing in 2015 as in the previous periods. In 2015, compared to 2014, the number of such service users went down by 4.7 thousand and totalled 165.2 thousand users at the end of the year. In 2015, the similar trends in the

[25] http://digital-agenda-data.eu/charts/analyse-one-indicator-and-compare-countries

provision of retail Internet access services via LAN lines and CTV networks were observed. The number of users of retail Internet access services provided via LAN lines decreased by 1.5 thousand in 2015 and at the end of the year the number stood at 9.8 thousand. The number of users of retail Internet access services provided via CTV networks dropped by 5.1 thousand in 2015 and at the end of the year the number stood at 32.0 thousand. The decrease of the number of such service users is the outcome of continuous investments in FTTx line networks, where service users, who used to receive retail Internet access service via CTV networks, switched to the services provided via FTTx lines without changing the service provider.

Speed Rate. Internet access speed rate is annually increasing (see Fig. 28). This is driven by several reasons, i.e. service users' needs growing in terms of speed rate and development of technologies used to provide retail Internet access services in Lithuania. In 2015, less than one fourth (23.8%) of all users of Internet access services provided by means of fixed communications technologies, or less by 3.8 pp than in 2014 and even by 21.9 pp less than in 2011, used Internet access of a speed lower than 10 Mb/s. The most popular Internet access speed rate preferred by users of retail Internet access services provided by fixed communications technologies remained 30-100 Mb/s in 2015, as in 2014. In 2015, this speed rate was selected by slightly less service users than in 2014. This may be explained by the fact that the number of users of retail Internet access services provided by means of fixed communications technologies who preferred even higher speed rate (100 Mb/s and more) significantly increased in 2015. In 2015, compared to 2014, the share of service users that chose the speed rate over 100 Mb/s grew by 5.5 pp and stood at 17.7%.

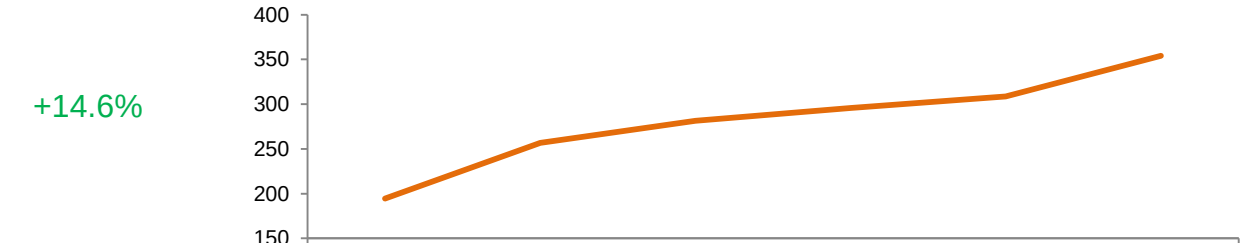


	2011	2012	2013	2014	2015
up to 2 Mb/s	10.8 %	8.5 %	4.8 %	3.2 %	2.1 %
2 Mb/s-10 Mb/s	37.5 %	34.4 %	24.7 %	24.4 %	21.7 %
10 Mb/s-30 Mb/s	11.7 %	10.4 %	19.0 %	15.6 %	16.1 %
30 Mb/s-100 Mb/s	30.6 %	36.6 %	41.0 %	44.6 %	42.4 %
> 100 Mb/s	9.4 %	10.1 %	10.5 %	12.2 %	17.7 %

Fig. 28. **Structure of users of retail Internet access services provided by means of fixed communications technologies by speed rate, %, 2011-2015.**
Source: RRT

Retail Internet access services provided by means of mobile communications technologies. In 2015, retail Internet access services provided by means of mobile communications technologies were provided by one undertaking more than in 2014, i.e. 6 operators[26]. In 2015, as in the previous periods, the demand for retail Internet access services provided by means of mobile communications technologies was further increasing. In 2015, the growth of the number of such service users has been at its peak over the last four years. It stood at 14.6% (or 45.2 thousand) and it was by 10.3 pp higher than in 2014. At the end of 2015, as many as 353.9 thousand service users were using retail Internet access services provided by means of mobile communications technologies (see Fig. 29).

[26] UAB Omnitel, UAB Bitė Lietuva, UAB Tele2, UAB Eurocom, UAB Teledema and AS Viasat



	2010	2011	2012	2013	2014	2015
Number of service users	194.4	256.9	281.5	295.9	308.7	353.9
Change	21.4 %	32.2 %	9.6 %	5.1 %	4.3 %	14.6 %

Fig. 29 **The number of users of retail Internet access services provided by means of mobile communications technologies, in thousands, and annual change, %, 2010-2015.**
Source: RRT

In 2015, as in the previous periods, three major market players were dominating on the market of retail Internet access services provided by means of mobile communications technologies in Lithuania – UAB Omnitel, UAB Bitė Lietuva and UAB Tele2 (see Table 27).

Table 27. **Structure of users of retail Internet access services provided by means of mobile communications technologies by service providers, %, 2010-2015.**

	2010	2011	2012	2013	2014	2015
UAB Bitė Lietuva	41.4	37.9	33.5	33.1	33.8	39.1
UAB Omnitel	56.7	56.3	59.1	57.8	56.5	52.4
UAB Tele2	1.3	5.4	7.0	8.8	9.5	8.3
Other providers	0.6	0.4	0.4	0.3	0.2	0.2

Source: RRT

In 2015, compared to 2014, the number of service users who used package data transmission services provided via public mobile communications network[27] went up by 5.3% or by 112.7 thousand and stood at 2.2 million. With a view to the structure of the market of package data transmission services provided by service providers via public mobile communications network in terms of the number of service users, the major share (40.0%) of service users using such services in 2015, as in 2014, was that of UAB Tele2 (see Fig. 30). Compared to 2014, the market share of UAB Tele2 by service providers grew by 3.2 pp.

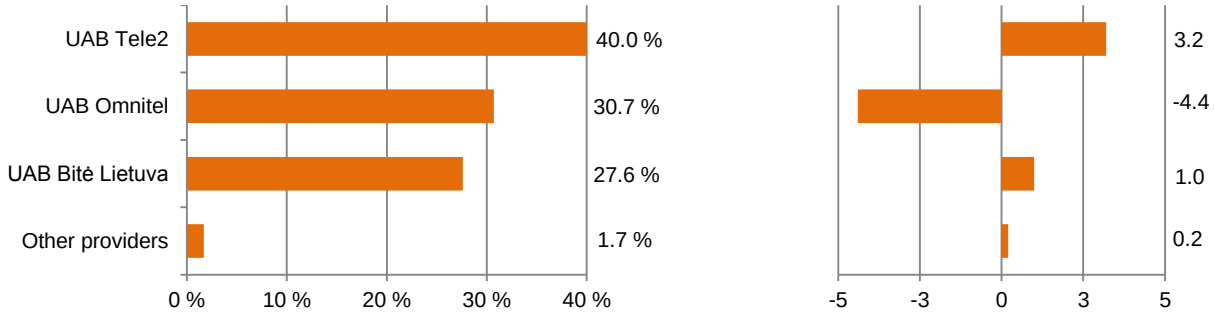
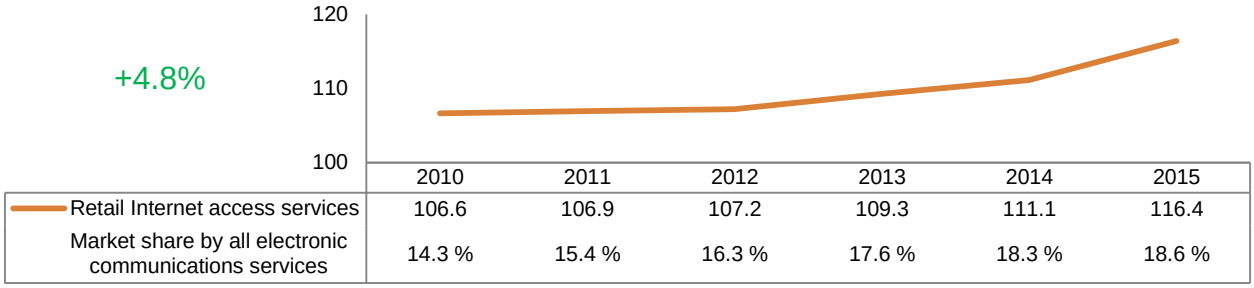


Fig. 30. **Structure of the number of users of retail Internet access services provided by means of mobile communications technologies who used package data transmission services in terms of service providers, %, and annual changes of the market shares, pp, 2015.**
Source: RRT

Revenue. In 2015, as in the previous periods, the service providers' revenue generated from the provision of retail Internet access services was growing. In 2015, the revenue of all undertakings gained from retail Internet access services totalled EUR 116.4 million, i.e. by 4.8% or EUR 5.3 million more than in 2014 (see Fig. 31). In 2015, the increasing revenue from retail Internet access services also raised the market

[27] GPRS and/or EDGE technologies, and/or UMTS, UMTS HSDPA, LTE

share of these services by 0.3 pp, which stood at 18.6% in 2015, with a view to the total revenue of the electronic communications market.



	2010	2011	2012	2013	2014	2015
Retail Internet access services	106.6	106.9	107.2	109.3	111.1	116.4
Market share by all electronic communications services	14.3 %	15.4 %	16.3 %	17.6 %	18.3 %	18.6 %

Fig. 31 **Revenue from retail Internet access services, in EUR million, and its share in the electronic communications market, %, 2010-2015.**
Source: RRT

In 2015, as in 2014, there were no significant changes in the structure of the market of retail Internet access services in terms of revenue generated by individual undertakings. Although the market shares of other providers were growing, TEO LT, AB maintained the leader's position by holding 45.9% of the market. The second largest operator in this market segment was UAB Omnitel that held 9.5% of the market in 2015 (see Fig. 32). The market share held by TEO LT, AB shrank by 1.2 pp in 2015, compared to 2014, and the market share held by UAB Omnitel strengthened by 0.6 pp. Moreover, although the retail Internet access service providers whose market share exceeded 3.0% remained the same – AB Lietuvos Radijo ir Televizijos Centras, UAB Bitė Lietuva, UAB Cgates and UAB Balticum TV – their market shares by revenue earned in 2015 slightly changed.

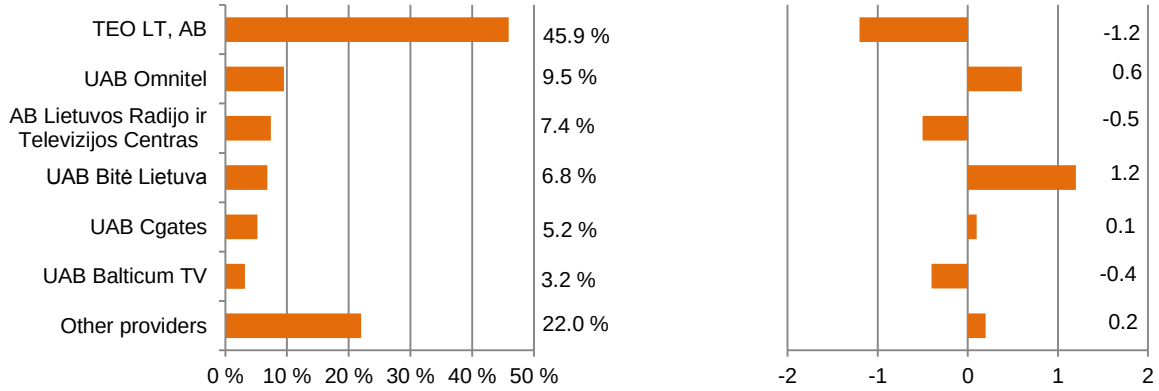
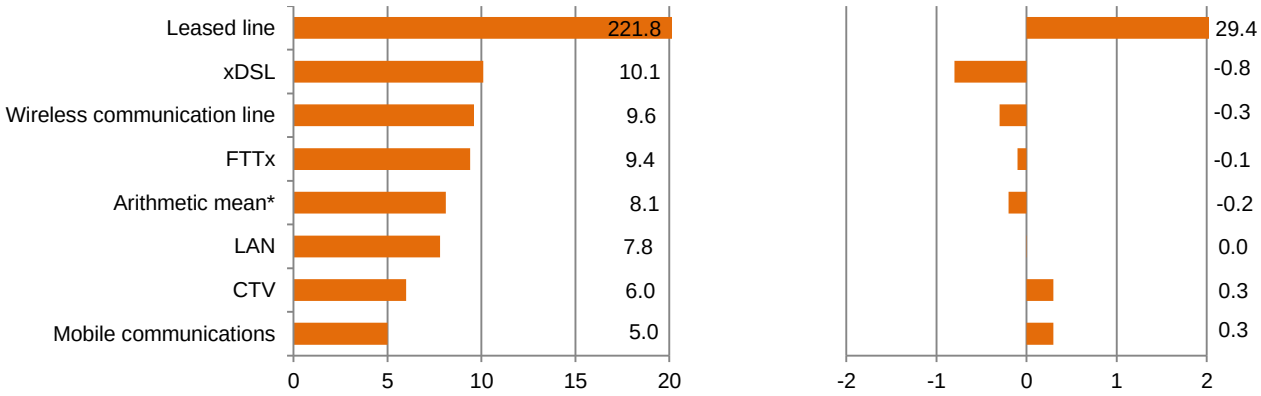


Fig. 32. **Structure of revenue from retail Internet access services by service providers, %, and annual changes of the market shares, pp, 2015.**
Source: RRT

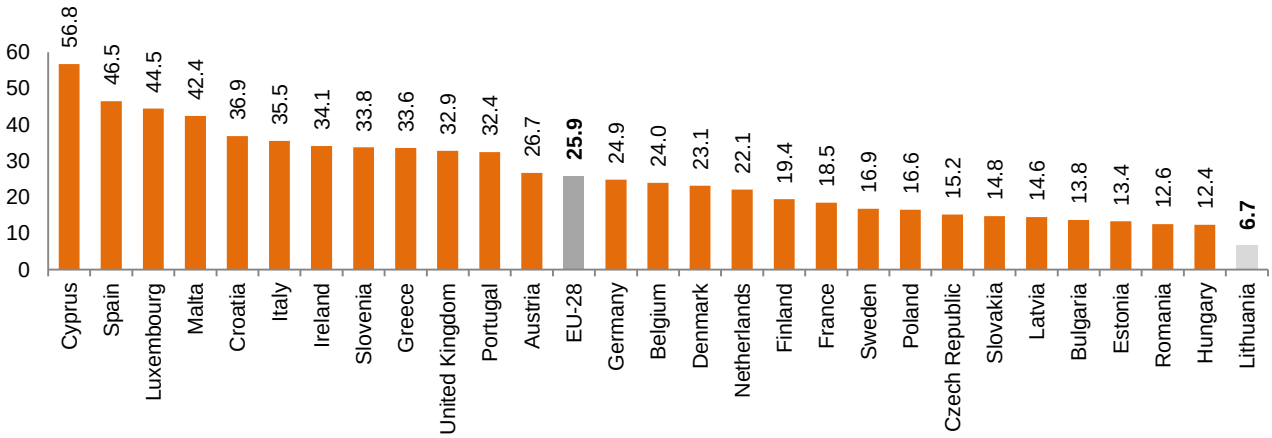
ARPU. The average monthly revenue per retail Internet access service user (ARPU) accounted for EUR 8.1 in 2015 and it was by EUR 0.2 less than in 2014 (see Fig. 33). As in the previous periods, the highest ARPU was generated from service users who connected to the Internet via leased lines. In 2015, compared to 2014, ARPU of this service went up by 15.3% or by EUR 29.4 per month. The lowest revenue (EUR 5.0) in 2015, as in 2014, was received from retail Internet access services provided by means of mobile communications technologies. ARPU of the most popular retail Internet access services provided via FTTx lines decreased insignificantly in 2015 (EUR 0.1) – to EUR 9.4 per month. ARPU of retail Internet access services provided via xDSL lines and FTTx lines differed by EUR 0.7.



** Calculated including all technologies, except for leased lines.*

Fig. 33. **ARPU for retail Internet access services by used technologies, in EUR per month, and ARPU annual changes, in EUR per month, 2015.**
Source: RRT

According to the data of the European Commission[28], the prices of retail Internet access services of the most popular 30-100 Mb/s speed rate in Lithuania were the lowest considering all Member States of the European Union in 2015. The minimum price of 30-100 Mb/s speed Internet access services stood at EUR 6.7 per month in 2015 in Lithuania, which is by EUR 19.2 less than the average of the EU Member States, where it totalled EUR 25.9 per month (see Fig. 34). In 2015, in the neighbouring countries of Lithuania – Latvia, Poland and Estonia – the minimum prices for 30-100 Mb/s speed Internet access services equalled EUR 14.6, EUR 16.6 and EUR 13.4 per month, respectively. The most expensive services of 30-100 Mb/s speed Internet access were in Spain and Cyprus in 2015 (respectively, EUR 46.5 and EUR 56.8 per month). Thus, the retail Internet access service prices for Lithuanian service users are the least expensive in the European Union.



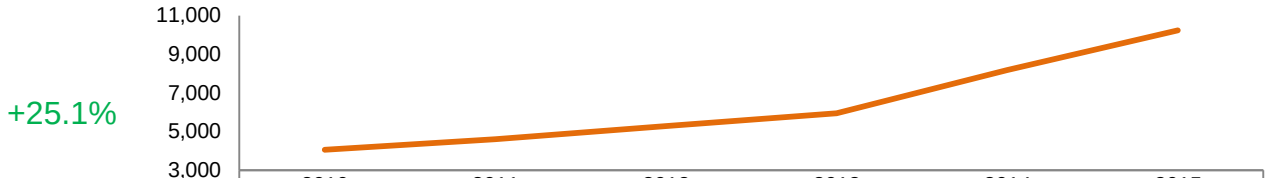
** Calculated based on the Purchasing Power Parity (PPP)*

Fig. 34. **Medians of prices for retail Internet (30-100 Mb/s speed rate) access services in the European Union in 2015, in EUR per month.**
Source: European Commission

Base Stations. For several consecutive years operators of mobile communications networks have been investing in the development of their networks, which in the future will ensure better geographical accessibility and quality of services. The scale of investment is also well illustrated by the growth in the number of new base stations. In 2015, the growth of base mobile communications stations stood at 25.1%

[28] http://digital-agenda-data.eu/charts/analyse-one-indicator-and-compare-countries#chart={"indicator-group": "bbquality", "indicator": "Price_Internet_only", "breakdown": "offer_30_100_Mbps", "unit-measure": "minimum_euro_PPP", "ref-area":["AT", "BE", "BG", "HR", "CY", "CZ", "DK", "EE", "EU27", "FI", "FR", "DE", "EL", "HU", "IE", "IT", "LV", "LT", "NL", "NO", "PL", "PT", "RO", "SK", "SI", "ES", "SE", "UK"]}

and at the end of the year there were 10.2 thousand base stations (see Fig. 35). On 2015, as in 2014, the most rapid development was that of LTE technology-based base stations. At the end of 2015, the number of such stations totalled 2.3 thousand or twice as much as during the respective period in 2014.



	2010	2011	2012	2013	2014	2015
GSM/DSC	2,986	3,170	3,472	3,669	3,890	4,219
UMTS	1,076	1,426	1,678	2,136	3,150	3,718
LTE		21	133	155	1,145	2,300
Stations, total	4,062	4,617	5,283	5,960	8,185	10,237

Fig. 35 **Number of mobile communications base stations in 2010-2015, in units.**
Source: RRT

In 2015, the service providers' revenue generated from the provision of retail Internet access services continued to grow (4.8%). In 2015, FTTx lines remained the most popular technology used to provide Internet access services. In 2015, as many as 43.6% of all Internet access service users were choosing this method of receiving the service.

3.3. Services of Leased Lines

N.B.!

- In this section of the report other leased line service providers shall be all leased line service providers, except for UAB Bitė Lietuva, UAB Duomenų Logistikos Centras and TEO LT, AB (“other providers”).

Leased line services include both retail and wholesale leased line services.

Service Providers. At the end of 2015, as in 2014, wholesale and/or retail leased line services were provided by 8 undertakings, of which the major providers were TEO LT, AB, UAB Duomenų Logistikos Centras and UAB Bitė Lietuva.

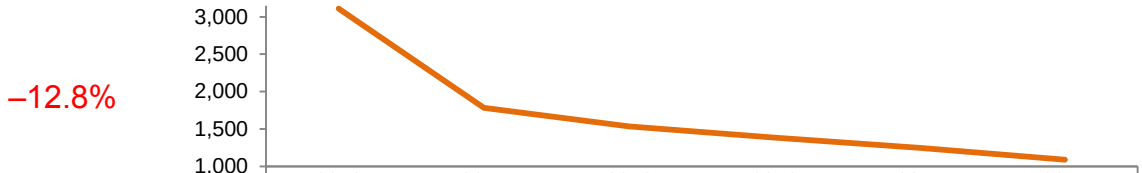
Service Recipients. Leased line services are used by both the providers of electronic communications networks and/or services and end service users. The latter usually use them to ensure high-quality communication for the purpose of transmitting data between two geographically distant points. Electronic communications network and/or service providers use leased lines for geographical expansion of their electronic communications networks, which enables the service providers to offer their retail electronic communications services to a larger circle of service users. The trends over the past years show that the popularity of leased line services has decreased due to development of new technologies, changing needs of service users and development of broadband communication, and such services are replaced with other data transmission services.

Number of assigned leased lines. At the end of 2015, as many as 1,088 leased lines were assigned: 578 retail lines and 510 wholesale leased lines. Of 1,088 leased lines, 679 leased lines were digital and 409 leased lines were analogue ones. In 2015, as in the previous year, the demand for leased lines was further decreasing. Compared to the end of 2014, the number of assigned leased lines dropped by 12.8% in 2015. In 2015, TEO LT, AB was leading on the market of leased lines both by revenue and number of assigned leased lines. In 2015, this undertaking assigned 66.0% of all leased lines or 718 leased lines – compared to 2014, where the total of 807 were assigned, which is by 11.0% less – and earned 54.9% of the total revenue of the market of leased lines.

At the end of 2015, as in the previous periods, the major share of assigned leased lines was represented by retail leased lines – 53.1%. Nevertheless, the gap between wholesale and retail leased line services was slightly greater in 2014. At the end of 2014, retail leased lines constituted a share larger by 2.7 pp – 55.8%.

In 2015, as in 2014, the number of both digital and analogue leased lines was going down – by 14.7% and 9.3%, respectively. A more significant decrease in the number of digital leased lines in 2015 was caused by the fact that their share on the market of leased lines had shrunk for the first time since 2011, and

at the end of 2015, it stood at 62.4%; the share of analogue leased lines accordingly increased by up to 37.6% (see Fig. 36).



	2010	2011	2012	2013	2014	2015
Analogue leased lines	40 %	45 %	42 %	39 %	36 %	38 %
Digital leased lines	60 %	55 %	58 %	61 %	64 %	62 %
Leased lines, total	3,108	1,783	1,535	1,385	1,247	1,088

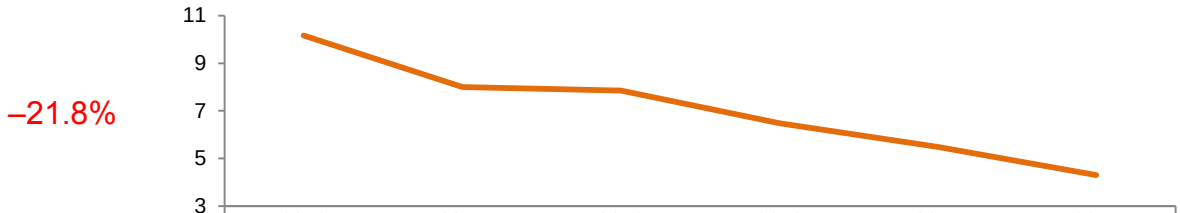
Fig. 36. **The number of assigned leased lines, in units, and their structure by service groups, %, 2010-2015.**
Source: RRT

Although the number of digital leased lines used to transmit data at the speed rate higher than 2 Mb/s slightly went down in 2015, the number of such lines has remained stable since 2011 (see Fig. 37). In 2015, as many as 208 lines were assigned, i.e. by 33 units or by 13.7% less than in 2014, and by 15 units or by 6.7% less than in 2013.

	2010	2011	2012	2013	2014	2015
Lines	1 002	168	197	223	241	208

Fig. 37. **The number of leased lines of speed rate higher than 2 Mb/s, in units, 2010-2015.**
Source: RRT

Revenue. In 2015, the revenue amounting to EUR 4.3 million was received from leased line services (see Fig. 38). Compared to the revenue in 2014, it decreased by EUR 1.2 million. Accordingly, their share on the market of data transmission services continued to go down as well and it stood at 2.8% in 2015. The decrease of the revenue from leased line services was higher in 2015 than in 2014: in 2015, the revenue from such services dropped by 21.8%, and in 2014, revenue falling accounted for 15.4%. With a view to the structure of revenue, the amount of EUR 2.54 million was received from retail leased line services in 2015 (in 2014 – EUR 3.15 million), and EUR 1.72 million (in 2014 – EUR 2.34 million) – from wholesale leased line services.



	2010	2011	2012	2013	2014	2015
Revenue	10.2	8.0	7.8	6.5	5.5	4.3
Share on the data transmission service market	6.4 %	5.0 %	5.0 %	4.1 %	3.5 %	2.8 %

Fig. 38. **Revenue from leased line services, in EUR million, and its share in the data transmission service market, %, 2010-2015.**
Source: RRT

Every single year during the period between 2010 and 2015, the major share of the market of leased lines was held by TEO LT, AB in terms of the number of assigned leased lines. The same trend remained in terms of held market shares and revenue (see Table 28). It must be noted that the market share held by TEO LT, AB was gradually shrinking, and the market shares held by other two major leased line service providers – UAB Duomenų Logistikos Centras and UAB Bitė Lietuva – were growing.

Table 28. **Structure of revenue received from leased line services by service providers in 2010-2015, %.**

	2010	2011	2012	2013	2014	2015
UAB Bitė Lietuva	6.3	7.4	9.2	9.3	9.8	9.4
UAB Duomenų logistikos centras	12.9	17.7	16.3	26.3	27.2	30.9
TEO LT, AB	67.7	64.2	62.2	60.6	58.2	54.9
Other providers	13.1	10.7	12.3	3.8	4.8	4.8

Source: RRT

In 2015, the market of leased lines shrank by 21.8% in terms of the revenue. The decrease of the revenue received from leased line services was mainly caused by lower demand for these services. Although in 2015 the number of digital leased lines used to transmit data at the speed rate higher than 2 Mb/s insignificantly decreased, the number of such lines has remained almost unchanged since 2011. Due to growing needs of service users and development of broadband communication based on advanced technologies, however, the demand for leased line services is decreasing and leased lines are replaced with retail Internet access and other data transmission services.

3.4. Other Data Transmission Services

Service providers	22
Major service provider	TEO LT, AB
Revenue, in EUR million	28.5

N.B.!

- In 2015, the following wholesale Internet access services were provided: services of wholesale central access to xDSL line and FTTx line for mass market products in a fixed location, direct and/or indirect shared connection to the Internet and Internet transit services. Information possessed by RRT includes the information only on the service of wholesale central access to xDSL line for mass market products in a fixed location, therefore this report contains only information on this particular service.
- In this section of the report other providers shall be all other data transmission service providers, except for UAB Plačiajuostis Internetas, UAB Satgate and TEO LT, AB ("other providers").

Other data transmission services are usually the services provided by the Internet Protocol technologies which ensure data transmission between the geographically distant points, connection of geographically distant points, data flow transmission and other features of data transmission. The examples of such services are Virtual Private Network services, Frame Relay services, Ethernet services, data traffic transmitted over the Multiprotocol Label Switching (MPLS) technology, and wholesale Internet access services.

Service Providers. Other data transmission services, including wholesale Internet access services, were provided by 3 undertakings less in 2015 than in 2014, i.e. the services were provided by 22 operators, of which 9 operators were providing wholesale Internet access services at the end of 2015, as in 2014.

Service Recipients. During the period between 2010 and 2015, the number of other data transmission service (except for wholesale Internet access services) users was at its peak in 2014. In 2015, the number of such service users went down by 14.6% to 17.0 thousand service users (see Fig. 39).

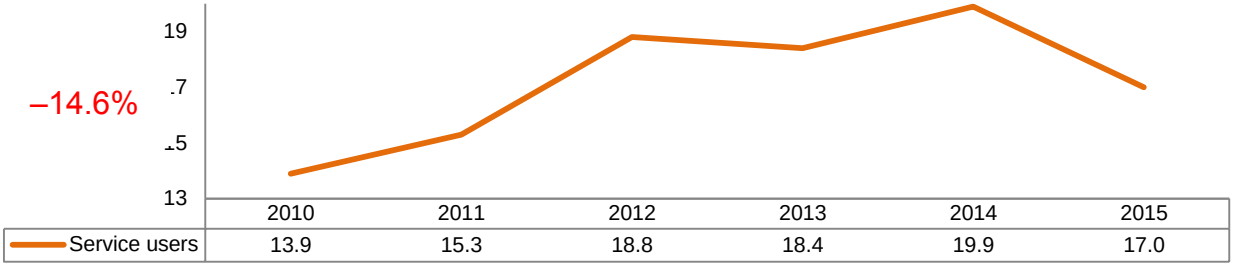


Fig. 39. **Number of other data transmission service (except for wholesale Internet access services) users, in thousands, 2010-2015.**
Source: RRT

The major share of other data transmission service (except for wholesale Internet access services) users were using the services provided by TEO LT, AB. At the end of 2015, TEO LT, AB was providing other

data transmission services (except for wholesale Internet access services) to 65.3% of such service users. It must be noted, that this indicator is higher by 10.0 pp than during the respective period in 2014.

Wholesale Internet Access Service. At the end of 2015, the wholesale Internet access service, i.e. the service of wholesale central access to xDSL line for mass market products in a fixed location, by 1 undertaking – TEO LT, AB. In 2015, this service was purchased by 5 operators who, at the end of year, were assigned 1,611 wholesale xDSL lines by TEO LT, AB (see Fig. 40). Regardless of the fact that in 2015 the number of assigned lines was higher by 4.7% but taking account of the decrease of the demand for retail Internet access services provided via xDSL lines and the growth of retail Internet access services provided via FTTx lines, mobile and wireless communications technologies, the demand for the service of wholesale central access to xDSL line for mass market products in a fixed location will likely go down.

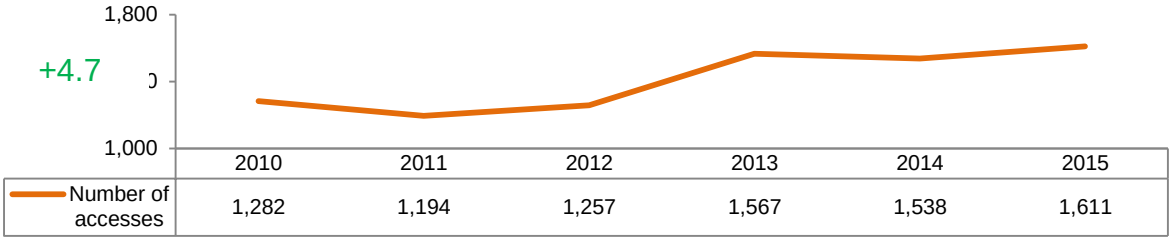
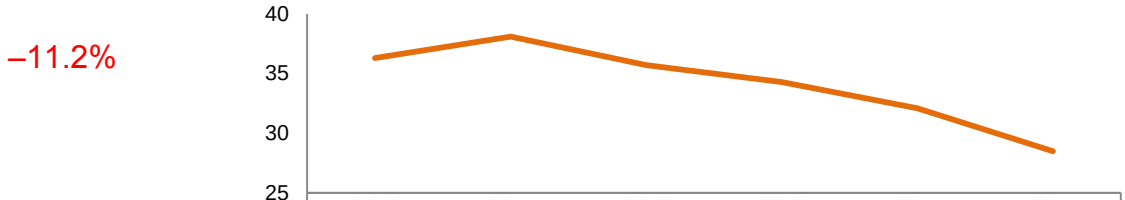


Fig. 40 **The number of granted accesses to wholesale xDSL lines, in units, 2010-2015.**

Revenue. The revenue from the provision of other data transmission services continued to decrease in 2015. It amounted to EUR 28.4 million or by 11.2% less than in 2014 (see Fig. 41). With a view to the total revenue of the electronic communications market, the revenue generated by other data transmission services accounted for 4.6% in 2015 – this is by 0.7 pp less than in 2014.



	2010	2011	2012	2013	2014	2015
Wholesale Internet access services	11.1	13.1	10.7	9.5	7.8	10.9
Other data transmission services (except for wholesale Internet access services)	25.2	25.0	25.0	24.8	24.3	17.5
Other data transmission services, total	36.3	38.1	35.7	34.3	32.1	28.5
Share in the revenue of the electronic communications market	4.9 %	5.5 %	5.4 %	5.5 %	5.3 %	4.6 %

Fig. 41. **Revenue from other data transmission services, in EUR million, and its share by the total revenue of the electronic communications market, %, 2010-2015.**
Source: RRT

In 2015, as in the previous year, the major portion of the revenue in the provision of other data transmission services was received from other data transmission services (except for wholesale Internet access services), i.e. 61.4% or EUR 17.5 million (see Fig. 41). Compared to the revenue in 2014, it decreased by 28.0% or by EUR 6.8 million. In 2015, the revenue from wholesale Internet access services had grown for the first since 2011. Its increase stood at 39.7% or EUR 3.1 million in 2015.

In 2015, TEO LT, AB not only remained the leader on the market of other data transmission services, in terms of the revenue, but it also increased its market share (see Fig. 42). Over the year, the market share held by TEO LT, AB grew by 5.2 pp. However, in 2015, compared to 2014, the revenue of TEO LT, AB from other data transmission services went down by 1.5%, and the overall market shrank by 11.2%.

Regardless of the fact that in 2015 the market was shrinking, the revenue of some service providers was growing, for instance, the revenue of the second market player – UAB Satgate – increased even by 54.3% in 2015 in terms of generated revenue. In 2015, compared to 2014, Public Enterprise Plačiajuostis Internetas also earned by 10.4% more revenue from other data transmission services.

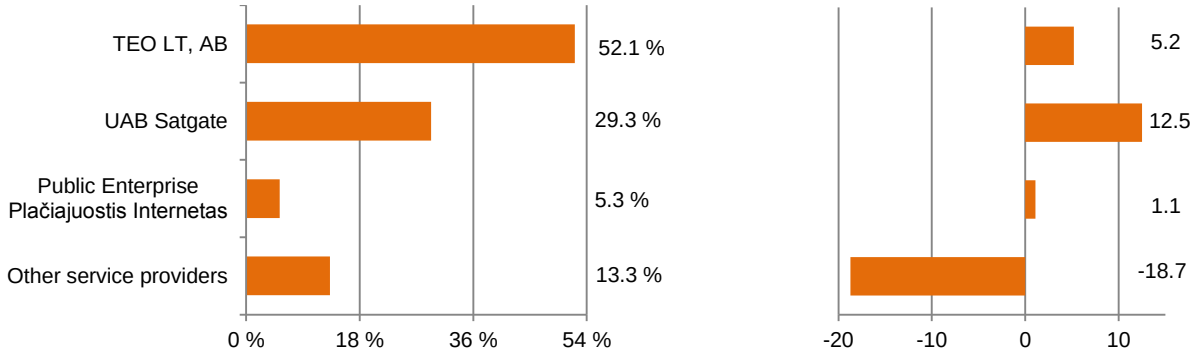


Fig. 42. **Structure of revenue from other data transmission services by service providers, %, and annual changes of the market shares, pp, 2015.**
Source: RRT

In 2015, the market of other data transmission services, in terms of the revenue, that constituted 19.1% of the overall data transmission market, shrank by 11.2%. Although the demand for wholesale Internet access services has been stable since 2013, taking account of the decrease of the demand for retail Internet access services provided via xDSL lines and the growth of retail Internet access services provided via FTTx lines, mobile and wireless communications technologies, the demand for wholesale Internet access services will likely go down.

4. Television and Radio

4.1. General Overview of the Market of Television and Radio Services

N.B.!

- In this section of the report other television and radio service providers shall be all television and radio service providers, except for UAB Balticum TV, UAB Cgates, UAB Init, AB Lietuvos Radijo ir Televizijos Centras, Splius, UAB, TEO LT, AB and AS Viasat (“other providers”).

The market of television and radio services covers retail free television and radio services, retail pay-TV services and wholesale television and radio broadcasting services which are required to provide retail radio and television services.

Service Providers. At the end of 2015, television and radio activities, insofar it relates to the electronic communications activities, were carried out by 1 undertaking less than at the end of 2014, i.e. 45 undertakings (see Table 29).

Table 29. **Number of television and radio service providers by services provided, in units, 2010-2015.**

	2010	2011	2012	2013	2014	2015
Radio and television broadcasting	4	4	5	4	6	4
Pay-TV services	55	49	45	44	43	42
Total	**56**	**50**	**46**	**46**	**46**	**45**

Source: RRT

In 2015, retail television services were provided by 42 service providers (in 2014 – by 43). There were quite fewer wholesale radio and television broadcasting service providers: at the end of 2015, television broadcasting services were provided by 4 undertakings, radio broadcasting services, as in the previous periods, were provided by only one undertaking – AB Lietuvos Radijo ir Televizijos Centras. In the segment of pay-TV services the decrease of the number of such service providers is caused by currently more active consolidation processes of service providers.

Revenue. The growth of the revenue from retail and wholesale television and radio services received till 2013 is to be associated with the shut-down of analog television broadcasting on 29 October 2012. After the shut-down that took place at the end of 2012, the revenue from television and radio services during the period between 2013 and 2015 remained stable. In 2015, it stood at EUR 64.6 million (see Fig. 43) and, compared to 2014, it went up by 0.3% or by EUR 202 thousand. This increase was mainly influenced by higher revenue from radio broadcasting services.

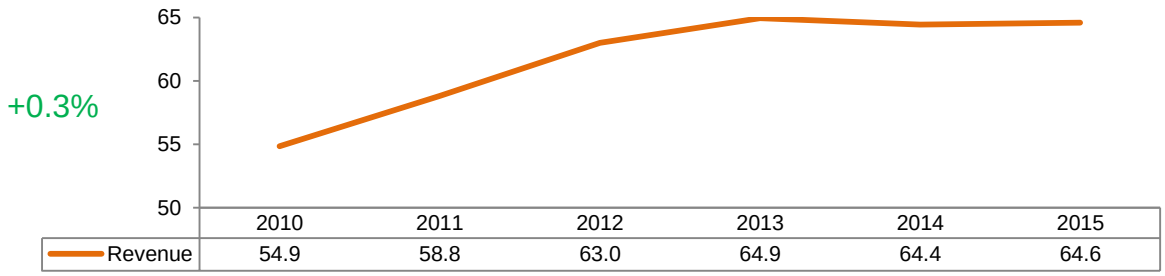


Fig. 43 **Revenue from television and radio services, in EUR million, 2010-2015.**
Source: RRT

In 2015, as in the previous periods, the largest portion of the revenue was earned from retail television services. The revenue generated from this activity stood at EUR 60.3 million or 93.3% (by 0.3 pp less than in 2014) of the total revenue from the provision of television and radio services. In 2015, the revenue from wholesale television and radio broadcasting services amounted to EUR 4.3 million or 6.7% of the total revenue from television and radio services: 5.2% (in 2014 – 5.3%) of the revenue was received from television broadcasting services, and 1.5% (in 2014 – 1.1%) – from radio broadcasting services.

With a view to the structure of the market of television and radio services by revenue of service providers in 2015, the same 7 undertakings remained the major service providers that together held 92.7% of the market, i.e. by 0.6 pp more than in 2014 (see Fig. 44). TEO LT, AB, which held 31.9% of the market by revenue in 2015, was the one to have strengthened its market share the most. Over the year, the market share of this undertaking grew by 3.8 pp.

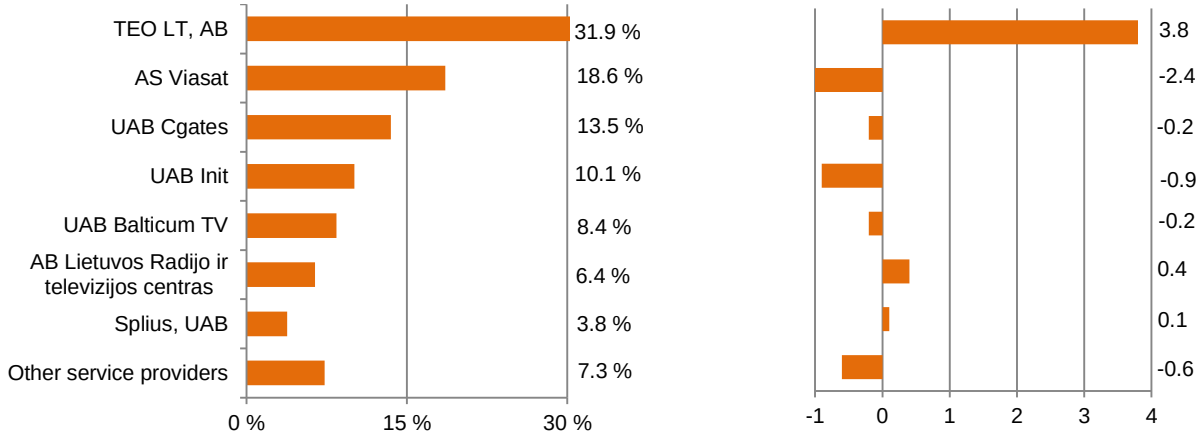


Fig. 44. **Structure of revenue from television and radio services by service providers, %, and annual changes of the market shares, pp, 2015.**
Source: RRT

The growth of the revenue from television and radio services received till 2013 is to be related to the shut-down of analog television broadcasting on 29 October 2012. After the shut-down that took place in 2012, the revenue from television and radio services during the period between 2013 and 2015 remained stable. In the segment of pay-TV services the decrease of the number of such service providers is caused by currently more active consolidation processes of service providers. TEO LT, AB, which held 31.9% of the market by the revenue in 2015, was the one to have strengthened its market share the most.

4.2. Retail Television Services

N.B.!

- Information possessed by RRT does not include retail free television and radio services, and retail radio services provided in Lithuania are free of charge, therefore the information contained herein will mostly cover pay-TV services.
- In this section of the report other retail television service providers shall be all retail television service providers, except for UAB Balticum TV, UAB Cgates, UAB Init, Splius, UAB, TEO LT, AB and AS Viasat ("other providers").

In 2015, as in the previous periods, retail free and pay television services were provided in Lithuania.

Free Television

Free television was broadcast via digital terrestrial television networks. According to the data of the Radio and Television Commission of Lithuania, free-TV service users could watch 11 free-TV (free-to-air) national television channels: BTV, "Info TV", "Lietuvos rytas.tv", "LIUKS!", LNK, "LRT Kultūra", "LRT Televizija", TV1, TV3, TV6 and TV8[29]. According to the data of research carried out by TNS LT, LNK, "LRT Televizija" and TV3 remained the most popular TV channels by viewers' time watched in 2015[30].

Pay-TV

Methods of the Service Provision. In 2015, pay-TV services were provided by employing 5 different methods in Lithuania:

- via cable television networks ("CTV");
- via Internet Protocol technologies ("IPTV");
- via satellite networks ("satellite TV");
- via terrestrial television networks ("DVB-T");
- via microwave multi-channel distribution system networks ("MMDS").

Service Providers. In 2015, compared to 2014, the number of pay-TV service users changed insignificantly. The changes are further recorded only in CTV and IPTV segments (see Table 30). The number of undertakings providing CTV services dropped to 32 service providers in 2015, and that of IPTV services – to 15 providers. In 2015, as in the previous periods, MMDS and DVB-T services were provided by 2 undertakings (each), and satellite TV services were provided by 1 undertaking – AS Viasat.

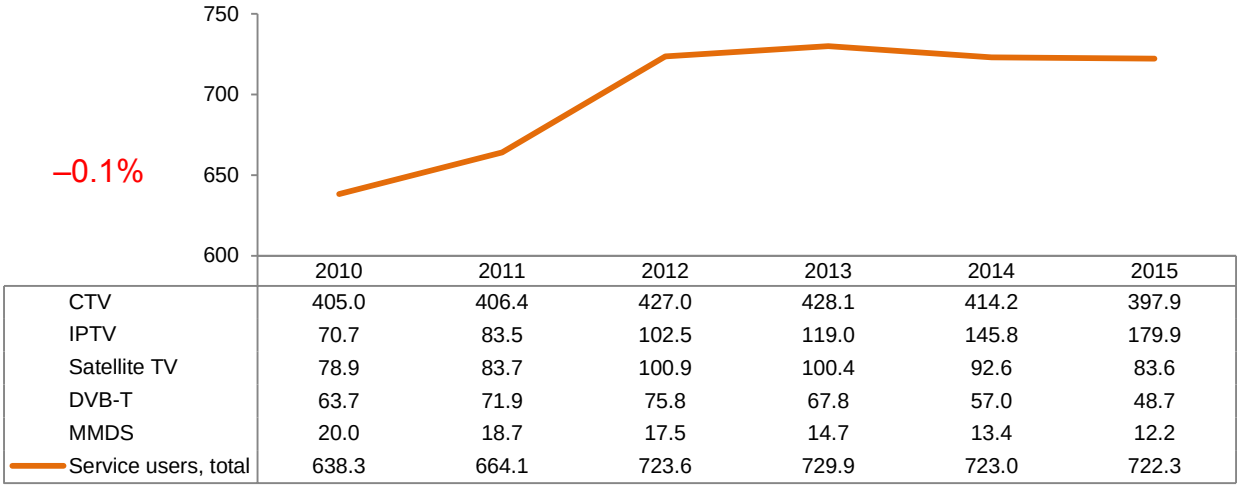
[29] http://www.rtk.lt/lt/radijas_ir_televizija/skaitmenine_televizija
[30] http://www.tns.lt/lt/news/tv-auditorijos-tyrimo-rezultatai-2015-m-gruodis/

Table 30. **Structure of pay-TV service providers by service provision methods, in units, between 2010 and the end of 2015.**

	2010	2011	2012	2013	2014	2015
CTV	49	44	41	37	35	32
MMDS	3	3	2	2	2	2
DVB-T	2	2	2	2	2	2
Satellite TV	1	1	1	1	1	1
IPTV	8	7	9	15	16	15

Source: RRT

Service Recipients. The growth of the number of television service users till 2013 is to be related to the shut-down of analog television broadcasting on 29 October 2012. During the period between 2013 and 2015 this number was stabilized and at the end of 2015 it stood at 722.3 thousand service users or by 0.1% less than in 2014 (see Fig. 45). With a view to the structure of pay-TV subscribers by methods of the television service provision, the number of the users of services provided by all methods, except for IPTV, was decreasing in 2015. The number of IPTV service users grew by almost one fourth – 23.4% (in 2014 – 22.5%). The growth of the demand for IPTV services may be associated with the fact that the functionality of such services corresponds to the needs of today's users. The number of DVB-T service users decreased the most – it went down by 14.6% and totalled 48.7 thousand users at the end of the year.



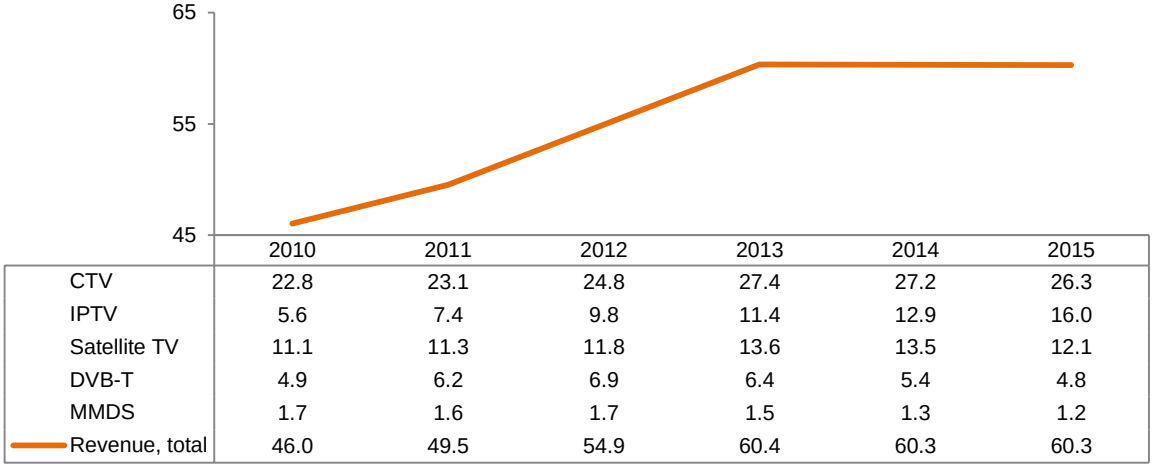
	2010	2011	2012	2013	2014	2015
CTV	405.0	406.4	427.0	428.1	414.2	397.9
IPTV	70.7	83.5	102.5	119.0	145.8	179.9
Satellite TV	78.9	83.7	100.9	100.4	92.6	83.6
DVB-T	63.7	71.9	75.8	67.8	57.0	48.7
MMDS	20.0	18.7	17.5	14.7	13.4	12.2
Service users, total	638.3	664.1	723.6	729.9	723.0	722.3

Fig. 45. **Number and structure of pay-TV service users by service provision methods in 2010-2015, in thousands.**
Source: RRT

The largest share (55.1%) of television service users still prefer CTV services, but their number is dropping. In 2015, compared to 2014, the share of CTV service subscribers decreased by 2.2 pp. CTV services are replaced with IPTV and satellite television services. In 2015, pay-TV services were used by 24.9% and 11.6% of all pay-TV service users, respectively. The MMDS service further remains the least popular service whose users accounted for mere 1.7%.

Revenue. The similar trends of the structure of the market of pay-TV services, in terms of revenue or number of service users, have been observed. In 2015, the largest portion (43.6%) of the revenue from pay-TV services was from CTV services whose revenue, compared to 2014, went down by 3.3% (see Fig. 46). In 2015, the stability of the revenue from pay-TV services resulted from the growth of the revenue from IPTV services. Over the year the revenue earned from these services amounted to EUR 16.0 million or by 24% more than in 2014. The revenue from IPTV grew due to the increased demand for these services

caused by higher functionality of television services provided this way vis-à-vis other methods of the provision of television services.



	2010	2011	2012	2013	2014	2015
CTV	22.8	23.1	24.8	27.4	27.2	26.3
IPTV	5.6	7.4	9.8	11.4	12.9	16.0
Satellite TV	11.1	11.3	11.8	13.6	13.5	12.1
DVB-T	4.9	6.2	6.9	6.4	5.4	4.8
MMDS	1.7	1.6	1.7	1.5	1.3	1.2
Revenue, total	46.0	49.5	54.9	60.4	60.3	60.3

Fig. 46. **Structure of revenue received from pay-TV services by service provision methods in 2010-2015, in EUR million.**
Source: RRT

In 2015, compared to 2014, the structure of the market of pay-TV services by revenue of service providers remained stable – 6 major pay-TV service providers maintained the same positions, but the market shares changed (see Fig. 47). The leader of the market of pay-TV services – TEO LT, AB – strengthened its position on the market in 2015 and over the year it expanded its market share by 4.3 pp up to 34.1%. This was mainly impacted by the increasing demand for IPTV services provided by TEO LT, AB. The position of the second largest undertaking by the market share held (AS Viasat) shrank by 2.4 pp and the market share equalled 20.0%.

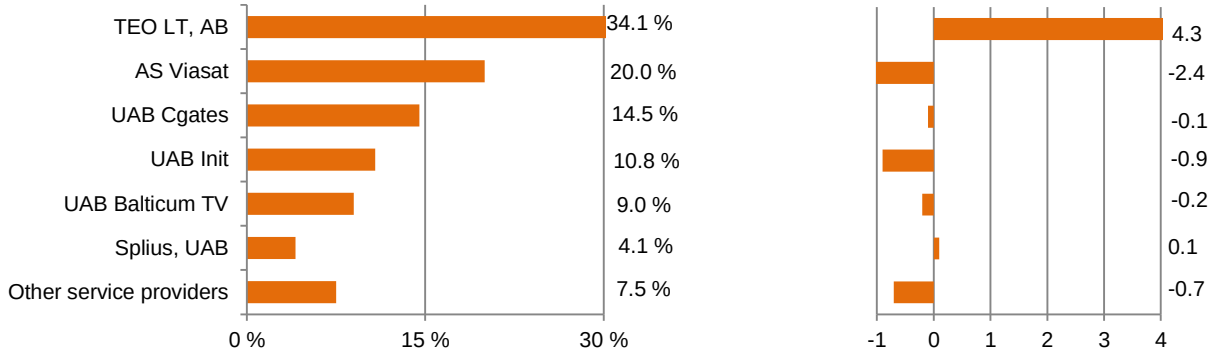
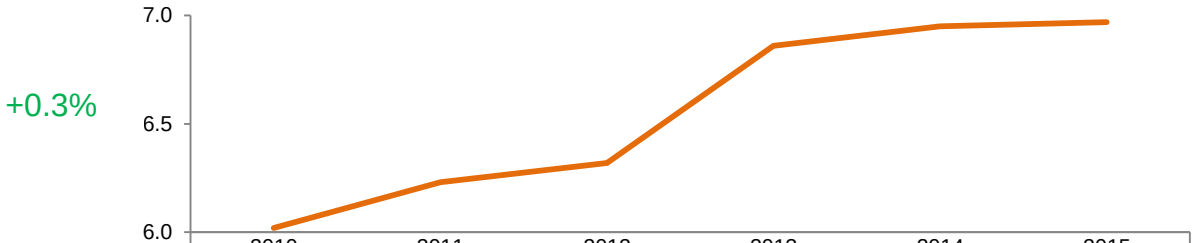


Fig. 47. **Structure of revenue from pay-TV services by service providers, %, and annual changes of the market shares, pp, 2015.**
Source: RRT

ARPU. The monthly revenue per pay-TV service user (ARPU) accounted for EUR 6.97 in 2015 and it was by EUR 0.02 more than in 2014 (see Fig. 48). With a view to ARPU received from pay-TV services provided by different means, the largest change in ARPU (growth by EUR 0.51) was recorded in the provision of DVB-T service in 2015, compared to 2014. In 2015, as in the previous periods, the highest ARPU was earned by the satellite television service provider, and the lowest ARPU was generated by CTV service providers. Where it comes to the most popular methods of the provision of television services, ARPU from IPTV and CTV increased by EUR 0.04 and 0.02, respectively, whereas ARPU from satellite television dropped by EUR 0.18.



	2010	2011	2012	2013	2014	2015
CTV	4.69	4.72	4.84	5.33	5.48	5.50
IPTV	6.63	7.36	7.97	8.02	7.37	7.41
Satellite TV	11.70	11.24	9.75	11.27	12.19	12.01
DVB-T	6.43	7.18	7.59	7.88	7.84	8.25
MMDS	7.15	7.12	8.09	8.72	8.14	8.06
Total ARPU	6.02	6.23	6.32	6.86	6.95	6.97

Fig. 48 **ARPU from pay-TV services by service provision methods in 2010-2015, in EUR per month.**
Source: RRT

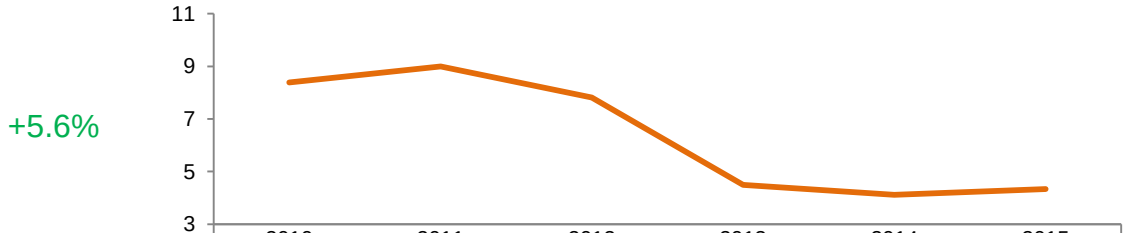
The growth of the market of pay-TV services till 2013, in terms of both number of users and revenue, is to be related to the shut-down of analog television broadcasting on 29 October 2012. During the period between 2013 and 2015 the pay-TV market was stabilized. Only the market of IPTV services was growing and its development increased the share of the market of pay-TV services held by TEO LT, AB as well.

4.3. Wholesale Television and Radio Broadcasting Services

Service providers	4
Major service provider	AB Lietuvos Radijo ir Televizijos Centras
Revenue, in EUR million	4.34

Service Providers. In 2015, wholesale television broadcasting services were provided by 4 undertakings: 2 undertakings – AB Lietuvos Radijo ir Televizijos Centras and TEO LT, AB – via national networks; 2 undertakings – UAB Balticum TV and UAB Šiaulių Apskrities Televizija – via regional networks. Also, one undertaking registered in Lithuania – UAB Satgate – was providing television broadcasting services outside Lithuania. Wholesale radio broadcasting services, as in the previous periods, were provided by only one undertaking – AB Lietuvos Radijo ir Televizijos Centras.

Revenue. In 2015, compared to 2014, the revenue from the provision of television and radio broadcasting services grew by 5.6% and stood at EUR 4.34 million (see Fig. 49). The growth of the revenue resulted from the revenue received from radio broadcasting services as in 2015 the revenue from television broadcasting did not change. The largest portion of the revenue from television and radio broadcasting services in 2015, as in the previous periods, was generated by AB Lietuvos Radijo ir Televizijos Centras. In 2015, this undertaking generated 94.7% (in 2014 – 93.4%) of the total revenue from television and radio broadcasting services.



	2010	2011	2012	2013	2014	2015
Digital terrestrial TV	3.10	3.57	3.13	3.62	3.37	3.38
Analog terrestrial TV	4.39	4.46	3.77	0.00	0.00	0.00
Radio	0.90	0.97	0.92	0.86	0.74	0.96
Revenue, total	8.39	9.00	7.82	4.49	4.11	4.34

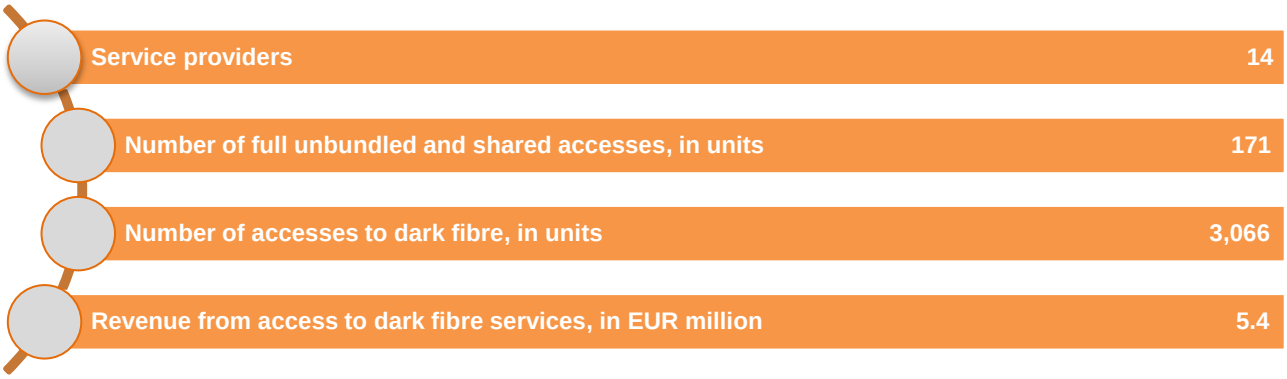
Fig. 49 **Revenue from television and radio broadcasting services by service groups, in EUR million, 2010-2015.**
Source: RRT

The revenue from radio broadcasting services that had been decreasing since 2011 grew by 29.7% or by EUR 0.22 million up to EUR 0.96 million in 2015. During the period between 2010 and 2015, only in 2011 such revenue was higher by EUR 0.01 million.

Stations. At the end of 2015, as many as 106 digital terrestrial television stations were operating in Lithuania. There were 92 digital terrestrial television stations which constituted 4 national coverage digital terrestrial television networks (2 networks were provided by AB Lietuvos Radijo ir Televizijos Centras, the other two – by TEO LT, AB). There were also 16 digital terrestrial television stations which operated in individual geographical regions.

In 2015, the revenue from wholesale television and radio broadcasting services grew by 5.6% and accounted for 6.7% of the total revenue of the television and radio market. In 2015, AB Lietuvos Radijo ir Televizijos Centras generated 94.7% of the total revenue from television and radio broadcasting services.

5. Access to Physical Infrastructure



N.B.!

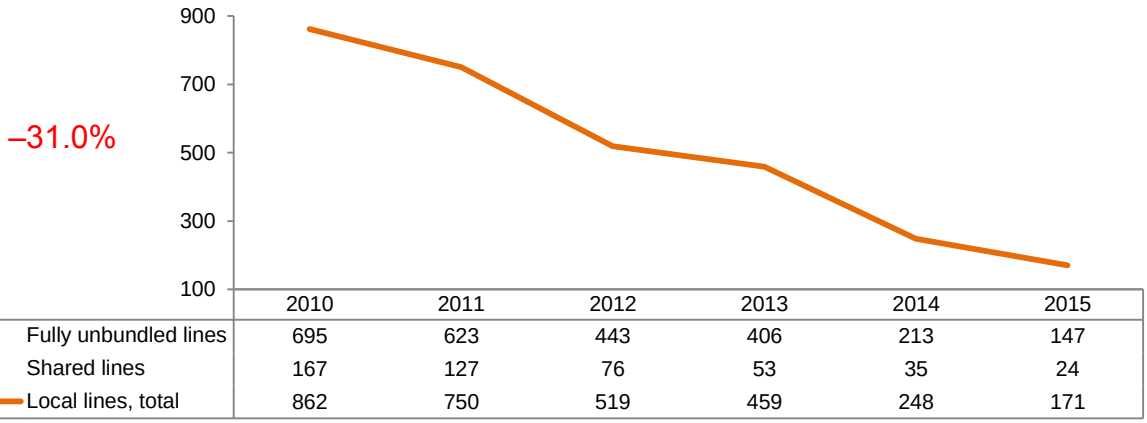
- The information possessed by RRT includes only access to dark fibre and full unbundled and shared access to the local metallic twisted pair loop services, therefore the information contained in this section will reflect the provision of the said services.
- In this section of the report other access to physical infrastructure service providers shall be all access to physical infrastructure service providers, except for TEO LT, AB in Figure 51 and UAB Duomenų Logistikos Centras, Public Enterprise Plačiajuostis Internetas, UAB Skaidula and TEO LT, AB in Figure 53 ("other providers").

In 2015, the following 5 wholesale access to physical infrastructure services were provided in Lithuania:

- access to dark fibre ("Dark Fibre") service;
- service of full unbundled and shared access to the local metallic twisted pair loop;
- service of access to communications cable duct system;
- service of access to television and radio broadcasting means;
- services of access to other physical infrastructure.

Providers. At the end of 2015, wholesale access to physical infrastructure services were provided by 1 undertaking less than in 2014, i.e. 14 undertakings. In 2015, as in the previous year, full unbundled and shared access to the local metallic twisted pair loop services were provided by only one undertaking – TEO LT, AB. Only two undertakings, i.e. Public Enterprise Infostruktūra and UAB Baltnetos Komunikacijos, were buying these services from TEO LT, AB, as in the previous periods. As many as 14 undertakings were engaged in the provision of access to dark fibre services, i.e. by 1 undertaking less than in 2014.

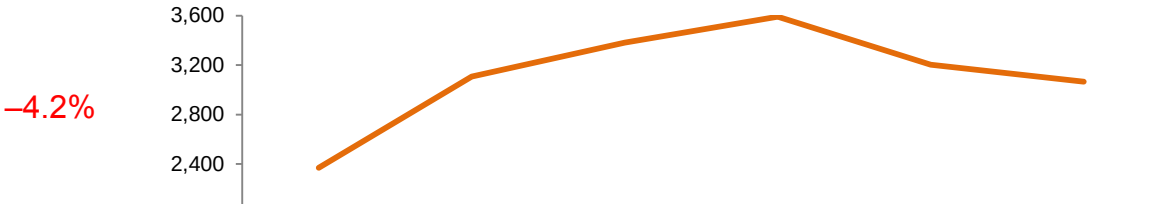
Number of Granted Accesses. During the period between 2010 and 2015, the demand for full unbundled and shared access to the local metallic twisted pair loop services was gradually decreasing (see Fig. 50). At the end of 2015, the total number of granted accesses to the local metallic twisted pair loop stood at 171 units or by 31.0% less than in 2014.



	2010	2011	2012	2013	2014	2015
Fully unbundled lines	695	623	443	406	213	147
Shared lines	167	127	76	53	35	24
Local lines, total	862	750	519	459	248	171

Fig. 50. **Number of granted accesses to full unbundled and shared local metallic twisted pair loop, in units, 2010-2015.**
Source: RRT

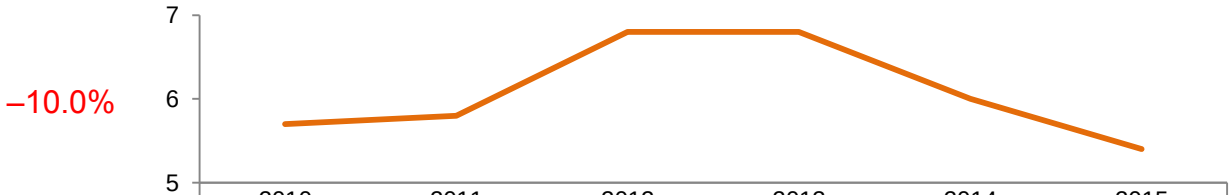
At the end of 2015, the service providers had provided 3,066 dark fibres (see Fig. 51). Compared to the situation at the end of 2014, this is by 4.2% or by 136 fibres less. The revenue from this activity also decreased in 2015 (see Fig. 52). In 2015, as in the previous periods, TEO LT, AB was leading on the market of the access to dark fibre services by the number of granted accesses. Nevertheless, it must be noted that the market share held by this undertaking has been gradually shrinking for several years in a row. In 2015, compared to 2014, its market share shrank by 1.8 pp. The decline in the demand for access to dark fibre services was probably caused by the fact that service users were replacing these services with other vertically related services.



	2010	2011	2012	2013	2014	2015
TEO LT, AB	1,089	1,121	1,197	1,324	1,075	975
Other service providers	1,280	1,985	2,185	2,268	2,127	2,091
Granted accesses, total	2,369	3,106	3,382	3,592	3,202	3,066

Fig. 51. **The number of granted accesses to dark fibre, in units, 2010-2015.**
Source: RRT

Revenue. In 2015, the access to dark fibre service providers earned the revenue amounting to EUR 5.4 million (see Fig. 52). The revenue from the provision of these services dropped for the second consecutive year in 2015. Compared to the revenue in 2014, it decreased by 10.0% or by EUR 0.6 million.



	2010	2011	2012	2013	2014	2015
Revenue	5.7	5.8	6.8	6.8	6.0	5.4

Fig. 52. **Revenue from access to dark fibre services, in EUR million, 2010-2015.**
Source: RRT

In 2015, TEO LT, AB was outperformed by UAB Skaidula on the market of the access to dark fibre services for the first time (see Fig. 53). Although the portion of the revenue earned by TEO LT, AB on the

market of access to dark fibre services grew by 0.5 pp, the market share held by UAB Skaidula increased even more – by 4.6 pp – and stood at 37.1% at the end of the year.

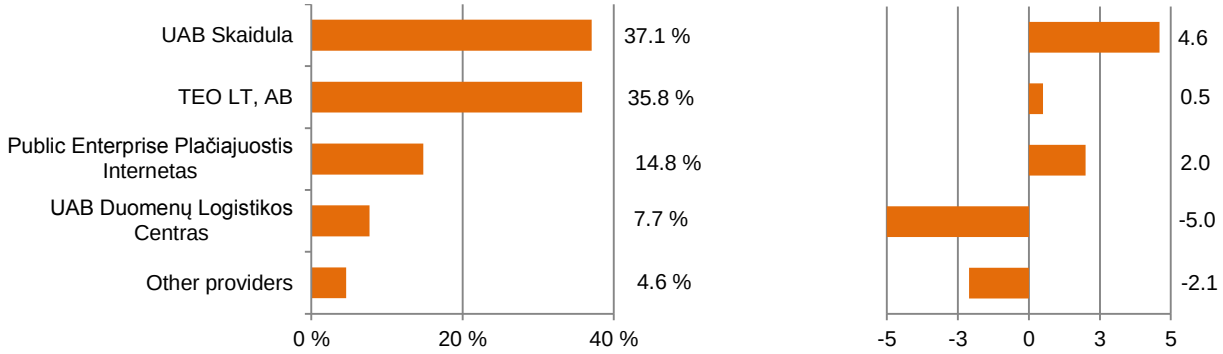


Fig. 53. **Structure of revenue from access to dark fibre services by service providers, %, and annual changes of the market shares, pp, 2015.**
Source: RRT

At the end of 2015, the total number of granted accesses to the local metallic twisted pair loop stood at 171 units or by 31.0% less than in 2014. At the end of 2015, the service providers had provided 3,066 dark fibres. In 2015, the access to dark fibre service providers earned by 10.0% less revenue from the access to physical infrastructure services, compared to 2014.

POSTAL SERVICE MARKET

1. General Overview of the Postal Service Market

The growth of the postal service market has been observed for six years already. During this period, the market has grown by 75.0% and in 2015, it represented 16.2% of the total revenue of the Lithuanian communications sector. The annually increasing volumes of e-commerce and scale of emigration result in the growing trend of the parcel flow. Thus, due to the relevance of the postal service the continuous provision of the universal postal service to all residents of Lithuania will be further ensured[31] under uniform conditions.

The postal service consists of the following three main activities: sending of items of correspondence[32] (letters and small packages), sending postal parcels (articles and merchandise up to 50 kg), other postal and related services (advertising information, newspapers, magazines, other periodicals, etc.). Moreover, the postal service may be divided into universal postal service and non-universal postal service.

Service Providers. At the end of 2015, there were 66 registered undertakings having indicated to intend to carry out the postal service activity in Lithuania, i.e. by 3 postal service providers less than at the end of 2014 (see Table 31). In 2015, the provision of postal services was launched by 5 undertakings, and 8 undertakings terminated this activity. However, there were only 47 out of 66 undertakings that were actually engaged in the provision of postal service at the end of 2015, i.e. by 9 undertakings less than in 2014.

Table 31. **Number of postal service providers in 2010-2015, in units.**

	2010	2011	2012	2013	2014	2015
Number of actual postal service providers	55	55	54	59	56	47
Total number of postal service providers	71	74	73	76	69	66

Source: RRT

Revenue. In 2015, all postal service providers earned the revenue amounting to EUR 120.6 million, which was by 10.6% or by EUR 11.6 million more than in 2014 (see Table 32). The following categories of the postal service are singled out: items of correspondence, postal parcels and other services related to the postal service. In 2015, the postal service market maintained the same proportions of the

[31] Universal postal service shall mean a postal service of the quality established by legal acts that is to be provided to all users willing to be provided with such a service throughout the Republic of Lithuania for an affordable fee. In the territory of the Republic of Lithuania the provision of this universal postal service shall be ensured: 1) the clearance, sorting, transport and delivery of postal items of up to 2 kilograms; 2) the clearance, sorting, transport and delivery of postal parcels up to 10 kg; 3) the clearance, sorting, transport and delivery of registered and insured postal items; 4) the delivery of postal parcels of up to 20 kilograms received from other Member States of the European Union.

[32] An item of correspondence is a postal item to be dispatched and delivered, which contains a notice inscribed on any physical material, including small packages, and has the address of the addressee indicated thereon (books, catalogues, newspapers and other periodicals are not considered items of correspondence).

structure that had formed since 2012, where the largest portion of the revenue (49.5%) was comprised of the revenue from postal parcels, although till 2012, the largest share of the market had been represented by the revenue from items of correspondence.

Table 32. **Structure of revenue of the postal service by types of postal items and services, in EUR million, 2010-2015.**

	2010	2011	2012	2013	2014	2015
By types of postal items:						
items of correspondence	35.4	38.5	41.3	41.7	45.4	49.1
postal parcels	30.6	36.4	44.3	50.4	53.8	59.7
other	2.9	3.9	4.2	9.9	9.8	11.8
By types of the service:						
universal	24.9	26.2	28.3	15.4	16.8	18.7
non-universal	44.0	52.6	61.4	86.5	92.2	101.9
Total revenue	**68.9**	**78.8**	**89.7**	**101.9**	**109.0**	**120.6**

Source: RRT

The largest portion (84.5%) of the revenue from postal services is further represented by the revenue from the provision of the non-universal postal service (see Table 32). The amendments of the Postal Law laying down that bulky postal items and parcels, as well as value-added services shall no longer be attributed to the universal postal service resulted in the drop of the revenue from the universal postal service in 2013. The revenue growth trend from the universal postal service has been further observed since 2013. In 2015, the revenue went up by 11.3%.

The largest market share (41.8%), in terms of revenue, was held by AB Lietuvos Paštas in 2015 (see Fig. 54). Over the year, its market share grew by 1.1 pp. The second largest undertaking in terms of the share of the postal service market was UAB DPD Lietuva holding 17.2% of the market, and UAB Venipak LT with the market share of 8.3% was ranked the third.

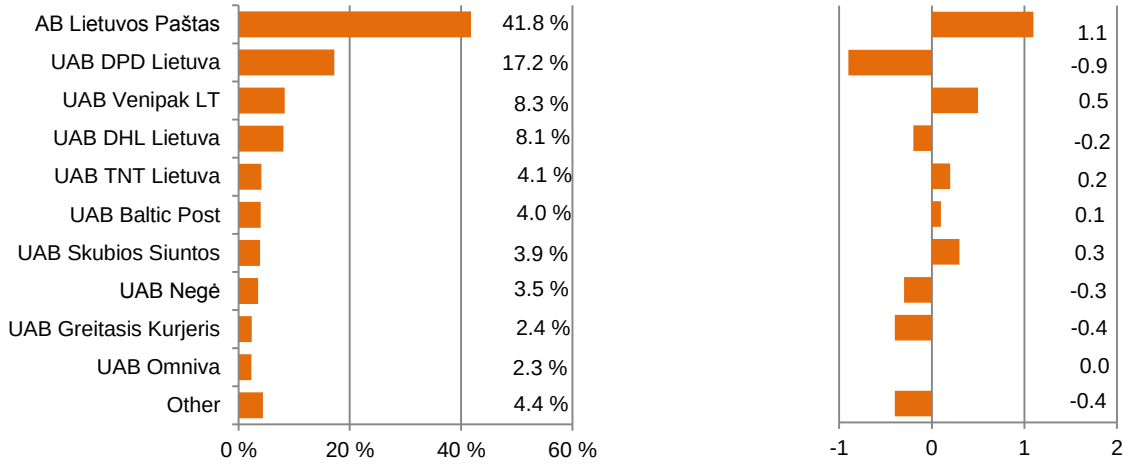


Fig. 54. **Structure of revenue of the postal service market by service providers, %, and annual changes of the market shares, pp, 2015.**
Source: RRT

The postal service market that grew by 75.0% over six years, in terms of revenue, shows that Lithuanian citizens are willingly sending and receiving various parcels. This is enhanced by the advanced electronic communications means which contribute to online shopping which is becoming part of a daily life of the population.

2. Items of Correspondence

Service Providers. In 2015, items of correspondence were provided by 36 undertakings, i.e. by two undertakings less than in 2014.

Number of items. In 2015, as many as 74.3 million items of correspondence were sent. In 2015, compared to 2014, the growth of 3.8% of the volume of items of correspondence was recorded (see Table 33). In 2015, the major share (77.4%) of these items was comprised of other items of correspondence. The amendments of the Postal Law laying down that bulky postal items and parcels, as well as value-added services shall no longer be attributed to the universal postal service resulted in the drop of the volume of universal items of correspondence that has been observed since 2013. In 2015, the decrease in the volume of items of correspondence on the universal service market (4.0%) and the growth of the non-universal services (6.3%) was observed.

Table 33. **Volumes of items of correspondence, in million units, 2010-2015.**

	2010	2011	2012	2013	2014	2015
Universal items of correspondence	49.5	48.1	49.2	17.2	17.5	16.8
Non-universal items of correspondence	23.8	26.2	25.0	51.9	54.1	57.5
All items	**73.3**	**74.3**	**74.2**	**69.1**	**71.6**	**74.3**

Source: RRT

The major volume (76.4%) of all items of correspondence was sent and received through AB Lietuvos Paštas. This is by 7.5 pp more than in 2014. The total of 11.2% of items of correspondence were send and received through UAB Greitasis Kurjeris, which is by 6.6 pp less than in the previous year. In 2015, as many as 4.3% of all items of correspondence were sent and received through UAB Litpost, 1.9% – through UAB Bijusta and UAB Apskonta each. The total of 4.3% of all items of correspondence were sent and received through other undertakings (31 providers).

Revenue. In 2015, the revenue received from items of correspondence increased by 8.1% and equalled EUR 49.1 million (see Table 34). In 2015, the largest portion of the revenue (65.6%) was received from the provision of non-universal items of correspondence. The revenue from the provision of these services grew by 6.3% over the year. The revenue from universal items of correspondence also increased (11.3%).

Table 34. **Revenue from items of correspondence, in EUR million, 2010-2015.**

	2010	2011	2012	2013	2014	2015
For universal items of correspondence	22.6	24.0	25.7	13.7	15.1	16.8
For non-universal items of correspondence	12.8	14.5	15.6	28.0	30.3	32.2
For all items	**35.4**	**38.5**	**41.3**	**41.7**	**45.4**	**49.1**

Source: RRT

The amendments of the Postal Law laying down that bulky postal items and parcels, as well as value-added services shall no longer be attributed to the universal postal service resulted in the drop of the revenue from universal items of correspondence in 2013. Therefore the revenue from the provision of universal items of correspondence in 2015 accounted for 34.2% of the total revenue received from items of correspondence, where in 2012, the portion of such revenue stood at 62.2%.

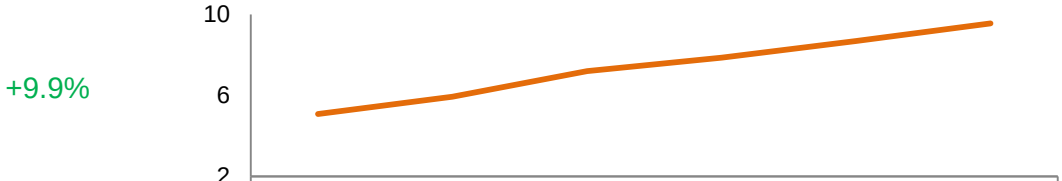
Items of correspondence further remain a significant share of the postal service market. The number of items went up by 3.8% over the year, and the generated revenue grew by 8.1%.

3. Postal Parcels

Service providers	26
Number of items, in million units	9.6
Revenue, in EUR million	59.7

Service Providers. In 2015, the postal parcel services were provided by 26 undertakings, i.e. by 7 undertakings less than in 2014.

Number of parcels. The continuously growing number of postal parcels had an impact on the increase of the revenue from postal parcels in 2010-2015. In 2015, as many as 9.5 million units of postal parcels were handed over, i.e. by 10.0% more than in 2014. In 2015, 9.36 million units of non-universal postal parcels were sent and received, i.e. by 10.4% more than in 2014, and the number of universal postal parcels stood at 0.19 million units, i.e. by 5.0% less than in the previous year (see Fig. 55).

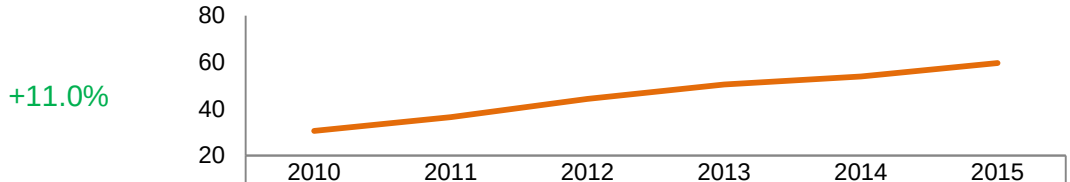


	2010	2011	2012	2013	2014	2015
Universal postal parcels	0.60	0.54	0.45	0.21	0.20	0.19
Non-universal postal parcels	4.48	5.39	6.74	7.66	8.48	9.36
All postal parcels	5.08	5.93	7.19	7.87	8.68	9.55

Fig. 55. **Volumes of universal and non-universal postal parcels, in million units, 2010-2015.**
Source: RRT

The major share of the postal parcel market, by number of parcels, was held by UAB DPD Lietuva – 37.8% (by 1.4 pp less than in 2014), UAB Venipak LT – 22.2% (by 4.3 pp more than in 2014), UAB Baltic Post – 17.6% (by 0.1 pp more than in 2014), UAB Omniva – 8.6%, AB Lietuvos Paštas – 4.0% (by 0.7 pp less than in 2014), UAB Skubios Siuntos – 4.8%. The remaining 21 undertakings jointly held 5.0% of the market.

Revenue. Between 2010 and 2015, the revenue from postal parcels almost doubled (increased by 95.1%). In 2015, the revenue amounting to EUR 59.7 million was received from postal parcel services, which was by EUR 5.9 million or by 11.0% more than in 2014 (see Fig. 56). Such a growth is directly related to the increase of e-commerce volumes, which results in a greater demand for the postal parcel service.



	2010	2011	2012	2013	2014	2015
Universal postal parcels	2.26	2.24	2.63	1.73	1.73	1.87
Non-universal postal parcels	28.3	34.2	41.7	48.6	52.1	57.9
Revenue from postal parcels	30.6	36.4	44.3	50.4	53.8	59.7

Fig. 56. **Revenue from postal parcel services, in EUR million, 2010-2015.**
Source: RRT

The revenue from non-universal postal parcels grew by 11.1% in 2015, compared to 2014. The revenue from the provision of universal postal parcels increased by 8.1% or EUR 0.14 million (see Fig. 56). In 2015, 96.9% of the revenue was received from non-universal postal parcels, and 3.1% – from universal postal parcels.

Postal parcels hold the major share (49.5%) of the postal service market in terms of the revenue. During the period between 2010 and 2015 both the revenue and number of parcels almost doubled.

4. Universal Postal Service

Service Provision. In 2015, there were 793 points of access to universal postal services in Lithuania, i.e. by 18 points of access less than in 2014 (see Table 35). In 2015, there were 0.27 points of access to universal postal services per 1,000 residents of Lithuania (or one point of access per 3,704 residents). The number of both mobile and stationary points of access to universal postal service was decreasing. 83.1% of all access points were stationary, and 16.8% – mobile ones. In 2015, there was one working place of a postal agent[33].

Table 35. **Number of points of access to universal postal services, in units, 2010-2015.**

	2010	2011	2012	2013	2014	2015
Mobile access points	135	138	133	134	132	133
Stationary access points	737	715	703	695	679	659
Postal agent						1
All points of access	**872**	**853**	**836**	**829**	**811**	**793**

Source: RRT

In 2015, there were 1,687 post boxes for outgoing mail in Lithuania, i.e. by 151 boxes or by 8.2% less than in 2014 (see Table 36). During the period between 2010 and 2015, the number of post boxed for outgoing mail was annually decreasing.

Table 36. **Number of post boxes for outgoing mail, in units, 2010-2015.**

	2010	2011	2012	2013	2014	2015
Post boxes for outgoing mail	2,302	2,254	2,122	2,058	1,838	1,687

Source: RRT

Volume of Service. In 2015, the volume amounting to 17.0 million units of the universal postal service was sent and received, which was by 4.0% less than in 2014 (see Table 37).

Table 37. **Volume of provided universal postal service, in million units, and its structure, %, 2010-2015.**

	2010	2011	2012	2013	2014	2015
Items of correspondence = or < 2 kg, %	83.7	81.6	80.1	74.14	70.56	69.07
Registered items, %	15.1	17.3	19.0	24.6	28.3	29.79
Postal parcels < 10 kg, %	1.2	1.1	0.9	1.2	1.06	1.06
Postal parcels from the EU < 20 kg, %	0.01	0.01	0.01	0.02	0.02	0.02
Insured items, %	0.02	0.02	0.02	0.04	0.04	0.05
Total	**50.1**	**48.7**	**49.7**	**17.4**	**17.7**	**17.0**

Source: RRT

[33] A postal agent is an entity acting on behalf of a postal service provider when concluding contracts on the provision of postal service; however, it is not an employee of a postal service provider (a postal service provider and an agent sign the agency agreement).

With a view to the structure of the universal postal service market in terms of the volume of services, in 2015, the major share (69.07%) was represented by items of correspondence of up to 2 kg; however, this market share shrank by almost 1.5 pp over the year.

Revenue. The revenue received from the provision of the postal service stood at EUR 18.7 million in 2015 and, compared to 2014, it grew by 11.3%. It must be noted that the revenue growth was enhanced by the increase of the number of registered items (see Table 38).

Table 38. **Revenue from the universal postal service, in EUR million, and structure of revenue, %, 2010-2015.**

	2010	2011	2012	2013	2014	2015
For items of correspondence = or < 2 kg, %	51.1	48.6	46.3	40.6	38.5	37.7
For registered items, %	39.5	42.5	44.0	47.6	50.7	51.7
For postal parcels < 10 kg, %	8.9	8.5	9.2	11.1	10.2	10.0
For postal parcels from the EU < 20 kg, %	0.2	0.1	0.1	0.1	0.1	0.1
For insured items, %	0.3	0.3	0.4	0.7	0.5	0.5
For all services	**24.9**	**26.2**	**28.3**	**15.4**	**16.8**	**18.7**

Source: RRT

The largest portion of the revenue (51.7%) was generated from the provision of registered items. 37.7% of the revenue was generated from items of correspondence up to or equal to 2 kg (see Table 38).

Prices. The maximum tariffs of the universal postal service which may be set by AB Lietuvos Paštas are provided in Annex 5 to the report.

The universal postal service in Lithuania is provided by AB Lietuvos Paštas. This service is of a relevance to the residents of remote areas who are provided with an opportunity to send and receive various postal parcels or items of correspondence. Thus, the universal postal service plays a significant social role.

Annex 1

Electronic Communications Service Providers in 2015

Item No	Service providers	Telephone service		Networks interconnection		Data transmission			Radio and television		Wholesale access
		Mobile telephone service	Fixed telephone service	Call termination	Call transit	Retail Internet access	Leased lines	Other data transmission services	Pay-TV	Posting services	
1.	Splius, UAB		•			•			•		•
2.	TEO LT, AB		•	•	•	•	•	•	•		•
3.	AB Lietuvos Geležinkeliai		•	•			•				
4.	AB Lietuvos Radijo ir Televizijos Centras		•	•		•		•		•	
5.	AB Ogmios Centras		•			•					
6.	UAB Šiaulių Apskrities Televizija									•	
7.	AS Viasat					•			•		
8.	D. Kamarauskas' company Davgita					•					
9.	DIDWW Ireland Ltd		•								
10.	G. Pečiulis' company					•					
11.	H. Abramavičius' company					•					
12.	Hibernia Media (UK) Limited						•				
13.	Individual Enterprise IT Kubas					•					
14.	Individual Enterprise Satinet					•					
15.	Individual Enterprise INLO					•					
16.	V. Ivančikas' Individual Enterprise Žaibas					•			•		
17.	J. Jasiulionis' Individual Enterprise								•		
18.	J. Varnas' Vilniaus Radijo Studija								•		
19.	KTU Department of Information Technology					•					
20.	L. Bulovas' firm					•					

Item No	Service providers	Telephone service		Networks interconnection		Data transmission			Radio and television		Wholesale access
		Mobile telephone service	Fixed telephone service	Call termination	Call transit	Retail Internet access	Leased lines	Other data transmission services	Pay-TV	Posting services	
	Elektromedija										
21.	SIA Lattelecom affiliate					•		•			
22.	UAB Acta Iuventus					•					
23.	UAB Agon Networks		•								
24.	UAB AirnetTV					•			•		•
25.	UAB Alantos Kompiuterių Servisas					•					
26.	UAB Alpha Komunikacijos					•					
27.	UAB Alterkomas	•									
28.	UAB Auridija					•					
29.	UAB Autožvilgsnis	•									
30.	UAB AVVA					•			•		
31.	UAB Balticum TV		•			•		•	•	•	•
32.	UAB Baltnetos Komunikacijos		•			•					
33.	UAB Bitė Lietuva	•		•	•	•	•	•			
34.	UAB Bitosis					•		•	•		
35.	UAB Cgates		•			•			•		
36.	UAB Consilium Optimum					•		•	•		
37.	UAB CSC Telecom	•	•	•	•	•		•			
38.	UAB Data Business					•			•		
39.	UAB Dekbera							•			
40.	UAB Dicto Citius						•				
41.	UAB Dinetas					•					
42.	UAB DKD					•					
43.	UAB Duomenų Ekspresas					•					
44.	UAB Duomenų Greitkelis					•			•		•
45.	UAB Duomenų Logistikos Centras					•	•	•			•
46.	UAB Dzūkijos Internetas					•					

Item No	Service providers	Telephone service		Networks interconnection		Data transmission			Radio and television		Wholesale access
		Mobile telephone service	Fixed telephone service	Call termination	Call transit	Retail Internet access	Leased lines	Other data transmission services	Pay-TV	Posting services	
47.	UAB Ecofon		●	●	●						
48.	UAB Ektra					●	●	●			●
49.	UAB Elekta					●			●		●
50.	UAB Elneta					●					
51.	UAB Eltida					●					
52.	UAB Etanetas					●			●		
53.	UAB Eteris					●			●		
54.	UAB Eurocom	●				●					
55.	UAB Eurofonas		●								
56.	UAB Funaris								●		
57.	UAB Gisnetas					●					
58.	UAB Horda								●		
59.	UAB Ignalinos Televizija					●			●		
60.	UAB Ilora					●			●		
61.	UAB Informacijos Labirintas					●					
62.	UAB Infoseka					●					
63.	UAB Init		●			●			●		●
64.	UAB Kalbu Lt		●								
65.	UAB Kalvanet					●					
66.	UAB Kateka					●			●		
67.	UAB Kauno Interneto Sistemos					●					
68.	UAB Kava					●					
69.	UAB Kavamedia		●			●			●		●
70.	UAB Kednetas					●					
71.	UAB KLI LT		●			●			●		
72.	UAB Kodas					●					
73.	UAB Krėna					●					
74.	UAB Kvartalo Tinklas					●					

Item No	Service providers	Telephone service		Networks interconnection		Data transmission			Radio and television		Wholesale access
		Mobile telephone service	Fixed telephone service	Call termination	Call transit	Retail Internet access	Leased lines	Other data transmission services	Pay-TV	Posting services	
75.	UAB Lansneta					•			•		
76.	UAB Lema					•					
77.	UAB Linaspas					•					
78.	UAB Linx Telecommunications					•		•			
79.	UAB LT Telekomunikacijos		•								
80.	UAB M Projektai					•					
81.	UAB Magnetukas					•					
82.	UAB Mano Kamanė								•		
83.	UAB Marsatas		•			•			•		
84.	UAB Mediafon Carrier Services	•	•	•	•						
85.	UAB Mediafon	•	•								
86.	UAB Medium Group	•	•								
87.	UAB Metameda and Co	•									
88.	UAB Miesto Tinklas					•					
89.	UAB Molėtų Radijas ir Televizija		•			•			•		
90.	UAB N Plius					•					
91.	UAB Nacionalinis Telekomunikacijų Tinklas		•	•	•	•		•			
92.	UAB Neltė							•			
93.	UAB Netsis					•					
94.	UAB NNT					•					
95.	UAB Omnitel	•		•		•		•			
96.	UAB Pakeleivis					•					
97.	UAB Parabolė					•			•		
98.	UAB Patrimpas								•		
99.	UAB Penkių Kontinentų Komunikacijų Centras		•			•		•	•		•
100.	UAB Peoplefone		•		•						

Item No	Service providers	Telephone service		Networks interconnection		Data transmission			Radio and television		Wholesale access
		Mobile telephone service	Fixed telephone service	Call termination	Call transit	Retail Internet access	Leased lines	Other data transmission services	Pay-TV	Posting services	
101.	UAB Progmera					•					
102.	UAB Proitas		•								
103.	UAB Radijo Elektroninės Sistemos		•			•			•		
104.	UAB Raystorm*		•		•						
105.	UAB Remo Televizija					•		•	•		
106.	UAB Roventa		•			•			•		
107.	UAB Satgate							•		•	
108.	UAB SauleNet					•					
109.	UAB Silnet					•					
110.	UAB Skaidula										•
111.	UAB Skylink LT		•								
112.	UAB Socius					•		•	•		
113.	UAB Sugardas					•		•	•		•
114.	UAB Taurų Dvaras					•			•		
115.	UAB Telco Consulting Group		•		•						
116.	UAB Tele2	•		•		•					
117.	UAB Teledema SIP		•								
118.	UAB Teledema	•				•					
119.	UAB Telekomunikacijų Grupė		•	•							
120.	UAB Telekomunikaciniai Projektai		•			•					
121.	UAB Telemeta	•									
122.	UAB Teletinklas		•			•					
123.	UAB Televizijos Komunikacijos		•			•			•		
124.	UAB Topnet					•					
125.	UAB Transteleservis	•	•			•			•		
126.	UAB Verslo Tiltas					•		•			
127.	UAB Vilniaus Avilda					•					

Item No	Service providers	Telephone service		Networks interconnection		Data transmission			Radio and television		Wholesale access
		Mobile telephone service	Fixed telephone service	Call termination	Call transit	Retail Internet access	Leased lines	Other data transmission services	Pay-TV	Posting services	
128.	UAB Viltuva					•			•		
129.	UAB Vinetika					•					
130.	UAB Zirzilė		•			•			•		
131.	Public Enterprise Ozo Tinklas					•					
132.	Public Enterprise Plačiajuostis Internetas							•			•
133.	Public Enterprise Infostruktūra					•	•				
134.	V. Ričkauskas' company					•					
135.	SA Voxbone		•		•						
	Total	**14**	**40**	**11**	**10**	**99**	**8**	**22**	**42**	**4**	**14**

* UAB Raystorm provided one electronic communications service – call transit service which is also attributed to fixed telephone services.

Annex 2

Postal Service Providers in 2015

Item No	Service Providers	Items of correspondence	Postal parcels	Other
1.	A. Safošina's Individual Enterprise		•	
2.	AB Lietuvos Paštas	•	•	•
3.	"Federal Express Corporation" affiliate	•	•	
4.	Individual Enterprise Britlita		•	
5.	Individual Enterprise K.Matulevičiaus firma Ryto Žvaigždė	•		
6.	Lithuanian and Canadian UAB Kali		•	
7.	UAB Apskonta	•		
8.	UAB Baltic Krantas		•	
9.	UAB Baltic Post		•	
10.	UAB Bijusta	•	•	•
11.	UAB Brevitra	•		
12.	UAB DHL Lietuva	•	•	
13.	UAB DPD Lietuva	•	•	
14.	UAB Drusvilma	•		
15.	UAB Finansinės Strategijos	•		
16.	UAB GerViva		•	
17.	UAB Greitasis Kurjeris	•	•	•
18.	UAB Greitasis Paštas	•		
19.	UAB Invicte		•	
20.	UAB Jūros Paštas	•	•	•
21.	UAB Kaišiadorių Butų Ūkis	•		
22.	UAB Kodas	•		
23.	UAB Litera	•		
24.	UAB Litgina	•	•	
25.	UAB Litpost	•		
26.	UAB Megatomas	•		
27.	UAB Nėgė		•	
28.	UAB Omniva		•	
29.	UAB Paslauga Tau	•		
30.	UAB Pašto Paslaugos	•		
31.	UAB Plungės Paštas	•		
32.	UAB Ritspeda	•		
33.	UAB Rusko	•	•	
34.	UAB Salmera	•		
35.	UAB Samus	•	•	
36.	UAB Skubios Siuntos	•	•	
37.	UAB Spaudos Kelias	•	•	•
38.	UAB Šiaulių Naujienos	•		
39.	UAB TNT	•	•	
40.	UAB Velo Kurjeris		•	
41.	UAB Venipak LT		•	
42.	UAB VIM Agentūra	•	•	
43.	UAB Zenesa	•		
44.	UAB Žemaitijos Paštas	•		
45.	Public Enterprise Kultūros vizija	•		
46.	Public Enterprise Šiauliai plius	•		•
47.	Public Enterprise Vilties pagalba	•	•	
	Total	**36**	**26**	**6**

Item No	Service Providers	Items of correspondence	Postal parcels	Other
	Activity not carried out by:			
1.	Aleksas Sinkevičius			
2.	UAB Atlantic Express			
3.	UAB Avaneta			
4.	UAB Observis			
5.	UAB Rubo			
6.	UAB Tikroji Turto Kaina			
7.	UAB VAV investicija			
	Report not submitted by:			
1.	Justas Oščepkovas			
2.	MB Express Delivery			
3.	MB Nortlita			
4.	UAB Autopašto terminalas			
5.	UAB AZI Group			
6.	UAB Itella Logistics			
7.	UAB Kastinida			
8.	UAB Prekių Ir Paslaugų Grupė			
9.	UAB Toras LT			
10.	UAB VB group			
11.	UAB Verslo Spaudos Centras			
12.	UAB VOX JURIS			

Annex 3

Number of residents and households in Lithuania on 1 January, 2011-2016

	2011	2012	2013	2014	2015	2016
Number of residents	3,052,588	3,003,641	2,971,905	2,943,472	2,921,262	2,888,582*
Number of households	1,282,600	1,262,034	1,238,294	1,308,210	1,298,339	1,289,546*

* preliminary data

Source: Statistics Department of Lithuania

Annex 4

Methodologies for the Calculation of Certain Indicators

Table 4:

- Penetration of electronic communications services per 100 residents is calculated by dividing the number of service users (at the end of the year) by the number of residents (at the end of the year) and dividing by 100.
- Penetration of electronic communications services per 100 households is calculated by dividing the number of service users (at the end of the year) by the number of households (at the end of the year) and dividing by 100.

Tables 5, 12, 13, 20, Fig. 33 and 48:

Average revenue per subscriber per month (ARPU) shall be calculated as follows:

- *of public fixed telephone services*: the total annual revenue from retail public fixed telephone service (including the revenue from the provision of retail IP telephony services) is divided by the number of fixed telephone service users (at the end of the year) and divided by 12;
- *of Internet access*: the total annual revenue from retail Internet access services is divided by the number of Internet access service users (at the end of the year) and divided by 12;
- *of television*: the total annual revenue from retail pay-TV services is divided by the number of TV service users (at the end of the year) and divided by 12;
- *of public mobile telephone services*: the total annual revenue from the provision of retail public communications networks and/or public mobile telephone service (including the revenue from calls made by subscribers using roaming services) is divided by the number of mobile telephone service users (at the end of the year) and divided by 12.

Fig. 8.: monthly average duration of calls originated by a single public mobile telephone service user in Lithuania is calculated by dividing the annual duration of calls originated in public mobile communications networks in Lithuania by the number of mobile telephone service users (at the end of the year) and dividing by 12.

Table 14: the calculated average prices of public mobile telephone voice services are calculated by dividing annual revenue for retail mobile telephone voice services (including revenue for calls from subscribers using roaming services) by duration of calls originated in public mobile communications networks (including the duration of calls made by subscribers using roaming services).

Table 21:

- The calculated average local call prices were calculated by dividing annual revenue for retail fixed telephone local call (terminated in own, Lithuanian public fixed and mobile communications networks) services by duration of local calls originated in public fixed communications networks (terminated in own, Lithuanian public fixed and mobile communications networks).
- The calculated average international call prices are calculated by dividing annual retail revenue for international fixed telephone calls by duration of international calls originated in public fixed communications networks.

SMS and MMS prices (section 2.4 of the report):

- The calculated average SMS sending price is calculated by diving annual revenue for SMS by the annual number of sent SMS.
- The calculated average MMS sending price is calculated by diving annual revenue for MMS by the annual number of sent MMS.

Annex 5

Maximum Tariffs of the Universal Postal Service[34]

I. Maximum Tariffs of the Universal Postal Service in Lithuania

Item of correspondence[1] up to 500 grams

Item No	Universal postal service	Postage tariff per one postal item, in EUR (exclusive of VAT)	
		non-priority postal items	priority postal items
1.	Up to 20 grams	0.39	0.45
2.	> 20 grams, up to 50 grams	0.42	0.48
3.	> 50 grams, up to 100 grams	0.45	0.52
4.	> 100 grams, up to 500 grams	0.62	0.72

Bulky item of correspondence[2] up to 2 kilograms

Item No	Universal postal service	Postage tariff per one postal item, in EUR (exclusive of VAT)	
		non-priority postal items	priority postal items
1.	Up to 100 grams	0.68	0.78
2.	> 100 grams, up to 500 grams	0.94	1.09
3.	> 500 grams, up to 1,000 grams	1.16	1.33
4.	> 1,000 grams, up to 2,000 grams	1.56	1.80

Postal parcel[3, 4, 5] up to 10 kilograms (including a registration service)

Item No	Universal postal service	Postage tariff per one postal item, in EUR (exclusive of VAT)
1.	Per each postal parcel	2.40
2.	Per each full or partial kilogram	0.14

Registration and/or insurance of items of correspondence[1], bulky items of correspondence[2] or postal parcels[3, 4]

Item No	Universal postal service	Postage tariff per one postal item, in EUR (VAT excl.)
1.	Registration of items of correspondence or bulky items of correspondence	0.58
2.	Registration and insurance of items of correspondence or bulky items of correspondence	3.48
3.	Insurance of postal parcels	3.48

[34] Approved by Order No 1V-1025 of the Director of the Communications Regulatory Authority of the Republic of Lithuania of 29 July 2014 *On the Approval of Maximum Tariffs of the Universal Postal Service*

II. Maximum Tariffs of Cross-Border Universal Postal Service

Item of correspondence[1] up to 500 grams

Item No	Universal postal service	Postage tariff per one postal item, in EUR (exclusive of VAT)			
		non-priority parcels		priority parcels	
		to the European Union Member States	to other states	to the European Union Member States	to other states
1.	Up to 20 grams	0.75	0.71	0.81	0.84
2.	> 20 grams, up to 50 grams	0.84	0.75	1.00	0.97
3.	> 50 grams, up to 100 grams	1.13	0.84	1.29	1.27
4.	> 100 grams, up to 500 grams	1.98	2.09	2.37	3.40

Bulky items of correspondence[2] up to 2 kilograms

Item No	Universal postal service	Postage tariff per one postal item, in EUR (VAT excl.)			
		non-priority parcels		priority parcels	
		to the European Union Member States	to other states	to the European Union Member States	to other states
1.	Up to 100 grams	1.42	1.26	1.85	1.67
2.	> 100 grams, up to 500 grams	2.52	3.13	2.93	3.91
3.	> 500 grams, up to 1,000 grams	4.63	6.95	5.21	7.82
4.	> 1,000 grams, up to 2,000 grams	6.95	10.43	7.53	11.58

Postal parcel[3, 4, 5] up to 10 kilograms (including a registration service)

Item No	Universal postal service	Postage tariff per one postal item, in EUR (exclusive of VAT)	
		to the European Union Member States	to other states
	Cross-border postal parcel tariffs apply to postage of postal parcels. The share of processing postal parcels in Lithuania:		
1.	Per each postal parcel	5.07	5.07
2.	Per each full or partial kilogram	0.14	0.14

Registration and/or insurance of items of correspondence[1, 6], bulky items of correspondence[2, 6] or postal parcels[3, 4]

Item No	Universal postal service	Postage tariff per one postal item, in EUR (VAT excl.)
1.	Registration of priority items of correspondence or priority bulky items of correspondence	20.3
2.	Registration and insurance of priority items of correspondence or priority bulky items of correspondence	3.48
3.	Insurance of postal parcels	3.48

Notes:

1. Largest possible dimensions of an item of correspondence shall be as follows: length – 381 mm, width – 305 mm, height – 20 mm.

2. Largest possible dimensions of a bulky item of correspondence shall be the following: any dimension shall not exceed 600 mm, while the sum of the length, width and height shall be no greater than 900 mm; any dimension of a cylinder item shall be no greater than 900 mm, while the sum of length and double diameter shall not exceed 1,040 mm.

3. Largest dimensions of a postal parcel shall be as follows: any dimension shall be no greater than 1.05 m, while the sum of the length and the largest dimension measured in any other direction than the length shall be no greater than 2 m.

4. Largest dimensions of a postal parcel marked “Encombrant” (“Bulky”) shall be as follows: any dimension shall be no greater than 1.50 m, while the sum of the length and the largest dimension measured in any other direction than the length shall be no greater than 3 m.

5. A postal parcel marked “Encombrant” (“Bulky”) shall be subject to additional postage tariffs of 50% as indicated in Table 3 or Table 7.

6. Only priority items of correspondence or priority bulky items of correspondence may be registered or registered and insured.

7. Items of correspondence marked as “Cécogrammes”, items of correspondence addressed to prisoners of war marked as “Service des prisonniers de guerre” and to interned civilians marked as “Service des internés civils” or sent by these persons shall be sent free of charge.