

# **Report on the telecommunications market in 2008 (update)**

**OFFICE OF ELECTRONIC COMMUNICATIONS**  
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## **Introduction**

Pursuant to Art. 192, paragraph 3 of the Telecommunications Law Act of 16 July 2004 (Journal of Laws No. 171, item 1800 as amended), hereinafter referred to as the Act or the TL, the obligation to develop and publish the Report on the telecommunications market on an annual basis was imposed on the President of the Office of Electronic Communications. Under these provisions this report is published in the UKE Newsletter and posted on the website of the Office.

### **1. Report methodology**

This Report was developed in order to describe the situation of the Polish telecommunications market in 2008 and to show its prevailing tendencies.

Pursuant to provisions of Art. 192, paragraph 3 of the TL, this Report was prepared on the basis of information obtained from telecommunications undertakings under the procedure referred to in Art. 7 of the Act. This procedure imposes an obligation on all telecommunications undertakings to submit information about the scope and type of performed telecommunications activities and the sales volume of these services to the Office by 31 March of the year following the reporting year.

At the same time, the President of UKE is obliged to publish all obtained data in the form of a Report on the telecommunications market for the previous year by 30 April of the year following the reporting year.

Pursuant to Art. 7, paragraph 1 of the TL, a telecommunications undertaking, whose annual revenues from performed telecommunications activities in the previous financial year exceeded the amount of PLN 4 million, is obliged to submit information to the President of UKE using official reporting forms. On 23 December 2008 the Minister of Infrastructure published an Ordinance on template forms for submission of information about the telecommunications activities, which became effective on 31 January 2009. Consequently, the Ordinance of 8 February 2006 became invalid and current form templates became invalid as well.

This updated report was developed on the basis of data submitted by operators to the Office of Electronic Telecommunications by 26 June 2009. Until this date, UKE had registered about 1900 reporting forms and information about current telecommunications activities.

Moreover, for the purpose of this document, publicly available information and reports, as well as studies ordered for the Office, were used. Such studies include the following: "Telecommunications market in Poland. Development forecasts for 2008-2012" prepared by PMR company or "The Western European Mobile Market: trends and forecasts 2008-2013" prepared by Analysys Mason, annual consumer survey "Telecommunications market in Poland in 2008" prepared by INDICATOR Centre for Market Research and the 14<sup>th</sup> Implementation Report of the European Commission for which the Office provides input data on annual basis..

Information about the market were presented in this Report mainly in the form of share of telecommunications entrepreneurs in particular fields of the telecommunications activities.

### **2. Regulatory Strategy**

At the beginning of 2008 the President of UKE prepared the Regulatory Strategy for the years 2008 - 2010. Its principal and overriding objective was defined as an increase of telecommunications services availability for the society and their increased use. The

implementation of the objective defined above, which is both overriding and fundamental, is pursued in the framework of six main tasks, which are the focus of the activities of the President of UKE.

## **2.1. Main strategic objectives**

### **2.1.1 Stimulating competition**

- enable alternative operators to compete effectively and increase their market shares;
- create favourable market entry conditions for new telecommunications entrants;
- ensure the optimal use of available resources.

### **2.1.2 Consumer protection**

- transparent information;
- fair conditions on which services are provided and an appropriate quality of services;
- increasing consumer awareness of their rights.

### **2.1.3. Development of new products and technologies**

- support initiatives aimed at research on new products and technologies;
- making available the resources required for such research, which remain under its control (e.g. frequencies).

### **2.1.4. Reducing prices**

- reduction in the prices of telecommunications services;
- provide all end-users with a certain minimum set of services at an affordable price in their domicile.

### **2.1.5. Wider physical availability of services through stimulation of infrastructural investment**

- development of access infrastructure to broadband Internet, including fostering new technologies such as FWA (“Fixed Wireless Access”) or FTTx (“Fiber to the X”).

### **2.1.6. Promoting Poland as an investor-friendly country**

- promoting Poland on various European and world fora;
- ensuring easy and quick access to information for investors;
- support for the development of mechanisms facilitating the start-up of investment projects in Poland, as well as those increasing their profitability

In accordance with the “Report on the status of the Strategy implementation” published in November 2008, the Strategy is now at a very advanced stage of implementation despite the fact that it was planned for the years 2008 - 2010.

At the end of the third quarter of the first year, in which the Strategy is binding, 7 out of 14 detailed tasks leading to the completion of planned objectives in the whole period of the Strategy were carried out.

### **3. Major results of the telecommunications market in 2008**

Due to the fact that, until the day of publishing the updated Report, UKE did not receive reporting forms from all telecommunications undertakings, it is not possible to provide the exact value of the entire telecommunications market.

In accordance with the data obtained from the reporting forms and information from telecommunications undertakings submitted to the Office by 26 June 2009, the value of the Polish telecommunications services market amounted to approximately PLN 49.6 billion in 2008.

Specific market segments are briefly described below:

#### **3.1. Fixed telephony**

- Telekomunikacja Polska S.A. remained the market leader in terms of revenues from sales of fixed telephony services, whereas entities, whose share in the market exceeded 1 per cent included: Netia S.A., Dialog S.A., Tele2 Polska Sp. z o.o., UPC Polska Sp. z o.o. and Polska Telefonia Cyfrowa Sp. z o.o.
- In 2008 there was an increase in the share of alternative operators, up to 26.7 per cent compared to the total revenues from the provision of fixed telephony services, while the share of the incumbent dropped to 73.3 per cent.
- In 2008 Telekomunikacja Polska S.A. had the largest share in the number of subscriber lines, about 76.9 per cent.
- In 2008 alternative operators owned about 23.1 per cent of the market measured by the number of subscriber lines. Netia S.A. had the highest share in this respect, amounting to almost 3.5 per cent.
- In the period from 2005 to 2008 revenues from the fixed telephony dropped by almost 36 per cent.
- As a result of reduced prices on the voice call market and dropping interest in the fixed telephony services, telecommunications operators focus on maximising revenues from rental charge. Tariffs with free calls during specific hours or days are becoming more and more popular.

#### **3.2. Mobile telephony**

- In Poland in 2008 there were over 43 million users of the mobile telephony services, which meant a penetration level of 115.2 per cent. However, considering 17.7 per cent of the so-called inactive users, the actual market penetration as of the end of 2008 amounted to 97.5 per cent.
- In accordance with a report of the European Commission, in 2008 Poland was ranked 22<sup>nd</sup> among all 27 European Union countries according to the market penetration criterion. The estimated penetration for Poland on the level of 101 per cent was much below the average level for the European Union, which amounted to 119 per cent (October 2008).

- In 2008, similar to the previous years, the ARPU index (Average Revenue Per User) decreased. In accordance with the Analysys Research forecast from September 2008, for Poland it amounted to PLN 59.42 at the end of the year.
- Within the scope of the market structure no major changes took place in 2008 in comparison with the previous years, despite a successful entry of P4 Sp. z o.o. in 2007, its market share did not exceed 1 per cent.
- In 2008 seven new operators began their activities on the national mobile market:
  - Mobile Entertainment Company Sp. z o.o. (Mobilking) – MVNO in PTC Sp. z o.o. network;
  - CP Telecom Sp. z o.o. (Carrefour Mova) – MVNO in Polkomtel S.A. network;
  - MediaTel S.A. (telepin mobi) – MVNO in PTK Centertel Sp z o.o. network;
  - Cyfrowy Polsat S.A. – MVNO in PTC Sp. z o.o. network;
  - Aster Sp. z o.o. - MVNO in cooperation with PTK Centertel Sp. z o.o.;
  - Crowley Data Poland Sp. z o.o. (CROWLEY TeleMobile) – MVNO in PTK Centertel Sp. z o.o. network;
  - Netia S.A. – MVNO in P4 Sp. z o.o. network.

### **3.3. Access to the Internet**

- During 2008 the number of broadband Internet access (fixed access) users in Poland increased up to 4.7 million, which constitutes an increase of over 12 per cent in comparison with the previous year.
- There was also a significant decrease in the number of dial-up access users.
- In 2008 neostrada tp, based on the xDSL technology, and offers of the cable television operators provided via TVK cable modem remained the most popular forms of access to the Internet in all households.
- In 2008 the total number of users with Internet access in the xDSL technology increased up to 2.7 million, which constitutes an increase of over 15 per cent.
- In 2008 the value of the Polish Internet access market amounted to approximately PLN 3.93 billion.
- Thirteen telecommunications operators dominated the broadband Internet access services in Poland. Three of them, headed by TP S.A., are representatives of the fixed telephony, whereas four other are mobile telephony providers and six remaining are cable television operators.

### **3.4. Retail leased lines**

- At the end of 2008 the value of the retail telecommunications leased lines market amounted to approximately PLN 448 million.

- In 2008 the largest operators in the retail leased lines market in terms of obtained revenues were: Telekomunikacja Polska S.A., Exatel S.A., Telekomunikacja Kolejowa Sp. z o.o., Netia S.A., Crowley Data Poland Sp. z o.o. and GTS Energis Sp. z o.o.
- In 2008 TP S.A. was the telecommunications undertaking with the highest share in this market. Since 2002 TP S.A. has been an unquestionable leader in terms of obtained revenues, as well as in the number of leased lines.
- The segment of analogue lines, as well as in the segment of digital lines with capacity lower than 2 Mbit/s is characterised by a large share of the incumbent in terms of obtained revenues and the number of lines.
- In the 2 Mbit/s lines segment the incumbent does not have such a large share in the retail leased lines market as in the case of analogue lines and lines with capacity lower than 2 Mbit/s.

### **3.5. Wholesale market**

- The greatest share in the interconnection market was held by the incumbent, whose share at the end of 2008 amounted to over 43.5 per cent. ELTERIX S.A. was number two in this market, with a share of 17.5 per cent.
- In 2008 the incumbent unbundled 1632 local loops and sub-loops for local loop unbundling (LLU) purposes.
- In 2008 the number of subscriber lines over which WLR services are provided, amounted to circa 900,000.
- In 2008 TP S.A. unbundled 353 440 local loops and sub-loops for BSA.
- In 2008 in terms of obtained revenues and the number of leased lines, the main operators on the retail leased lines market were: Telekomunikacja Polska S.A., Exatel S.A., Telekomunikacja Kolejowa Sp. z o.o, Netia S.A. and GTS Energis Sp. z o.o.

## **4. Major entities**

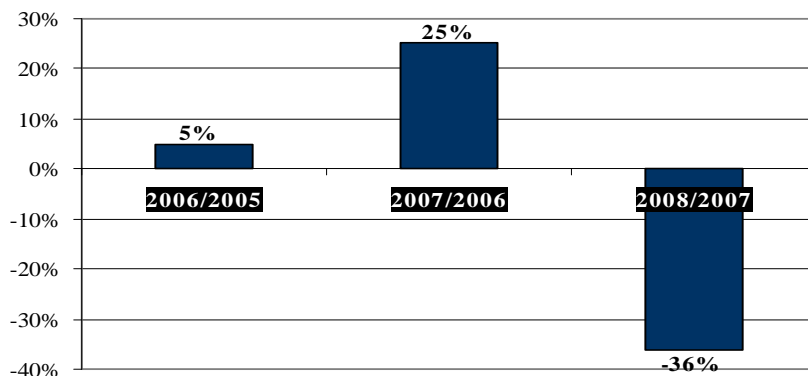
This section of the report provides a brief overview of telecommunications undertakings with over 1 per cent share from their basic telecommunications activity in the retail or wholesale market.

The undertakings were described in terms of their activity (based on their websites) and the percentage changes of investment outlays of analysed undertakings in 2005-2008 was also presented (in accordance with UKE information forms).

### **4.1. Telekomunikacja Polska S.A.**

Telekomunikacja Polska S.A. is the biggest Polish operator and the provider of telecommunications services in the fixed telephony market. It constitutes the hard core of the TP Group, which is the largest telecommunications group in Central Europe. Apart from the services offered in the fixed telephony market, mobile market, access to the Internet and data transmission, this operator offers also specialist services in the scope of radiocommunication, paging systems, radiotelephony and dispatcher communication systems, covering with its activities the whole country.

Chart 1: Percentage change in investment outlays of Telekomunikacja Polska S.A. in 2005 - 2008.



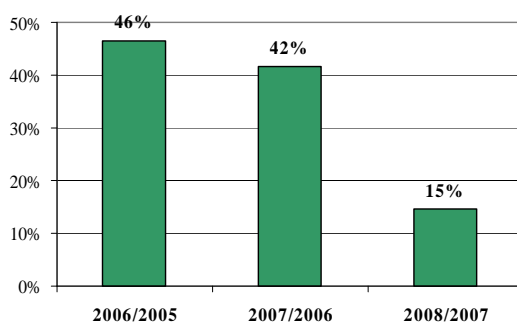
Source: UKE compilation based on information forms.

In 2005 - 2007 Telekomunikacja Polska increased its investment expenditure, whereas in 2008, in comparison with 2007 its investment expenditure was significantly lower – by about 36 per cent.

#### 4.2. Netia S.A.

Netia S.A. is an independent fixed telephony operator in Poland and constitutes the hard core of the NETIA capital group which includes a group of subsidiaries. It operates on the basis of its own fibre backbone network covering all major Polish cities and on the basis of local access networks. This operator provides a wide range of telecommunications services, including voice services, access to the Internet and data transmission services. Its services are dedicated especially to business customers. In 2007 the company began to provide services on the basis of TP S.A. infrastructure.

Chart 2: Percentage change in investment outlays of Netia S.A. in 2005-2008.



Source: UKE compilation based on information forms.

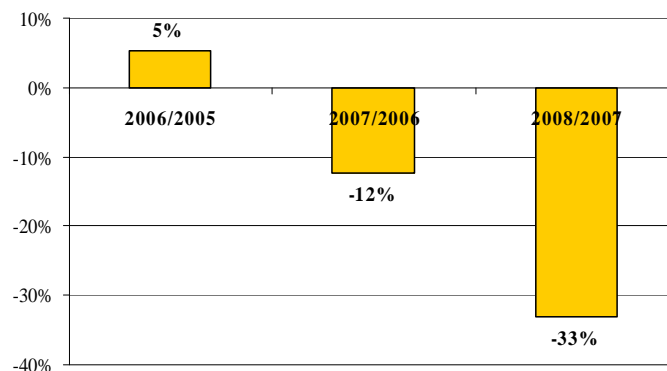
In 2005 – 2008 the company incurred investment expenditure, but in 2008 this expenditure was lower than in the previous years. In 2006 Netia allotted 46 per cent more for investment than in 2005, while in 2008 in comparison with 2007 only 15 per cent.

### 4.3. Telefonia Dialog S.A.

The company leads its activity in the scope of the fixed telephony services and Internet. Apart from the basic analogue lines, it offers services based on ISDN digital lines, voice mail as well as long-distance and international calls and calls to mobile networks through the 1011 prefix. Since mid 2007 this operator offers Internet services on the basis of TP S.A. infrastructure using Bitstream Access. In 2008 Telefonia Dialog began to provide wholesale line rental (WLR) services. Advance sale of services to TP subscribers under the name of Abonament DIALOGU continues from the beginning of 2008. Also starting from 2008 this operator offers a new service - IPTV.

In January 2009 Telefonia Dialog S.A. joined the MVNO group.

Chart 3: Percentage change in investment outlays of Telefonia Dialog S.A. in 2005-2008.



Source: UKE compilation based on information forms.

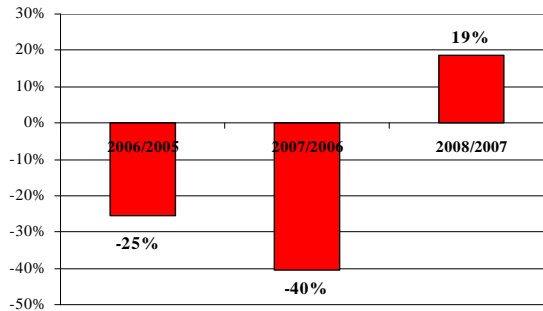
Only in 2006, in relation to 2005, Telefonia Dialog increased its investment expenditure, whereas in the following years it lowered them. In 2008 the Company decreased its investment expenditure by 33 per cent in relation to 2007.

### 4.4. Tele2 Polska Sp. z o.o.

Today a non-existing, independent telecommunications operator, which operated on the basis of Telekomunikacja Polska network providing services to TP subscribers. Telecommunications services offered by Tele2 Polska included mainly local and long-distance calls, calls to mobile networks and international calls within the frames of the prefix and pre-selection agreement, access to the Internet, pre-paid phone cards enabling cheap international calls. The Company provided its services also within the frames of the wholesale line rental (WLR).

On 15 September 2008 Tele2 Polska was taken over by Netia S.A. On 27 February 2009 the companies officially merged, which resulted in Tele2 Polska becoming completely incorporated into Netia S.A..

Chart 4: Percentage change in investment outlays of Tele2 Polska Sp. z o.o. in 2005 - 2008.



Source: UKE compilation based on information forms.

In 2005 – 2007 Tele2 incurred less and less investment expenditure. In 2007 this expenditure was lower by 40 per cent in relation to 2006. Only in 2008, in comparison with the previous year, investment expenditure of the company increased by 19 per cent.

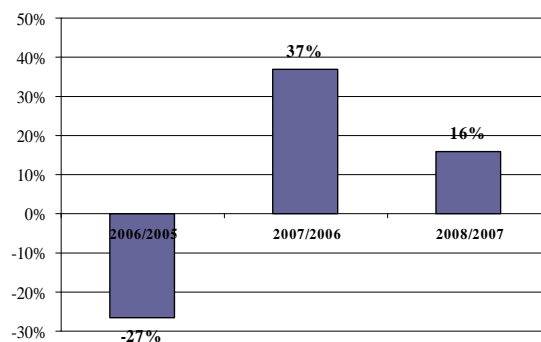
#### 4.5. GTS Energis Sp. z o.o.

GTS Energis is a telecommunications operator which provides services directly to business customers, companies, operators and resellers.

Services of Energis Sp. z o.o. include the following:

- telephone calls (analogue, digital, corporate and intelligent telephony),
- data transmission (inter-branch and international IT networks),
- network development (digital channels, Frame Relay lines),
- Internet (Internet access for offices, lines for local operators, international transit),
- data storage and provision (application and Internet servers, back-up data centres),
- operator activities (wholesale voice services).

Chart 5: Percentage change in investment outlays of GTS Energis Sp. z o.o. in 2005 - 2008.



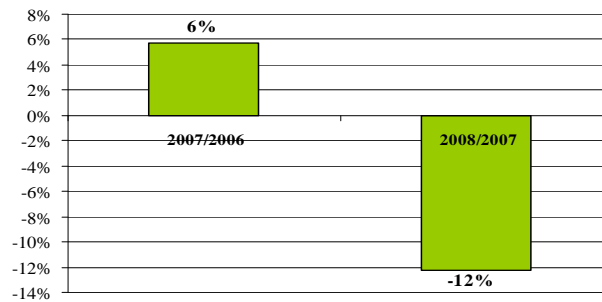
Source: UKE compilation based on information forms.

In 2007 the Company incurred the highest percentage investment outlays spending over 37 per cent more than in 2006. In 2008 GTS Energis allotted 16 per cent less for investment expenditure than in the previous year.

#### 4.6. EXATEL S.A.

Exatel S.A. focuses of telecommunications services for business, including Polish and foreign operators, as well as for public institutions. Its offer includes call and Internet services and also data transmission services.

Chart 6: Percentage change in investment outlays of Exatel S.A in 2006 - 2008.



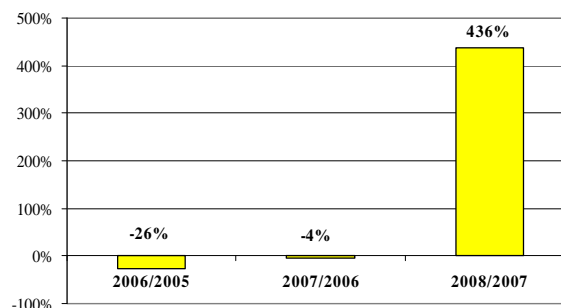
Source: UKE compilation based on information forms.

In 2007 the Company spent 6 per cent more on investments than in 2006, and in 2008 this tendency changed and the Company spent 12 per cent less on investments than in the previous year.

#### 4.7. MEDIATEL S.A.

Mediatel S.A. offers telecommunications solutions such as telephony, Internet, data centre, special solutions and added services. The Company offers its services to small, medium and big companies. In 2002 it was authorized to operate the fixed public telephone network in the entire territory of Poland, thus joining the group of public operators. MediaTel S.A. has its own numbering range and obtained also the right to use the 1031 prefix as the access number to the MediaTel network, via which local, long-distance, fixed to mobile and international calls are provided.

Chart 7: Percentage change in investment outlays of Mediatel S.A. in 2005 - 2008.



Source: UKE compilation based on information forms.

In 2006 – 2007 Mediatel spent less on investment than in the previous year, however, the dynamics showed a growing tendency. In 2008 for the first time the Company allotted more for

investment than in the previous year – this increase was spectacular and amounted to over 435 per cent of the amount of expenditure incurred by the company in 2007.

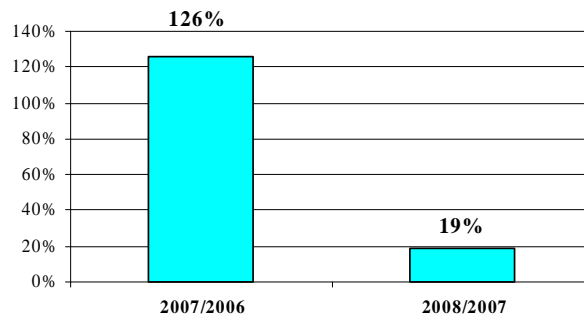
#### **4.8. Telekomunikacja Kolejowa Sp. z o.o.**

Telekomunikacja Kolejowa offers the following services:

- Telephone (fixed telephony, VoIP, 1022 prefix),
- Internet,
- Data transmission services,
- Interconnect,
- Leased lines.

The Company offers its services to telecommunications and business operators as well as to residential clients.

Chart 8: Percentage change in investment outlays of Telekomunikacja Kolejowa Sp. z o.o. in 2006 - 2008.



Source: UKE compilation based on information forms.

In 2007 the Company spent 126 per cent more on investment than in 2006, while in 2008 this increase was not that significant, the amount intended for investment was only 19 per cent higher than the amount of investment expenditure incurred in the previous year.

#### **4.9. Długie Rozmowy S.A.**

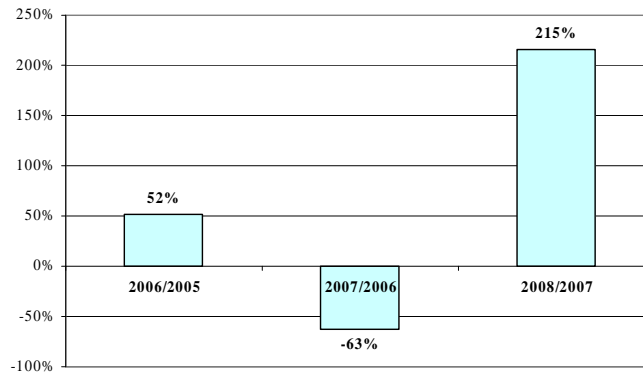
Długie Rozmowy operates in the retail and wholesale telecommunications services market. Since 2005 it has been offering telephone calls using the 1051 prefix.

In 2007 and 2008 this operator did not provide any information about the amount allotted to investment, therefore the assessment of its investment expenditure is not provided.

#### **4.10. Elterix S.A.**

In addition to the provision of telecommunications services, Elterix also deals with concepts, technical and economic assumptions and technical projects in the scope of telecommunications solutions. Elterix S.A. is an owner and operator of a telecommunications network under the trade name of Sieć T2 and operator of the eFon Internet telephony.

Chart 9: Percentage change in investment outlays of Elterix S.A. in 2005 - 2008.



Source: UKE compilation based on information forms.

During 2005 to 2008, only in 2007 the Company spent 63 per cent less on investment than in 2006, whereas in the remaining years those amounts were higher than in the previous years. The Company incurred the highest investment expenditure in 2008 spending 215 per cent more than in 2007.

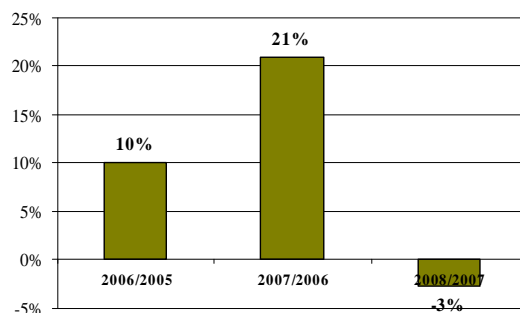
#### 4.11. Polkomtel S.A.

POLKOMTEL S.A. is a mobile network operator. It provides its customers with a set of telecommunications services intended for business as well as for individual customers, offered under the following brands:

- PLUS – tariff offers for individual and business customers (post-paid system)
- SIMPLUS – telephones with pre-paid cards (pre-paid system)
- MixPlus - telephones with pre-paid cards for PLN 1 (a mixture of both post-paid and pre-paid systems)
- Sami Swoi – mobile telephony (pre-paid system)
- iPlus – wireless Internet access

The most important service categories in the Polkomtel S.A. network include: voice services (the 1069 prefix, simultaneous usage of mobile and fixed telephony services package), non-voice services, roaming, telemetrics and monitoring.

Chart 10: Percentage change in investment outlays of Polkomtel S.A. in 2005 - 2008.



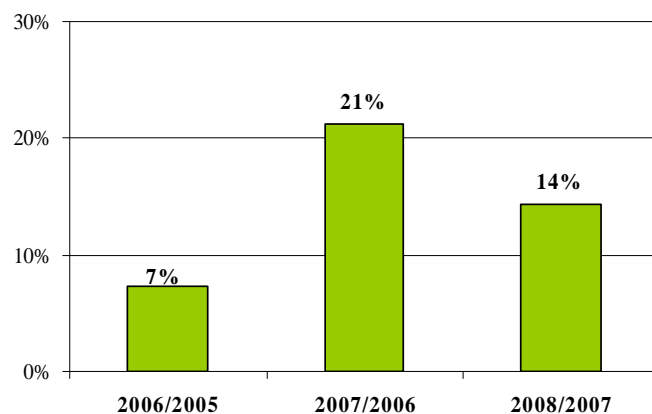
Source: UKE compilation based on information forms.

In 2005 – 2007 Polkomtel increased its investment expenditure. In 2007 it allotted 21 per cent more funds than in 2006, while in 2008 this operator lowered the expenditure by 3 per cent in relation to 2007.

#### 4.12. Polska Telefonia Cyfrowa Sp. z o.o.

Polska Telefonia Cyfrowa Sp. z o.o. is a mobile network operator and offers services in three categories: Era – for individual customers, Era biznes – for corporate customers as well as Tak Tak and Heyah – in a pre-paid system. The offer of the Company includes voice and non-voice services, including wireless Internet access with blueconnect service and multimedia services on the Era Omnix platform. In 2006 the Company launched its fixed telephony offer called “Era Domowa” and “Era Firmowa”.

Chart 11: Percentage change in investment outlays of Polska Telefonia Cyfrowa Sp. z o.o. in 2005 - 2008.



Source: UKE compilation based on information forms.

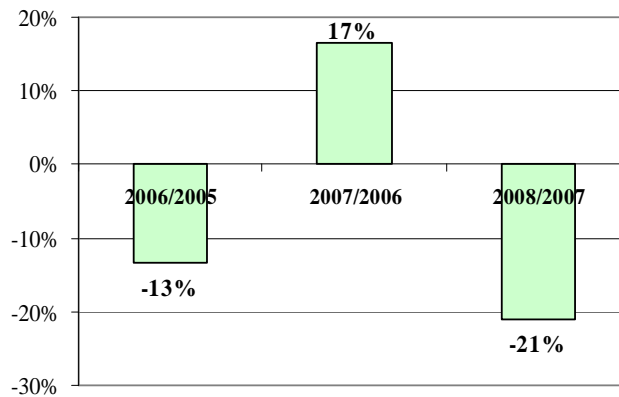
In 2005 – 2007 the operator increased its investment expenditure annually. In 2007 PTC spent on investment 21 per cent more than in 2006, while in 2008 by 14 per cent more than in 2007.

#### 4.13. Polska Telefonia Komórkowa Centertel Sp. z o.o.

PTK Centertel is an operator of two mobile networks: Orange digital network and NMT450i analogue network (Centertel); however, starting from 1 January 2001 the operator ceased to accept new customers in this standard.

On 26 October 2005 Telekomunikacja Polska S.A. purchased 34 per cent of shares in the company from France Telecom and thus became the sole owner of PTK Centertel Sp. z o.o. This operator provides mobile and fixed telephony services as well as mobile and fixed access to the Internet.

Chart 12: Percentage change in investment outlays of Polska Telefonia Komórkowa Centertel Sp. z o.o. in 2005 - 2008.



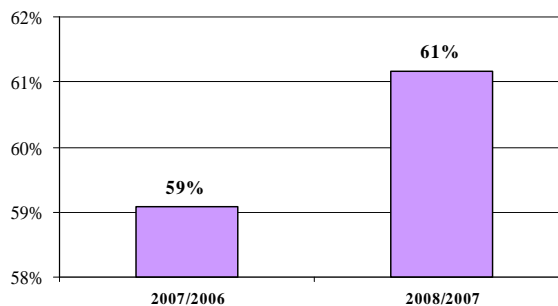
Source: UKE compilation based on information forms.

Only in 2007, in relation to 2006, the company increased its investment expenditure, while in 2006 and 2008 its investment outlays were lower than in the previous year. In 2008 the amount of investment expenditure was 21 per cent lower than in 2007.

#### 4.14. P4 Sp. z o.o.

P4 Sp. z o.o. – a mobile network operator, manages the Play network. P4 began its commercial activities on 16 March 2007. It offers voice and non-voice post-paid (including wireless access to the Internet), pre-paid card and Mix services. This network operates in the whole country.

Chart 13: Percentage change in investment outlays of P4 Sp. z o.o. in 2006 - 2008.



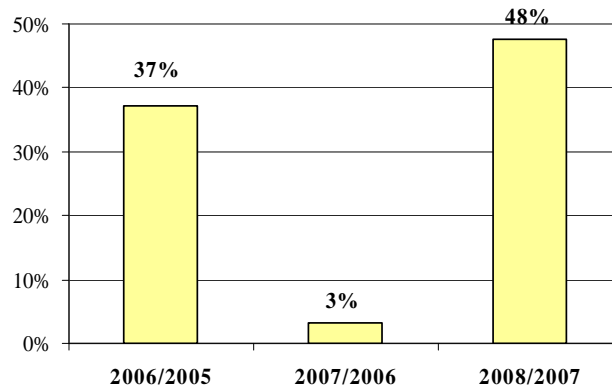
Source: UKE compilation based on information forms.

In 2007 – 2008 P4 Sp. z o.o. increased its investment expenditure. This increase was at a similar level. In 2008 the Company increased investment expenses by 61 per cent in relation to the previous year.

#### 4.15. UPC Polska Sp. z o.o.

UPC Polska Sp. z o.o. is currently the largest provider of the “triple-play” services in Poland. “Triple-play” means cable television, broadband Internet access and telephone services in one package. This operator provides services based on its own telecommunications infrastructure.

Chart 14: Percentage change in investment outlays of UPC Polska Sp. z o.o. in 2005 - 2008.



Source: UKE compilation based on information forms.

In 2006 – 2008 UPC spent more on investment than in the previous year. The highest increase (about 50 per cent) in investment expenditure by the company was noted in 2008.

#### **4.16. VECTRA S.A.**

Vectra is a nationwide cable television operator and the “triple-play” service provider.

The scope of activities of the Vectra capital group includes:

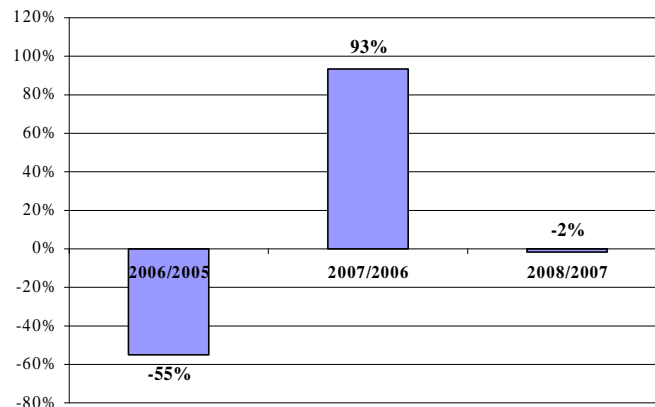
- cable television – including access to television programmes in the digital version and HD standard,
- broadband Internet access,
- fixed telephony based on digital technology.

No data concerning the investment expenditure of this operator is available.

#### **4.17. MULTIMEDIA POLSKA S.A.**

Multimedia Polska is a provider of the “triple-play” service, which combines television, broadband Internet access and fixed telephony in one package. This operator introduced High Definition Television (HDTV) with the feedback signal and video on demand (VoD). The company operates in the entire territory of Poland.

Chart 15: Percentage change in investment outlays of Multimedia Polska S.A. in 2005 - 2008.



Source: UKE compilation based on information forms.

In 2005 – 2008 Multimedia Polska led inconsistent investment policy. In 2007 it allotted 93 per cent more for investment expenditure than in 2006, while in 2008 it lowered it by 2 per cent in relation to 2007.

#### 4.18. GRUPA ASTER

**The ASTER Group** offers its services in Warsaw and its vicinity, in Cracow, Skawina as well as in Zielona Góra and areas near Zielona Góra. Aster provides the following services:

- analogue and digital television as well as HDTV
- Internet via cable
- digital telephony
- mobile telephony MVNO, Aster (mobile network telephony)

No data concerning the investment expenditure of this operator is available.

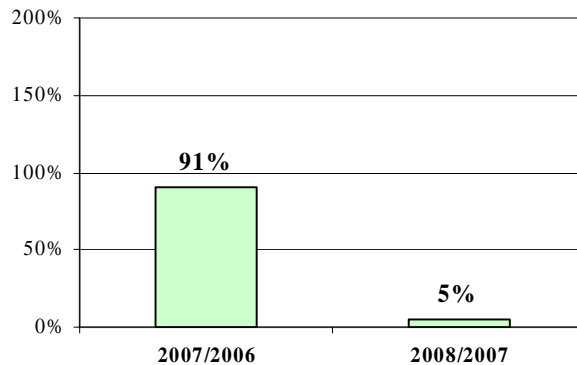
#### 4.19. TP EMITEL Sp. z o.o.

The main business field of this Company is broadcasting. These services are provided to radio and television broadcasters operating in the territory of Poland and they include: transmission and distribution of broadcasting and television signal for the biggest broadcasters in Poland.

TP Emitel is also involved in design, installation and technical consultancy concerning broadcasting and radio telecommunications systems as well as infrastructure rental for broadcasters and operators.

The company's customers include.: Telewizja Polska, TVN, Polsat, Telewizja Puls and radio stations: Polskie Radio, Radio ZET, Radio Muzyka Fakty, Radio Wawa, Radio Eska, Radio Kolor, Tok FM, Antyradio and other.

Chart 16: Percentage change in investment outlays of TP Emitel Sp. z o.o. in 2006-2008.



Source: UKE compilation based on information forms.

In 2006 – 2008 TP Emitel increased its investment expenditure. In 2007 the company allotted the highest amounts to investment, increasing it by 91 per cent in relation to 2006, while in 2008 the incurred investment expenditure was only 5 per cent higher than in 2007.

## **RETAIL MARKET**

### **5. Characteristics of the fixed telephony market in Poland in 2008.**

#### **5.1. Market description**

Within the frames of the retail fixed telephony market, the telecommunications undertakings provide the users with fixed telecommunications network access services and telephone calls services.

The telephone calls market within the fixed telephony market is a liberalised market. In 2008 there were no legal restrictions, which would prevent telecommunications undertakings from providing services in this market.

Operators obtain revenues from providing the following services in this market:

- connection to the network,
- maintaining readiness to provide telecommunications services (line rental),
- telephone calls.

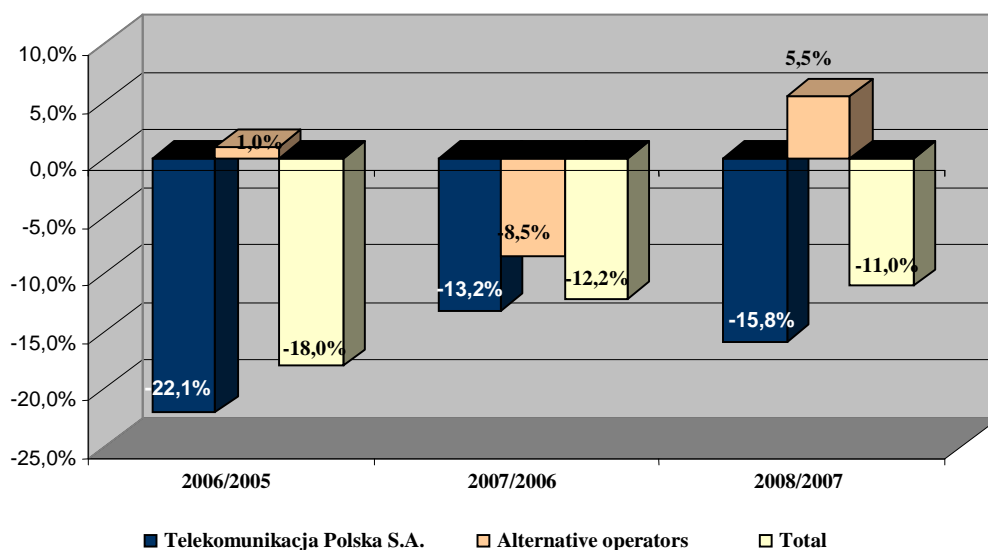
#### **5.2. Value of the market**

Over the last few years the value of the fixed telephony market, defined as the sum of revenues from the fixed telephony services<sup>1</sup>, generated by telecommunications undertakings, shows a

<sup>1</sup> Revenues from fixed activities such as: line rental, subscriber connection, local, zonal, long-distance and international calls, calls to mobile networks and other calls, i.e. with access numbers to intelligent network services within the frames of directory enquiry service. The following were not included: revenues from voice calls in VoIP technology and dial-up Internet access services.

downward tendency. In 2005 – 2008 the decrease of revenues from the fixed telephony services by almost 36 per cent was observed. In 2008 the decrease of the value of this market amounted to some 11 per cent. Similar to the previous years, in 2008 the highest revenues from services provided in the fixed telephony market were generated by Telekomunikacja Polska S.A. At the same time TP experienced the most intense decline in this revenue. In 2006 this undertaking obtained revenues by one-fifth lower than the year before. In the following years those decreases were slightly lower. In 2008 TP obtained revenues lower by 43 per cent than in 2005. The revenues of alternative operators fluctuated in the analysed period with a slight increase in 2006 followed by significant drop in the subsequent year to grow finally grow by 5.5 per cent in 2008.

Chart 17: Change in revenues of telecommunications operators in 2005 – 2008.



Source: UKE compilation based on information forms.

The main reasons for decreasing value of this market include the growing popularity of calls offered in mobile networks and in the IP technology, especially of free services provided to Internet access users by the means of the so-called voice communicators.

### 5.3. Market players

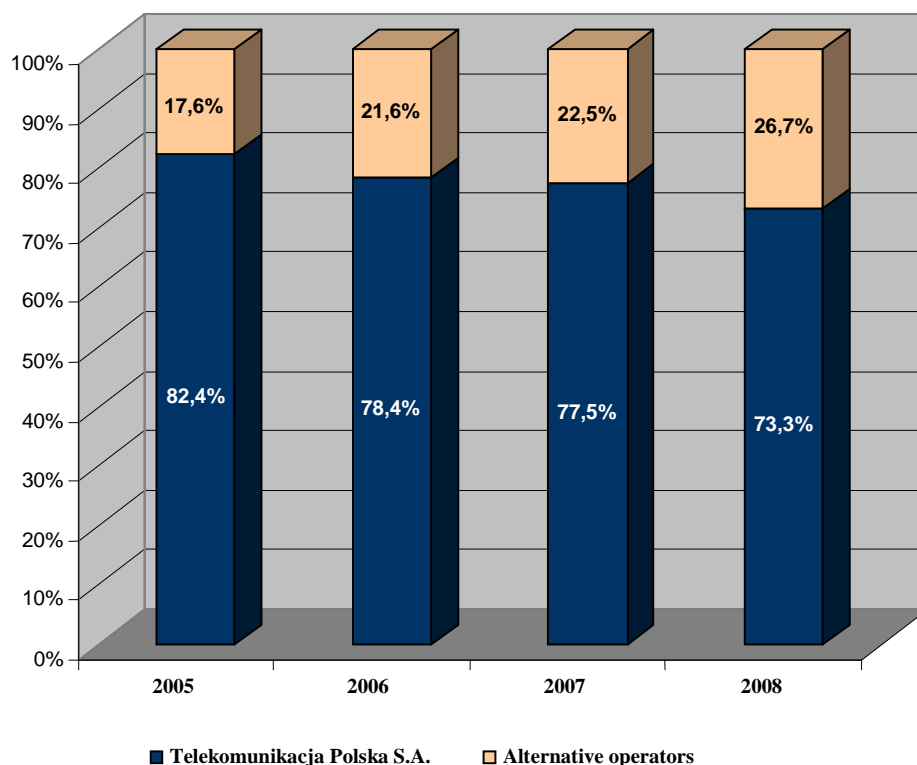
Undertakings which provide services by means of their own network or use the networks of other operators constitute players in the fixed telephony market. Usually, services of connection to the network and phone calls services are offered in one package, however, in the Polish market there are operators who do not provide connection to the network, but offer only line rental, taking advantage of the possibility of purchasing wholesale line rental from the incumbent. Providing telecommunications services by operators who do not own their own network was possible thanks to the introduction of a reference unbundling offer (LLU). Another possibility, currently displaced by WLR and LLU, were telephone services provided by means of network access numbers.

In 2008 Telekomunikacja Polska S.A. remained the main player in the fixed telephony market, although other alternative operators, such as Netia S.A., Telefonía Dialog S.A. and Tele 2 Polska Sp. z o.o. gained importance.

### 5.3.1. Shares of TP and alternative operators in revenues from fixed telephony

The growing importance of alternative operators in the fixed telephony market is proved by growing percentage share in revenues from fixed telephony compared with a declining share of TP. In 2005 – 2008 the share of TP was gradually decreasing. In 2008 the decrease of TP share in relation to 2005 was more than 9 percentage points.

Chart 18. Percentage shares of TP S.A. and alternative operators in the fixed telephony market in terms of revenues in 2005 - 2008.

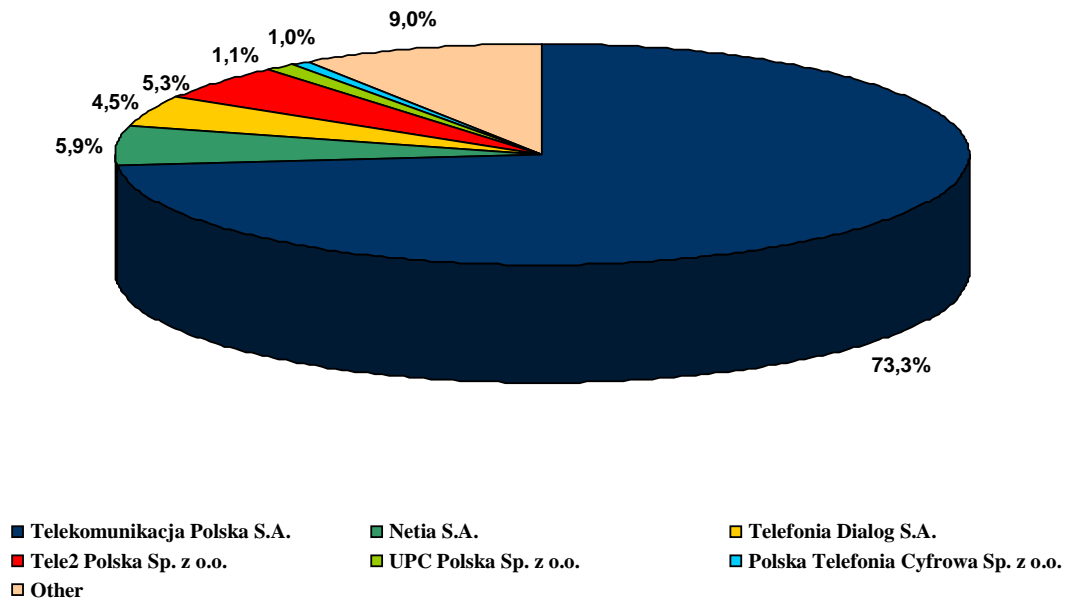


Source: UKE compilation based on information forms.

Among alternative operators Netia had the highest share in revenues from the provision of fixed telephony services. Tele2 and Telefonía Dialog obtained slightly lower revenues. It should be added that on 15 September 2008 Tele2 Polska was taken over by Netia S.A. and on 27 February 2009 a formal merger of both companies took place, in consequence Tele2 Polska was entirely incorporated into the structure of Netia SA. As a result a company emerged whose share in the fixed telephony market in terms of obtained revenues will amount to over 11 per cent. In addition, in 2008 UPC Polska Sp. z o.o. had over 1 per cent of shares in revenues from the provision of fixed telephony services.

Despite its competitors, Telekomunikacja Polska S.A. still maintained substantive share in terms of revenues from activities in the Polish fixed telephony market. A long-standing activity of TP S.A., its infrastructure that covers the whole country and inter-operator policy preserved its position in the market.

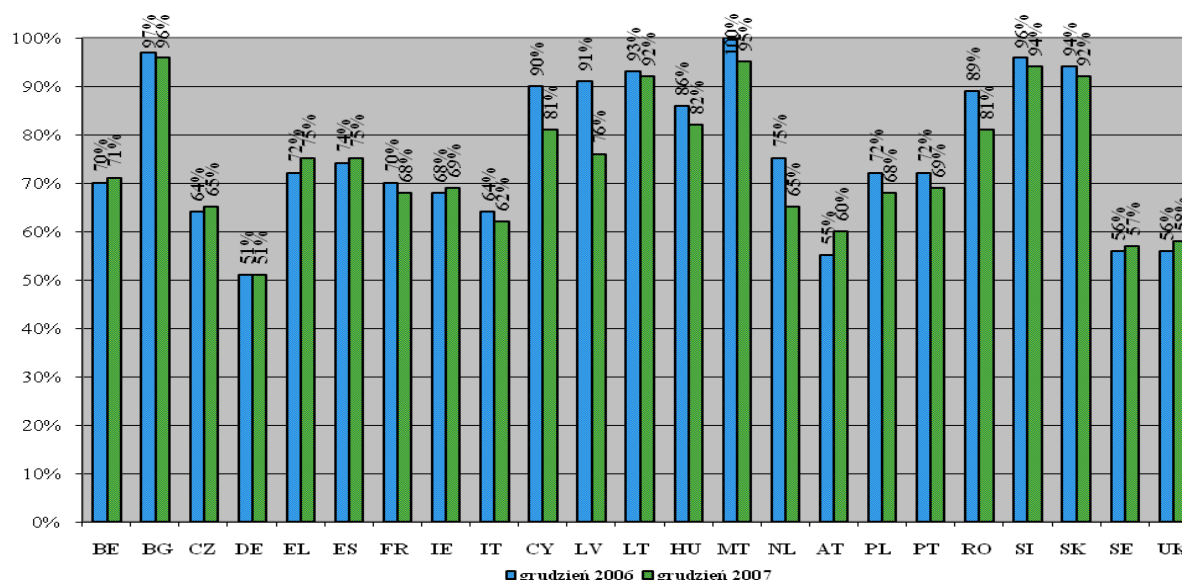
Chart 19. Percentage shares of TP S.A. and alternative operators in the fixed telephony market in terms of revenues in 2008.



Source: UKE compilation based on information forms.

The share of the Polish incumbent in the fixed telephony market does not differ significantly from shares of other European incumbents in other local fixed telephony markets.

Chart 20. Shares of European incumbents in the fixed telephony market in 2006 - 2007.



December 2006 / December 2007

Source: UKE compilation on the basis of the 14<sup>th</sup> Implementation Report of the European Commission.

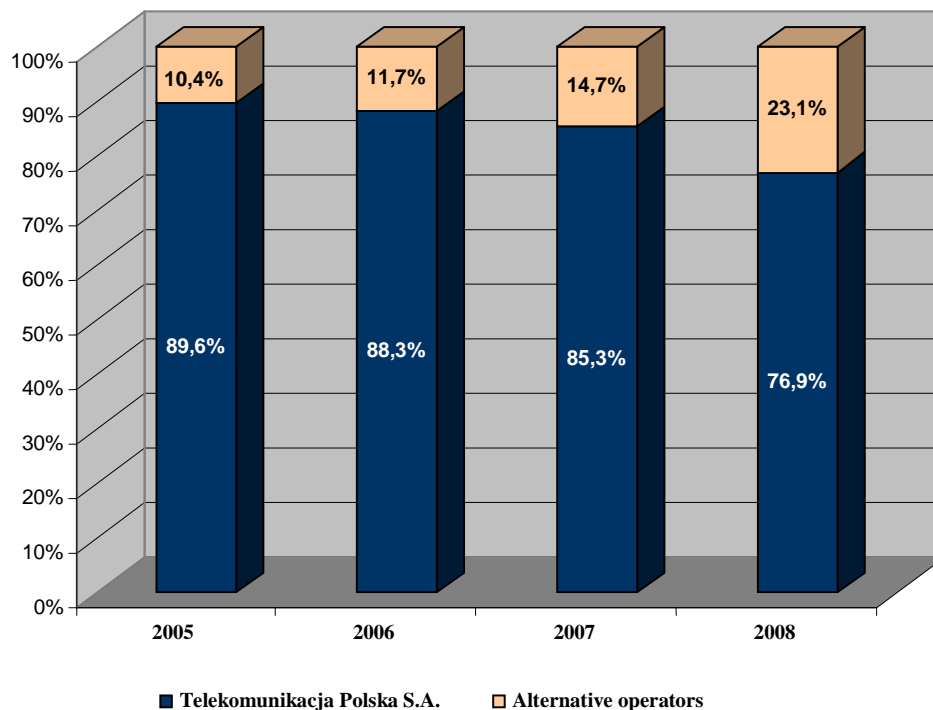
In 2007 the share of TP in revenues from all calls<sup>2</sup> (local, long-distance, international, calls to mobile networks and dial-up Internet access) amounted to 68 per cent in comparison with an average share of European incumbents, which remained at the level of 74 per cent. (Data on the European incumbents presented in the Implementation Report referred only to the end of 2007).

### 5.3.2. Shares of TP and alternative operators in the number of subscriber lines

Apart from the aforementioned change in the structure of operators' shares in revenues from the provision of fixed telephony services, also the structure of operators' shares in terms of the number of owned subscriber lines in 2005 – 2008 underwent changes.

Chart 21. Percentage shares of TP and alternative operators in terms of the number of lines in 2005 - 2008.

<sup>2</sup> Inconsistent data on charts 18, 19 and 20 concerning TP shares in the fixed telephony market results from slightly different revenues taken into account while calculating the shares. For charts 18 and 19 all revenues from the provision of fixed telephony services were taken for calculations (including revenues from connection and line rental), while the shares presented on chart 20 prepared for the purposes of the 14<sup>th</sup> Implementation Report of the European Commission were calculated only on the basis of revenues from calls (local, long-distance, international, calls to mobile networks and dial-up Internet access).

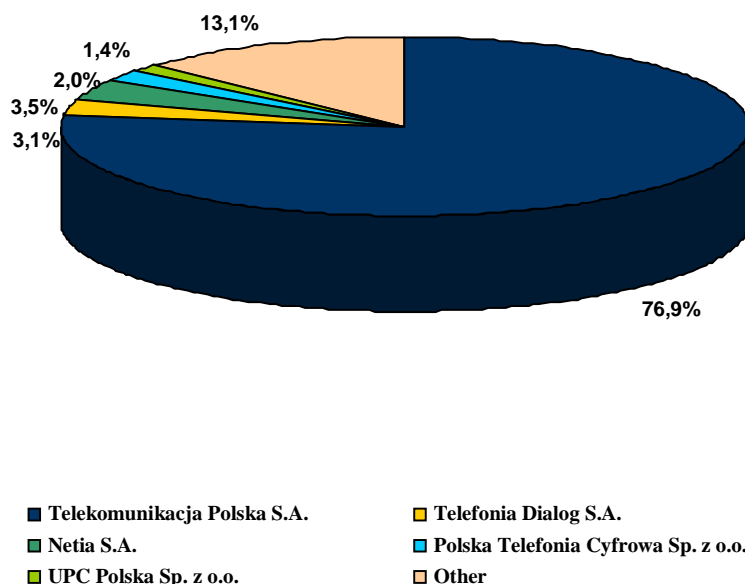


Source: UKE compilation based on information forms.

In 2005 – 2008 the share of alternative operators in the number of owned subscriber lines was growing systematically. The decrease of TP shares was in this scope greater than in the case of revenues. In 2008 over one-fifth of all lines belonged to alternative operators (in comparison with 10 per cent in 2005). In 2008 the incumbent noted the highest decrease of its share (over 8 percentage points).

Among alternative operators Netia had the largest share in the number of lines (3.5 per cent). Over 3 per cent of lines belonged to Telefonía Dialog.

Chart 22. Percentage shares of TP and alternative operators in terms of the number of telecommunications lines in 2008.



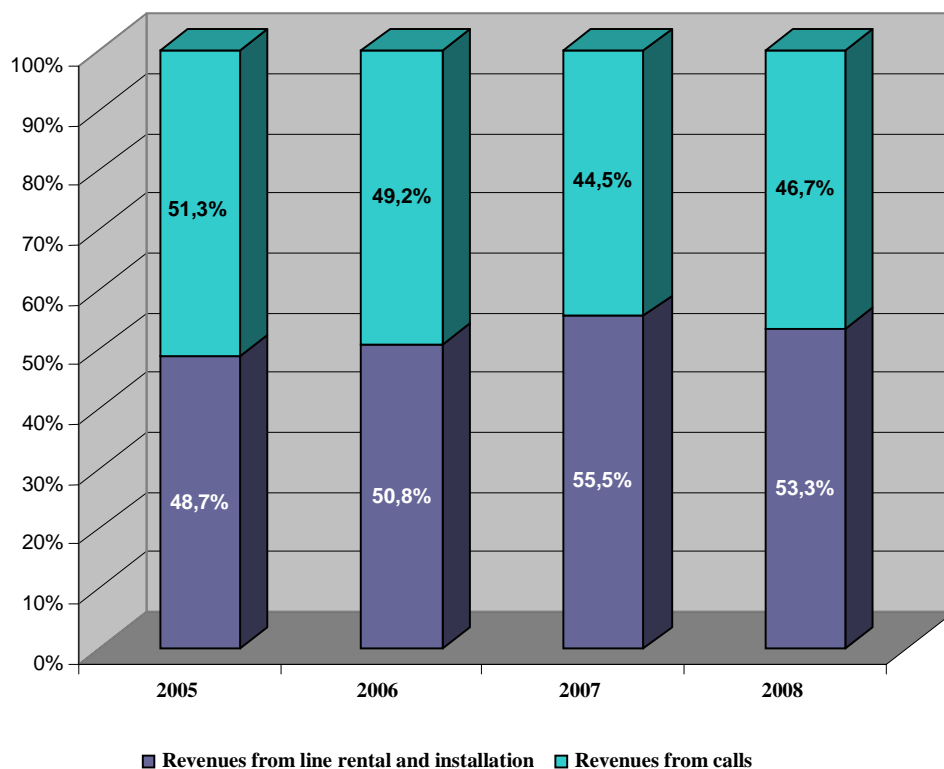
Source: UKE compilation based on information forms.

Polska Telefonia Cyfrowa and UPC Polska, with shares at the level of 2 per cent and 1.4 per cent respectively, were also significant companies in this scope.

#### 5.4. Market structure

Since 2005 the structure of revenues from fixed telephony has slightly changed. Revenues from connecting a subscriber and line rental constituted a growing share in total revenues from fixed telephony. The share of revenues from line rental and installation was growing year by year until it exceeded 50 per cent in the structure of revenues in 2006. In 2008 the share of revenues from line rental and installation decreased slightly, but still constituted over a half of all revenues from fixed telephony.

Chart 23. Percentage structure of revenues of fixed telephony operators in 2005 - 2008.



Source: UKE compilation based on information forms.

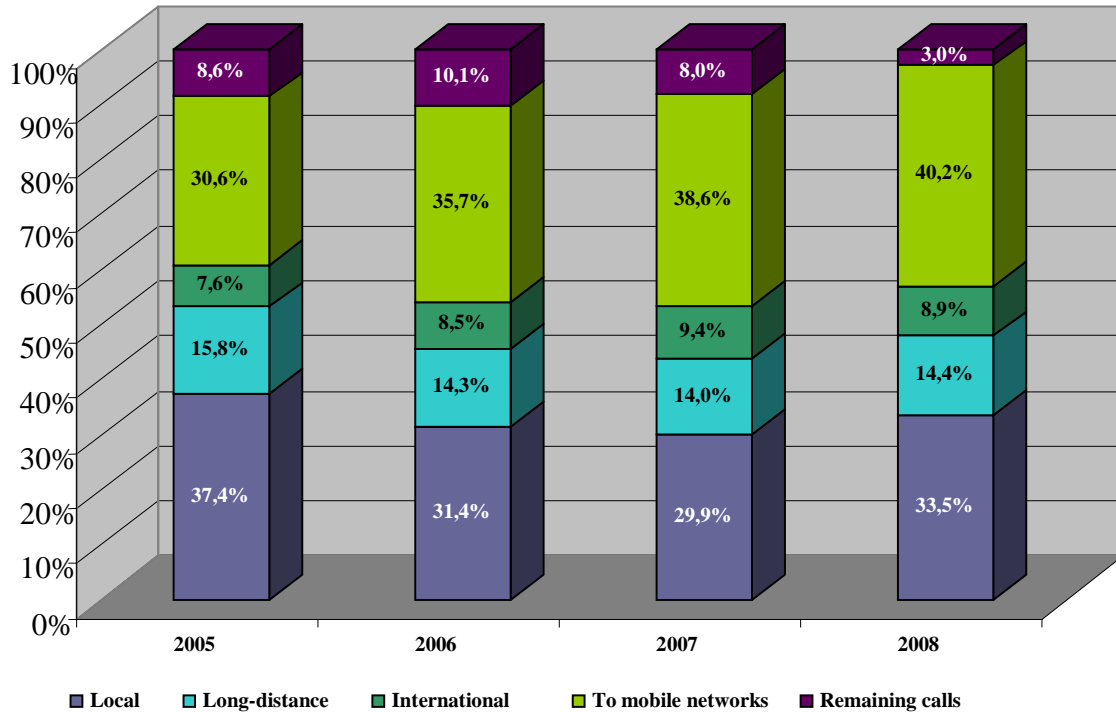
High share of revenues from line rental and installation was related to the growing convergence of services, thanks to which, within the framework of one subscription, the users receive two, three or four services, which if paid separately would be much more expensive. Moreover, high share was connected with promoting bundled offers, thanks to which by paying a subscription fee the user received free call minutes. Nominally in 2008 the value of revenues from line rental and installation decreased in relation to the previous year by about 14 per cent, while the revenues from calls decreased by almost 21 per cent. In comparison with the base year 2005 the revenues decreased by 32 per cent and 43 per cent respectively.

While analysing the aforementioned data it can be stated that more and more charges for telephone calls are included in the rental. During previous years, as a result of decreasing prices in the voice call market and decreasing interest in fixed telephony services, telecommunications operators concentrated on maximising their revenues from line rental. Tariffs with free calls (e.g. in the evenings or at weekends) are becoming more and more common. The price for this type of packages is usually higher than the price of standard offers. At the same time, the subscription fee is treated as a fixed charge, which constitutes guaranteed revenue for operators during the agreement period regardless of the number of minutes of calls generated by customers.

#### **5.4.1. Structure of revenues from particular types of calls**

During recent years the structure of revenues of telecommunications operators obtained from particular types of calls underwent major changes. Those changes were connected with the development of other services in the telecommunications market, for example mobile telephony.

Chart 24. Percentage share of calls in terms of revenues from the provision of fixed telephony services in 2005 - 2008.



Source: UKE compilation based on information forms.

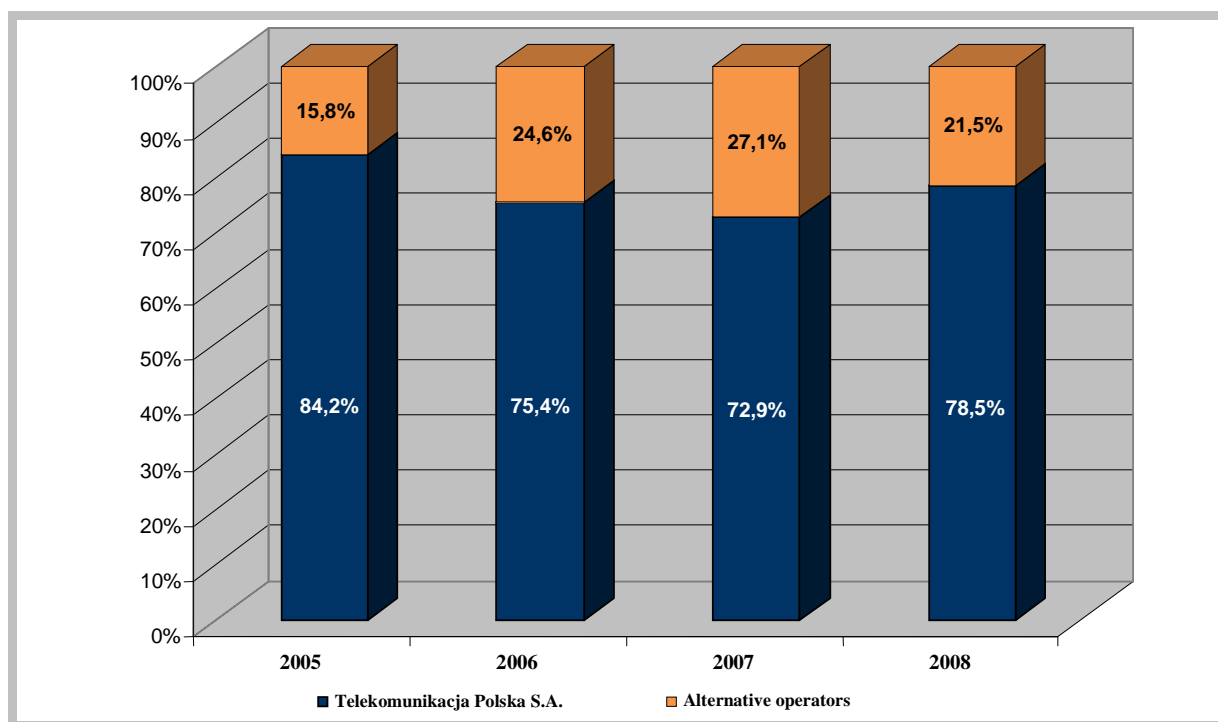
In 2006 for the first time the revenues from calls to mobile networks were higher than revenues from local calls. This growth was caused mainly by an increase in the mobile telephony penetration. The growing number of mobile telephony users do not have fixed-line phones in their households at all, therefore fixed network subscribers more often call mobile networks. In 2008 the share of revenues from calls to mobile networks grew by almost 2 percentage points compared to 2007.

Until 2007, to a small degree, but systematically the share of revenues from international calls was growing. In 2008 a slight drop of this share was observed. The category of revenues from other calls includes calls to intelligent networks and calls to directory enquiry service. The share of this type of calls increased in 2006, but significantly decreased in the following years.

#### 5.4.2. Local and zonal calls

From 2005 to 2007 the share of the incumbent in revenues from local and zonal calls decreased significantly, but Telekomunikacja Polska S.A. kept the highest share.

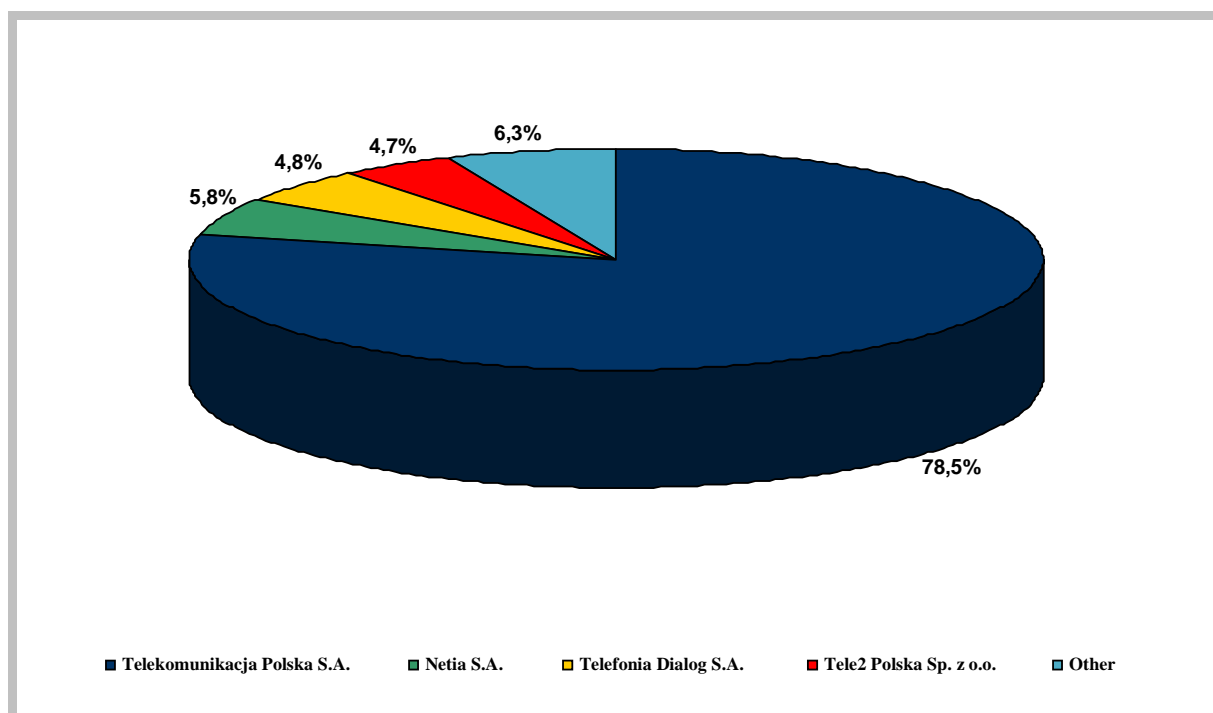
Chart 25. Share of TP S.A. and alternative operators in the fixed telephony market in terms of revenues from local and zonal calls in 2005 - 2008.



Source: UKE compilation based on information forms.

Significant decrease of TP share in the local and zonal calls market was observed especially in 2006. The share of the incumbent decreased then by almost 10 percentage points. The decreased share of the incumbent was at first caused by the growing popularity of local calls provided by alternative operators by means of network access numbers and then by launching the WLR offer. However, in 2008 a significant increase in the incumbent's share occurred in the described segment of the telephone calls market. At the end of 2008 the share of TP S.A. was some 6 percentage points higher in comparison with 2007.

Chart 26. Percentage share of telecommunications undertakings in the fixed telephony market in terms of local and zonal calls in 2008.



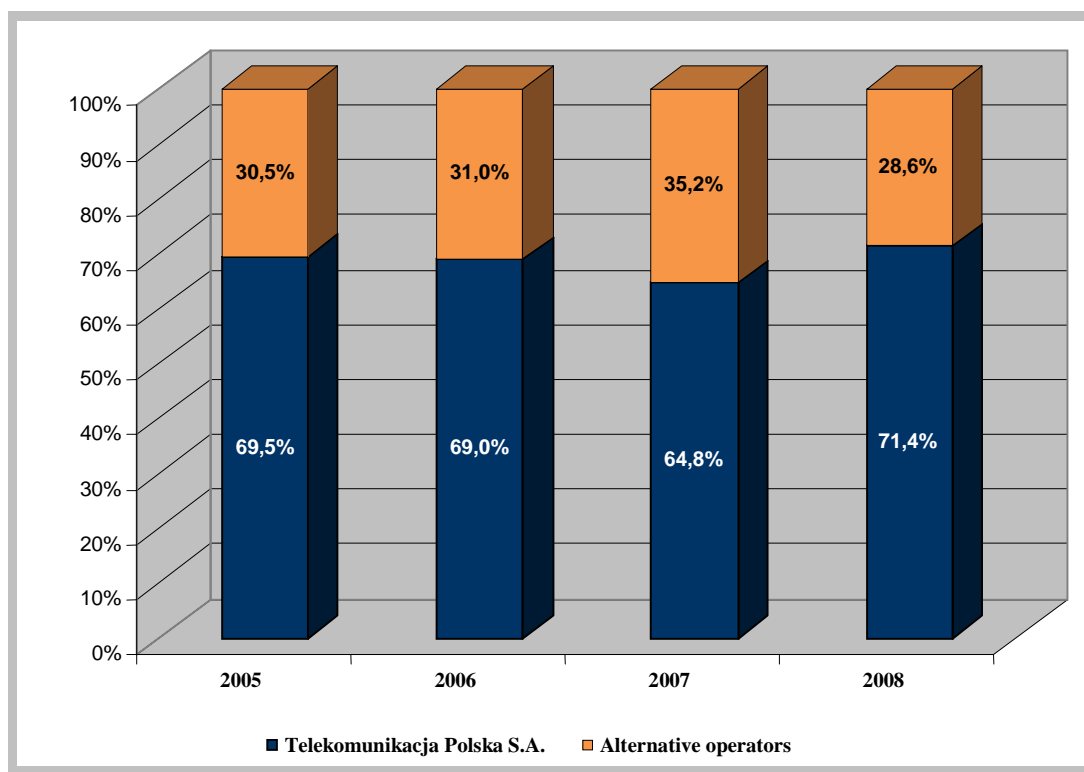
Source: UKE compilation based on information forms.

In 2007 Netia and Telefonía Dialog observed a noticeable increase of shares, reaching 6.8 per cent and 5.5 per cent, of the market respectively. In 2008 those shares decreased to the level of 5.8 per cent and 4.8 per cent. At the end of 2004, Tele2 Polska company started to provide its telecommunications services. In 2006 its share in revenues from local and zonal calls reached the level of 7.6 per cent and exceeded the shares of Telefonía Dialog S.A. and Netia S.A., which at the end of 2007 decreased to 6.9 per cent and in 2008 further to 4.7 per cent.

### 5.4.3. Long-distance calls

In case of long-distance calls, the share of alternative operators in revenues was higher than in case of local calls. However, in 2005 – 2007 a similar tendency of progressing decrease of TP share occurred. Nevertheless in 2008 TP share in the long-distance calls market increased to the level exceeding 71 per cent and was the highest in the last 4 years.

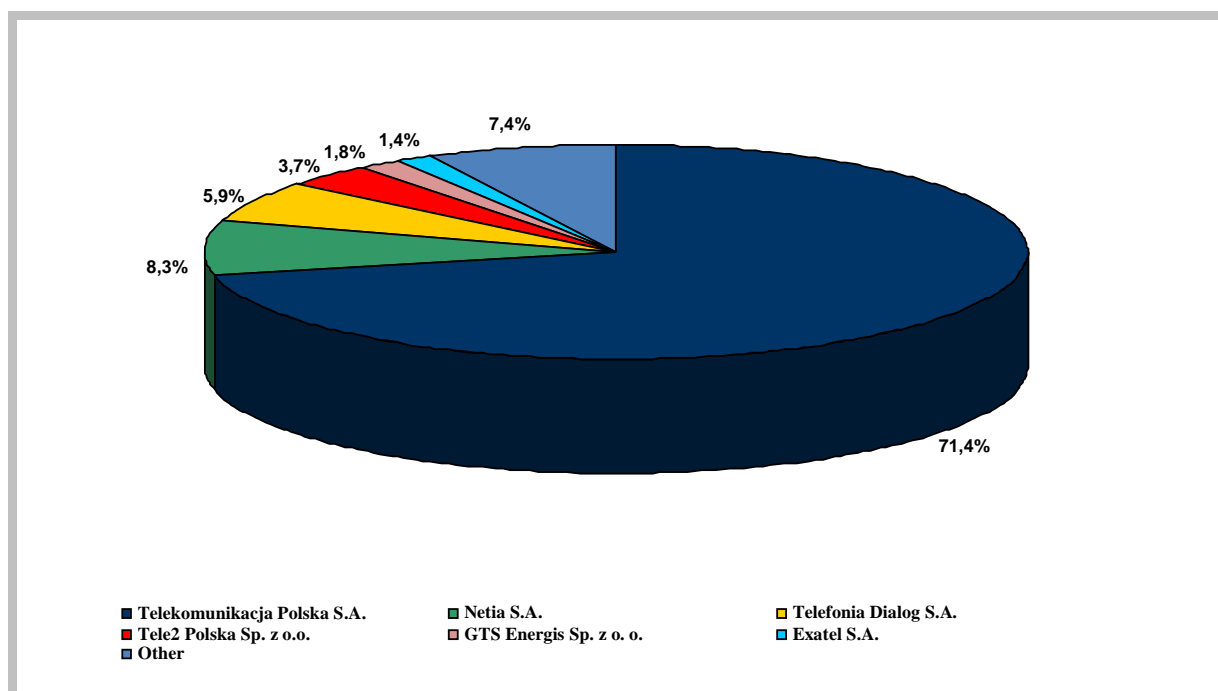
Chart 27. Share of TP S.A. and alternative operators in the fixed telephony market in terms of long-distance calls in 2005 - 2008.



Source: UKE compilation based on information forms.

In this segment of calls market Netia (which at the end of 2007 had a market share equal to 10.6 per cent ) was the major competitor of the incumbent. In the subsequent year its share decreased to 8.3 per cent. In 2008 the shares of Tele2 and Telefonía Dialog in the long-distance market decreased from 6.4 per cent to 5.9 per cent and from 5.3 per cent to 3.7 per cent respectively.

Chart 28. Percentage share of telecommunications undertakings in the fixed telephony market in terms of long-distance calls in 2008.



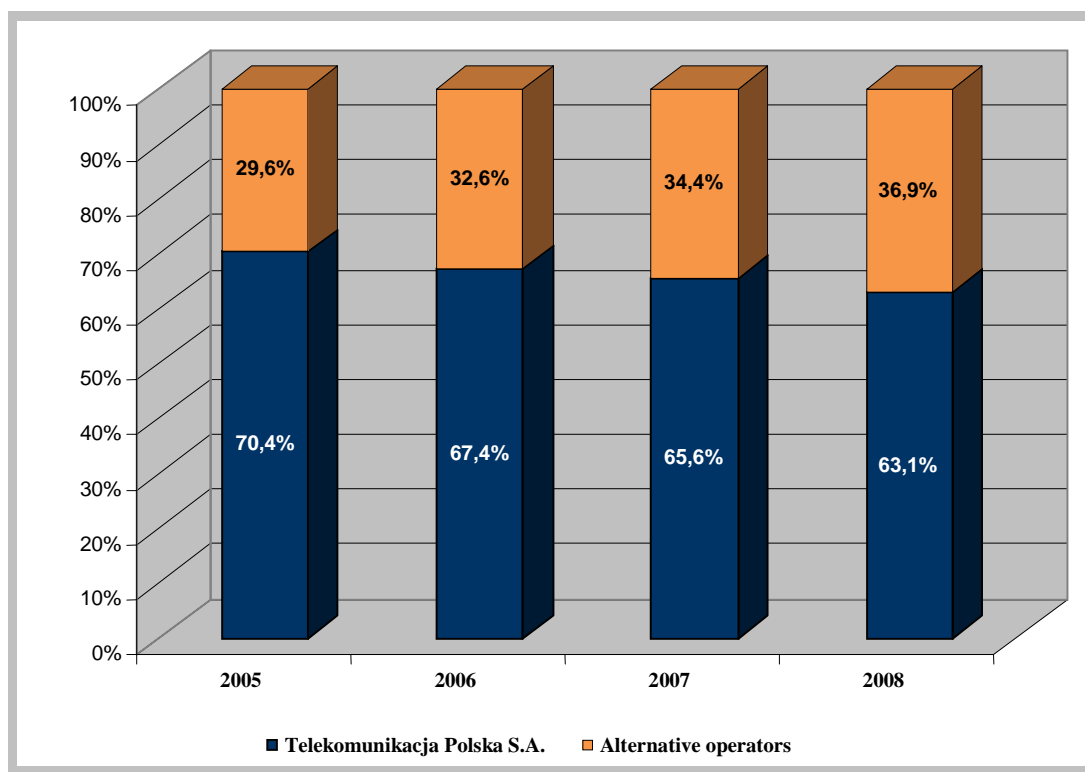
Source: UKE compilation based on information forms.

Due to their prices, long-distance calls are very sensitive to substitution: calls to mobile networks and calls in the VoIP technology. Telekomunikacja Polska S.A. is not only losing its share in this market, but also the global number of long-distance calls minutes is dropping. New tariffs with free calls minutes included in the rental and free evening and weekend calls were the solutions that probably stopped this downward tendency in the share of the incumbent.

#### 5.4.4. International calls

Alternative operators are constantly winning a growing part of the international calls market in terms of revenues. In 2005 – 2008 their share increased by more than 7 percentage points. It should be noted that in this calls segment competition is highly developed and more and more calls are provided outside the incumbent's network. A considerable number of calls are provided with the use of the VoIP technology.

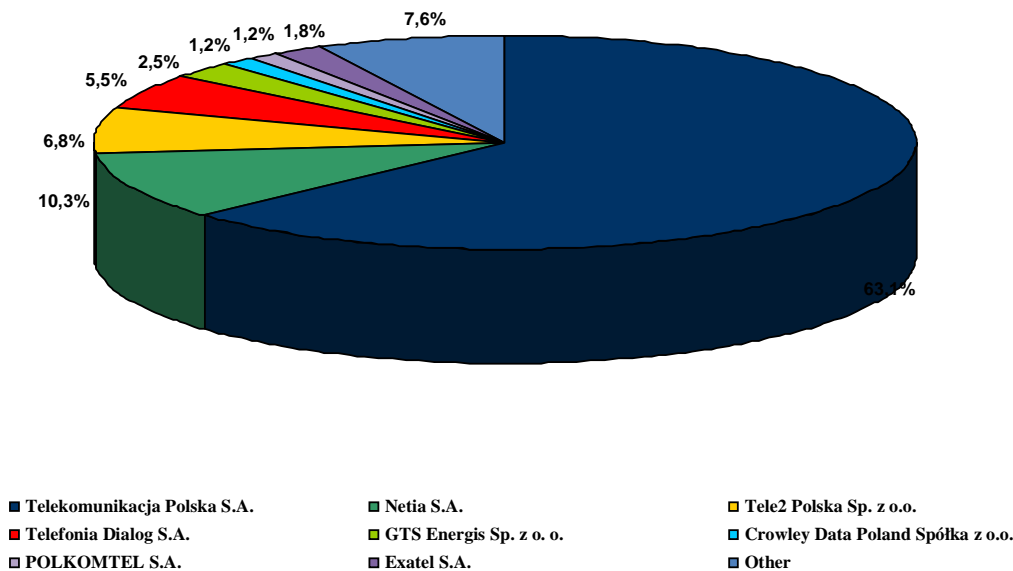
Chart 29. Share of TP S.A. and other operators in the fixed telephony market in terms of international calls in 2005 - 2008.



Source: UKE compilation based on information forms.

In 2008 the value of TP revenues decreased in comparison with 2004 by about 40 per cent, while alternative operators lowered their revenues by just 20 per cent. On average the incumbent lost slightly more than 2 percentage points of shares in revenues from the international calls market every year.

Chart 30. Share of telecommunications undertakings in the fixed telephony market in terms of international calls in 2008.



Source: UKE compilation based on information forms.

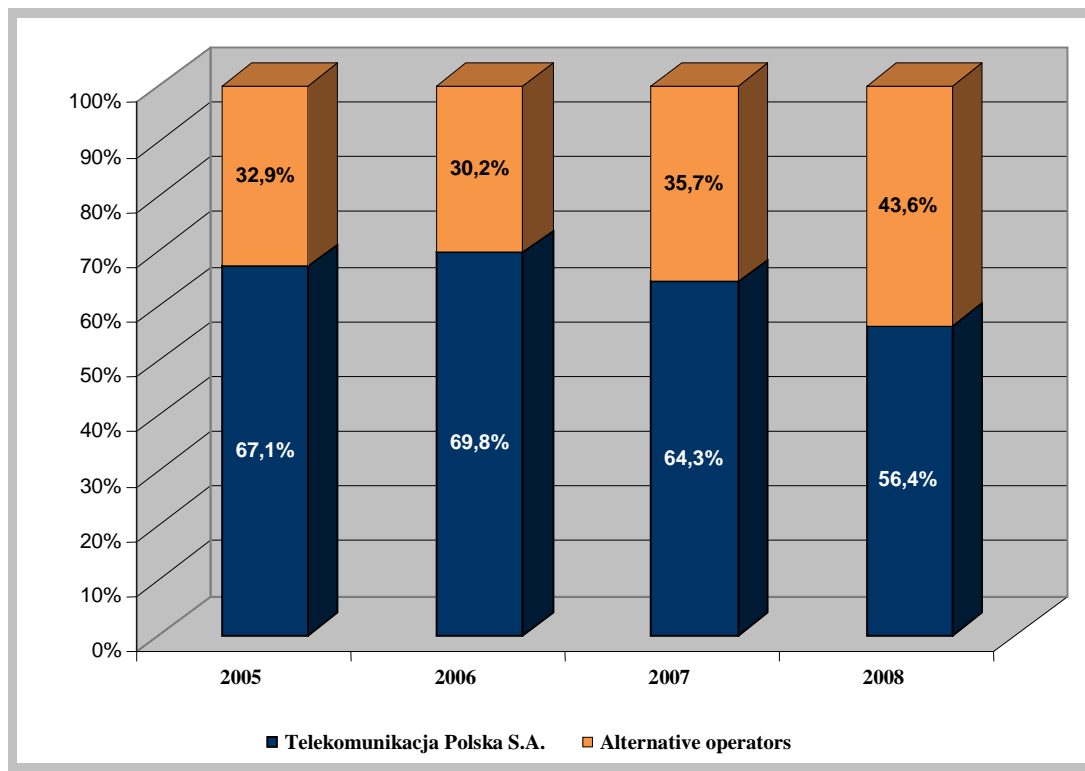
The second operator, which generated significant shares in revenues from international services in 2008 was Netia, followed by Tele2 and Dialog. Netia and Dialog reached higher shares than in 2007, while Tele2 observed a slight decrease. In 2008 GTS Energis Sp. z o.o., Crowley Data Poland Sp. Z o.o., Polkomtel S.A. and Exatel S.A. obtained shares above 1 per cent in terms of revenues from international calls.

The decrease of TP share in terms of revenues from international calls was probably caused also by noticeable popularity of calls with the use of the VoIP technology.

#### 5.4.5. Calls to mobile networks (F2M)

Due to the growth of the mobile telephony market penetration and fall in prices of this type of calls, the significance of F2M calls increased. Although revenues from traffic generated to mobile network decrease every year, due to substitution of fixed-line services with mobile services, this market segment becomes more and more attractive for alternative operators. In 2008 their total share in calls to mobile networks market was by over 10 percentage points higher than in 2005.

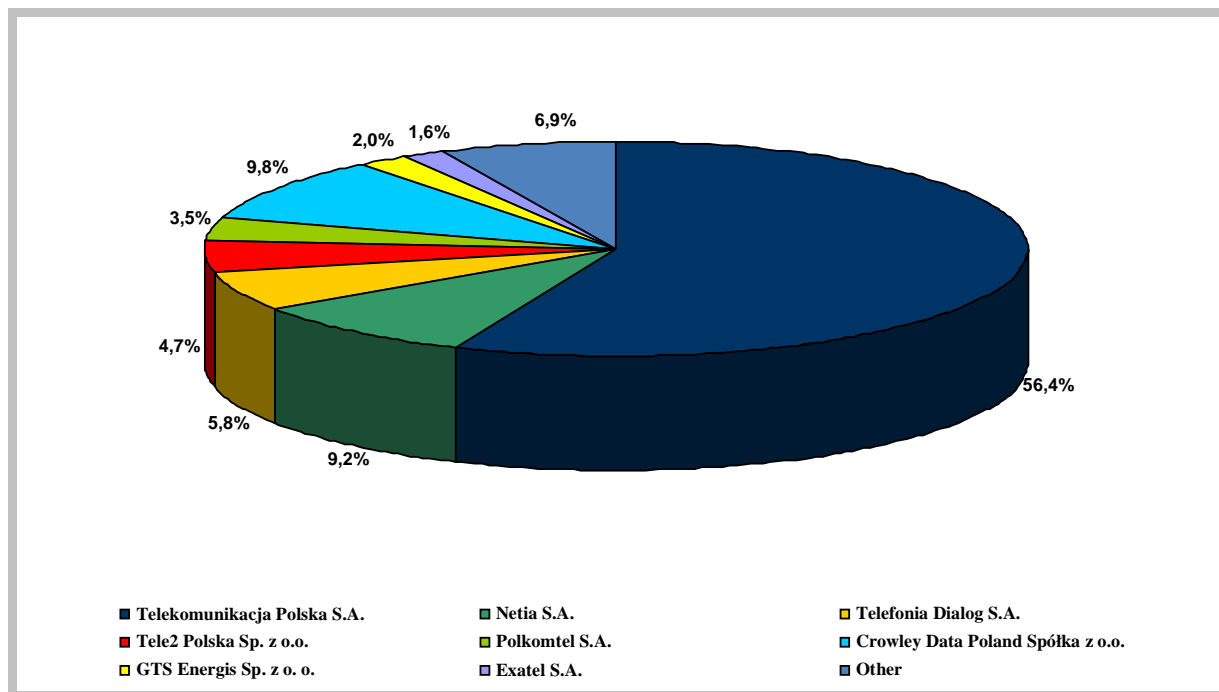
Chart 31. Share of TP S.A. and alternative operators in the fixed telephony market in terms of revenues from calls to mobile networks in 2005 - 2008.



Source: UKE compilation based on information forms.

In 2008 Crowley Data Poland was the largest competitor of Telekomunikacja Polska in the F2M market, as it obtained almost 10 per cent share in this market segment. Netia had a slightly lower share. Telefonía Dialog, Tele2 and Polkomtel also held significant shares in this market.

Chart 32. Percentage share of telecommunications undertakings in the fixed telephony market in terms of revenues from calls to mobile networks in 2008.



Source: UKE compilation based on information forms.

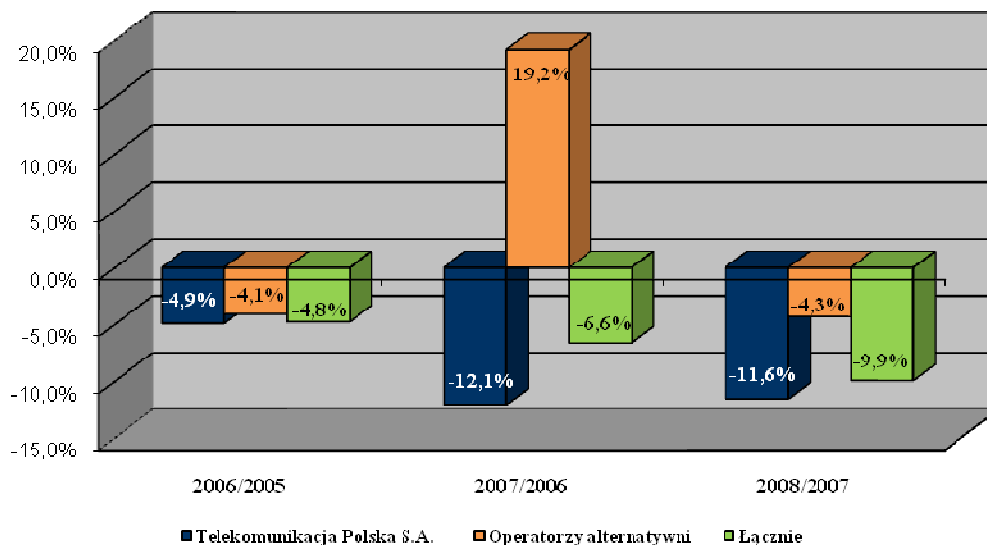
In 2008 GTS Energis and Exatel had shares in revenues from calls to mobile networks market exceeding 1 per cent.

One of the most important conclusions resulting from the situation in the fixed telephony market is a decreasing share of Telekomunikacja Polska S.A. In 2008 this share increased by almost 8 percentage points. It is also worth noticing that each year the number of undertakings which exceed 1 per cent of share thanks to their services is increasing. Among alternative operators Tele2 Polska Sp. z o.o., Netia S.A. and Telefonia Dialog Sp. z o.o. were well-established in all sectors.

#### 5.4.6. Number of users

In 2005 – 2008 the number of fixed telephony users was systematically lowering. In 2008 this number was about 20 per cent lower than in 2005. Definitely the most intensive decrease in the number of subscribers was observed by the incumbent, who in 2005 – 2008 lost about 28 per cent of its users.

Chart 33. Changes in the number of fixed telephony users in 2005 - 2008.

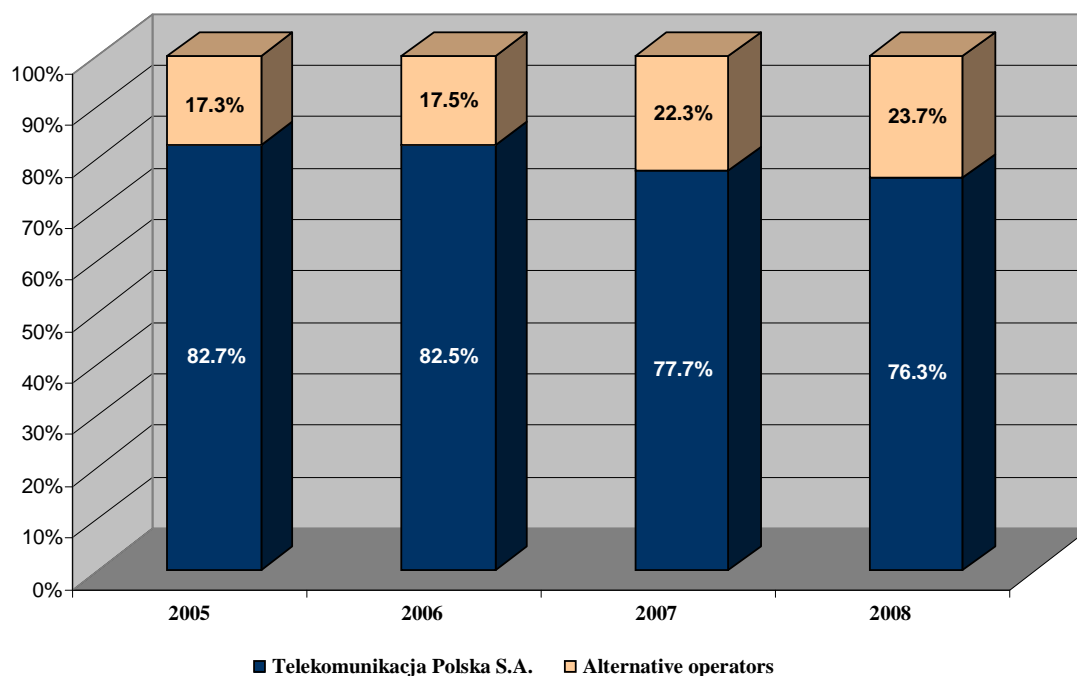


*Alternative operators / Total*

Source: UKE compilation based on information forms.

The decrease in the number of fixed telephony users was undoubtedly connected with growing popularity of mobile services. In recent years a tendency to resign from a fixed-line telephone in favour of a mobile phone by some consumers was observed.

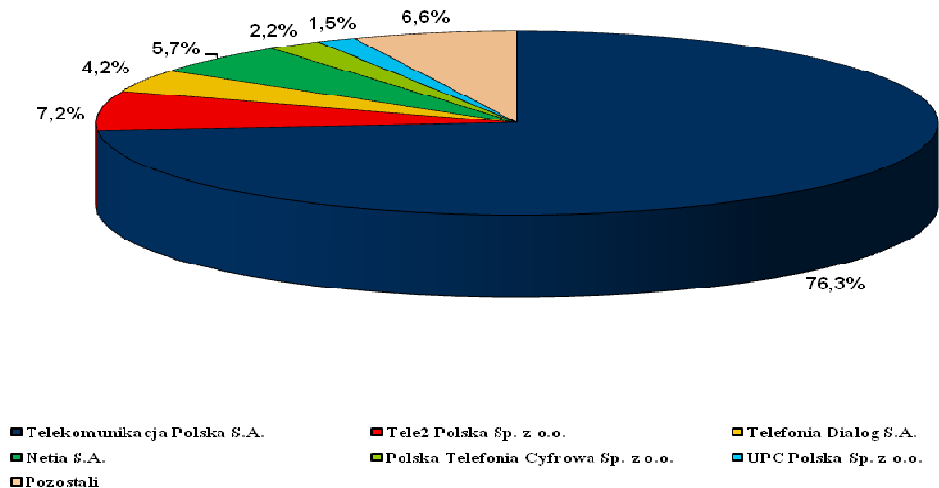
Chart 34. Share of TP and alternative operators in the number of fixed telephony users in 2005 - 2008.



Source: UKE compilation based on information forms.

In 2008 the incumbent had 6.4 percentage points lower share in the fixed telephony market in terms of the number of users than in 2005.

Chart 35. Share of telecommunications operators in the number of fixed telephony users in 2008.



Other

Source: UKE compilation based on information forms.

Similar to the previous three years, in 2008 Tele2 was the largest competitor of the incumbent as regards the number of subscribers. Netia and Telefonía Dialog also had significant shares in the number of users. Polska Telefonia Cyfrowa and UPC Polska offered their services to over 1 per cent of users.

## 5.5. Wholesale line rental

Thanks to the introduction of the WLR service to the Polish market, alternative operators, using the possibility of purchasing wholesale line rental from the incumbent, were able to provide line rental without the necessity to offer network connection.

Table 1. Share of the WLR lines in the total number of lines used by operators to provide fixed telephony services as of the end of September 2008.

Operator	Share of WLR lines in the total number of operator lines
Netia	27.5%
Dialog	33.8%
Tele2	100.0%

Source: UKE compilation based on information forms.

In September 2008 almost 9 per cent of lines owned by the incumbent were used to provide services by alternative operators. The possibility to use TP lines by alternative operators resulted in the increase of revenues from connection and line rental. The WLR lines constituted in total 58 per cent of lines used by alternative operators to provide fixed telephony services.

## 5.6. Convergence of telecommunications services

A new tendency is becoming more and more visible in the Polish telecommunications market – more and more fixed telephony operators offer telephone services in one bundle together with Internet, mobile telephony or television.

In July 2008 in the offer of national operators of fixed telephony there were 466 bundled offers used by 344,000 customers. Considering the fact that the total number of bundled offers proposed by all telecommunications operators amounted to 607, and the number of customers using those services amounted to 584,000, it may be calculated that fixed telephony operators offered almost 77 per cent of all convergent services to almost 59 per cent of users of such offers in July 2008.

Table 2. Convergent services offered by fixed telephony operators as of 1 July 2008.

Specification	Double play	Triple play	Quadruple play
Number of offers	193	225	48
Number of subscribers	178 817	164 818	10

Source: UKE compilation based on information forms.

Double play offers are recognised as the most interesting offers by the consumers. Their attractiveness is proved by the number of users relying on this form of services.

## 6. Access to the Internet

### 6.1. Market description

2008 was the year of further development of the Internet access services market in Poland. There was a substantial increase in the number of persons using the Internet and an increase in the popularity of broadband services.

During 2008 the number of persons using Internet access services (fixed-line access) in Poland increased up to 4.7 million<sup>3</sup>, which constituted an increase of over 12 per cent compared to 2007. As of the end of 2008 the number of users of access via modems in mobile networks was 1.06 million, which meant an increase at the level of 45 per cent compared to June 2008. In 2008 the number of persons using dial-up Internet access decreased to 378,000.

Table 3. Specification of the penetration rate and the number of users of the fixed Internet access in Poland in 2005 – 2008.

Year	2005	2006	2007	2008
Number of fixed broadband lines	2 017 715	3 452 839	4 168 565	4 690 623
Penetration in total	5.3%	9.1%	10.9%	12.3%
Total penetration in households	15.1%	25.9%	31.3%	35.2%

Source: UKE compilation based on information forms.

Table 4. Specification of the penetration rate and the number of user of wireless Internet access via modems in the networks of mobile networks operators in 2008 in Poland.

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<sup>3</sup> Data for 2008 obtained from 1240 entities which submitted their reports by 26 June 2009.

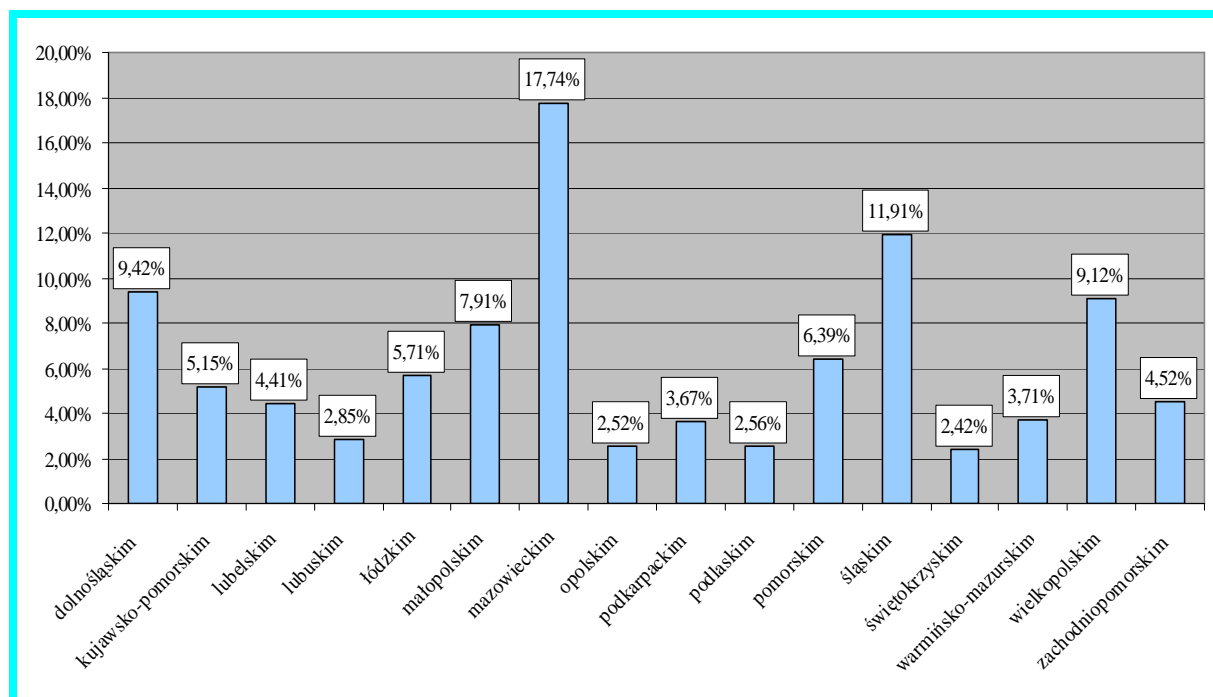
<b>Year</b>	<b>2008</b>
<b>Mobile Internet (number of modems)</b>	<b>1 064 158</b>
<b>Total penetration – mobile access</b>	<b>2.8%</b>
<b>Penetration of the number of modems in households</b>	<b>8.0%</b>

Source: UKE compilation based on information forms.

The degree of saturation with broadband services in Poland is constantly growing; however, still this rate proves a clear gap between Poland and other European Union countries. The penetration of fixed broadband access increased compared to 2007, reaching the level of 12.3 per cent at the end of 2008, whereas the penetration of access in the networks of mobile operators via wireless modems reached 2.8 per cent.

The Polish market is characterised by significant differences between the number of users in particular provinces. The Mazovian province has the biggest number of users. High penetration (at the level of approximately 10%) is also observed in the provinces of southern Poland.

Chart 36. Percentage share of the number of end-users with broadband access divided into provinces in 2008.



Source: UKE

Provinces with major municipal centres of Poland have the largest number of subscribers. This results from cable television operators being active in these cities along with the incumbent.

In 2008 neostrada tp, based on the xDSL technology, and cable television operators offers (Internet via TVK cable modem) remained the most popular forms of access to the Internet in households. In 2008 the number of xDSL broadband access lines was over 2.7 million.

In the case of alternative forms of access to the Internet, the year 2008 brought quite radical changes. They were connected with major interest in access to the Internet via mobile networks. Subscribers start to perceive access via modems as a substitute for access to the Internet in fixed location, which makes further dynamic growth in the number of users of this type of services highly possible. As of the end of 2008 over 18 per cent of Internet users were the customers of mobile networks.

Data obtained from mobile operators prove that practically each mobile phone owner in Poland has the possibility to access the Internet. However, it should be remembered that this type of connection is still an expensive service and cannot be treated as a complete substitute for broadband services.

In 2008 the prices for using the Internet stabilised. The current cost of a 1 Mbit/s neostrada Internet connection in the “neostrada tp – safe Internet” promotion (neostrada tp – bezpieczny Internet) amounted to PLN 64.00 when signing an agreement for 12, 24 or 36 months. This amount constitutes 28 per cent of a standard price when signing an agreement for an indefinite period of time.

The share of lines under 144 kbit/s (defined as narrowband) in all types of lines used to provide access to the Internet, excluding dial-up, amounted to just 2 per cent.

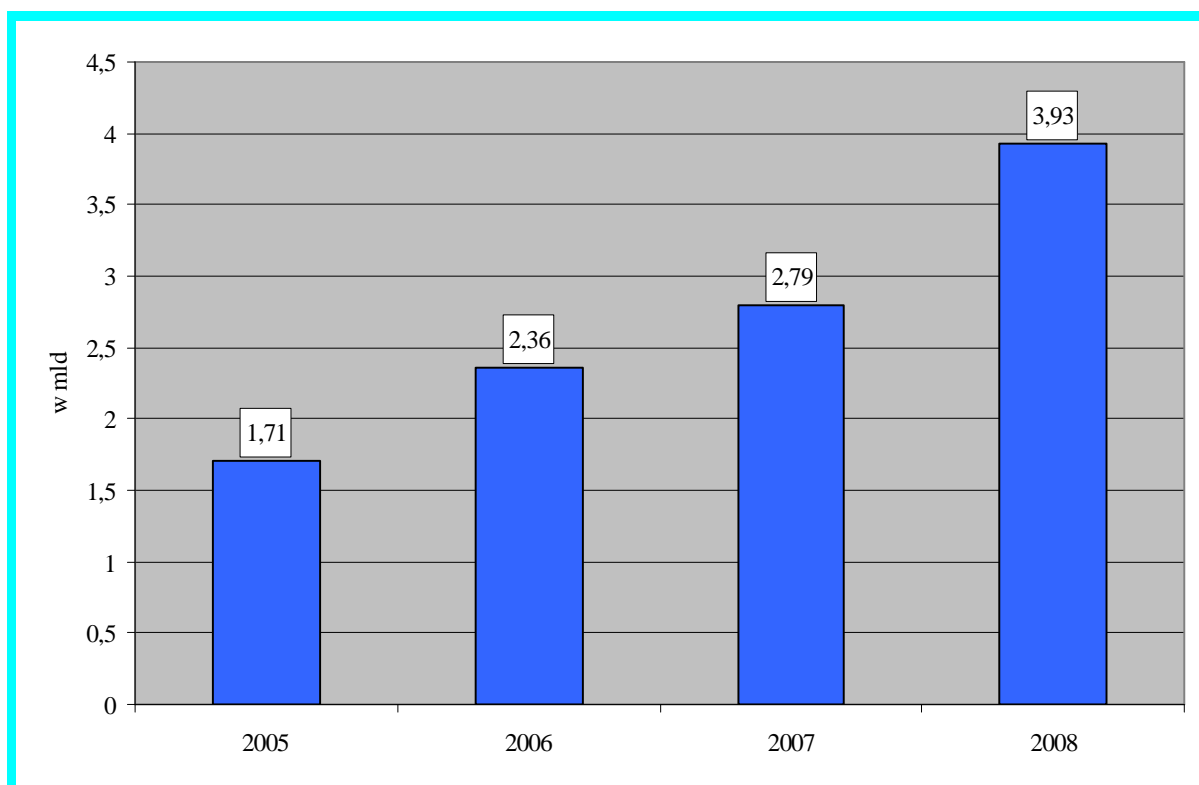
## **6.2. Market value**

In 2008 the value of the Polish Internet access market amounted to PLN 3.93 billion<sup>4</sup>, but due to the fact that by 26 June 2009 only 1240 out of 3,500 entities active in this market submitted their reports, this value may increase further.

Chart 37. Value of the Internet access services market in Poland in 2005 – 2008 in PLN billion (excluding VAT).

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<sup>4</sup> Data of 26 June 2009 obtained from 1240 entities.



Source: UKE compilation based on information forms.

### 6.3. Market structure

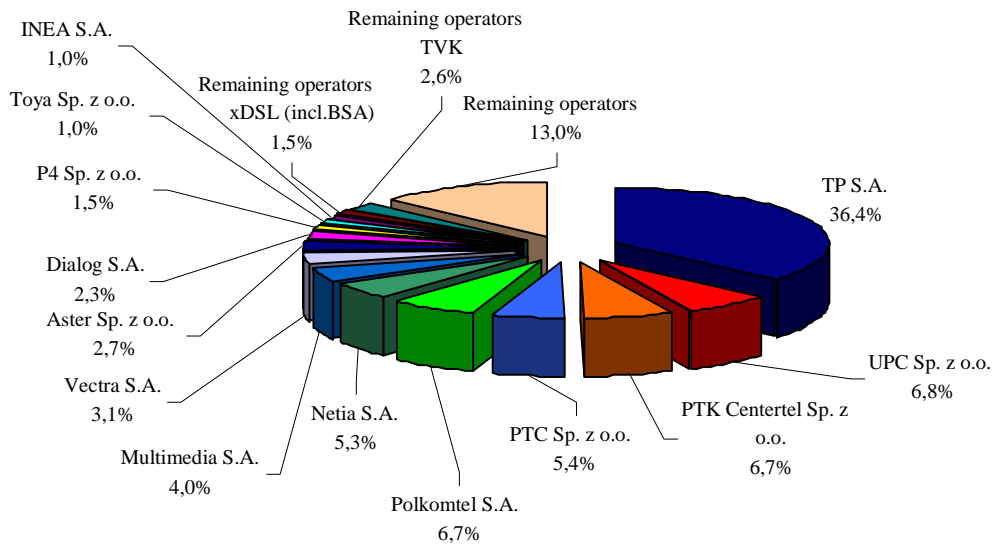
Broadband Internet access services in Poland are dominated by thirteen telecommunications operators. Three of them, headed by TP S.A., represent the fixed telephony market. Four other are mobile telephony operators and the remaining six are cable television operators. Increasing convergence of telecommunications services made operators to place a particular emphasis on double and triple play services. Those offers are no longer the domain of cable television operators and become more common among fixed-line and mobile operators who provide those services in their own networks and thanks to reference agreements signed with the incumbent.

Despite significant dominance of 13 major operators providing broadband Internet access services, minor ISP<sup>5</sup> operators have a 17 per cent share in the retail broadband access market. Most of those operators use the LAN/WLAN Ethernet local networks technology and are present mostly in smaller towns.

Chart 38. Share in the Internet access market in terms of the number of users in 2008.

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5 ISP – Internet Service Provider

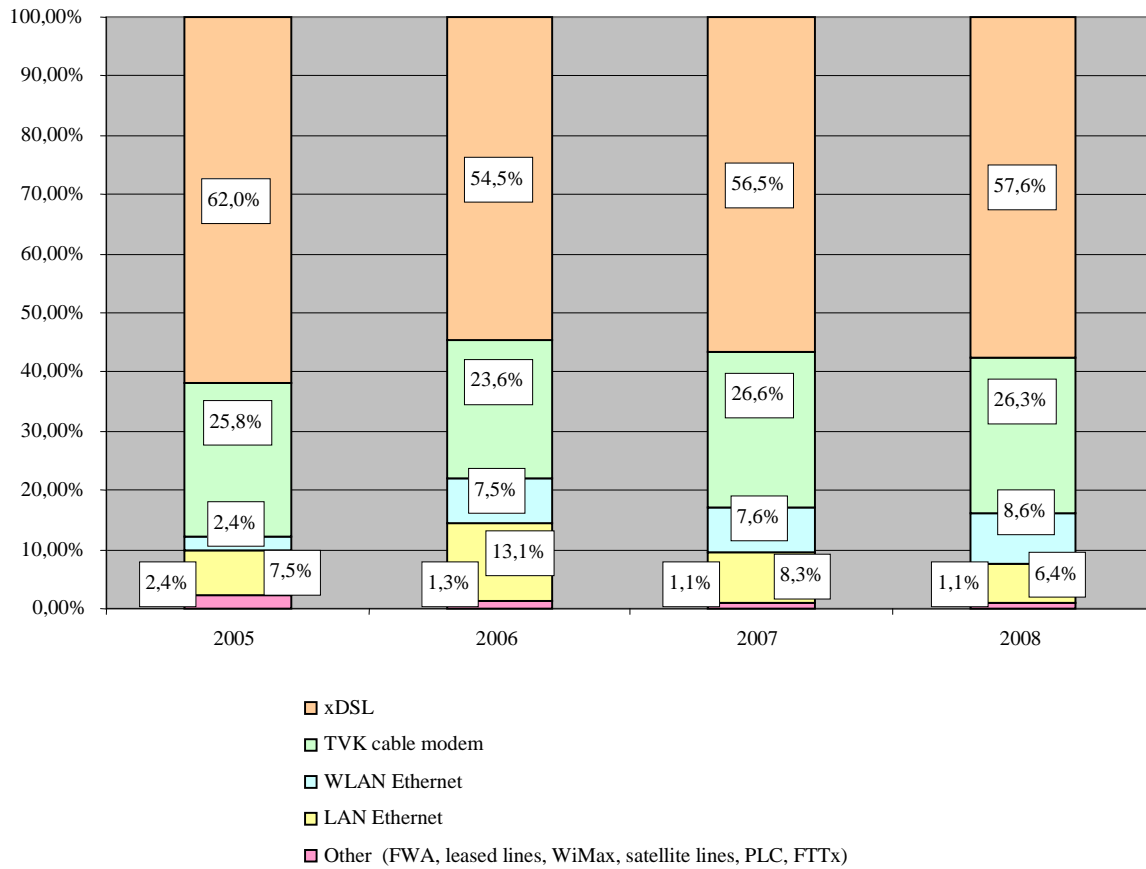


Source: UKE compilation based on information forms.

#### 6.4. Broadband Internet access technologies in Poland

Almost all possible technologies used to provide broadband access services are currently present in Poland. The main technologies of fixed access to the Internet are: xDSL, TVK cable modem and LAN/WLAN Ethernet.

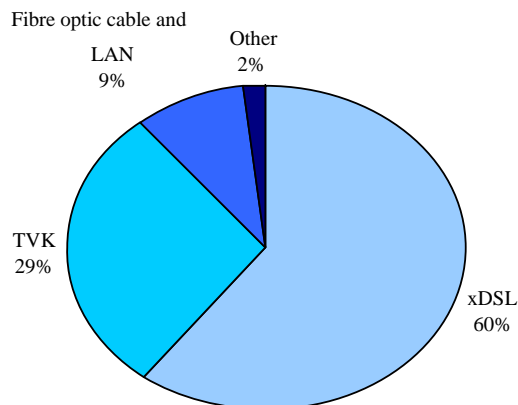
Chart 39. Percentage share of particular types of technologies in the number of subscribers using fixed Internet access.



Source: UKE compilation based on information forms.

Despite the development of alternative forms of access to fixed Internet to xDSL technology, those technologies still represent less than 50 per cent share. Since 2006 a visible increase in the number of xDSL lines has been observed, the share of which is currently at the level of 57 per cent. However, this tendency is similar in other European Union countries and in the world.

Chart 40. Percentage share of particular technologies used to provide broadband access in the OECD countries, data as of June 2008.

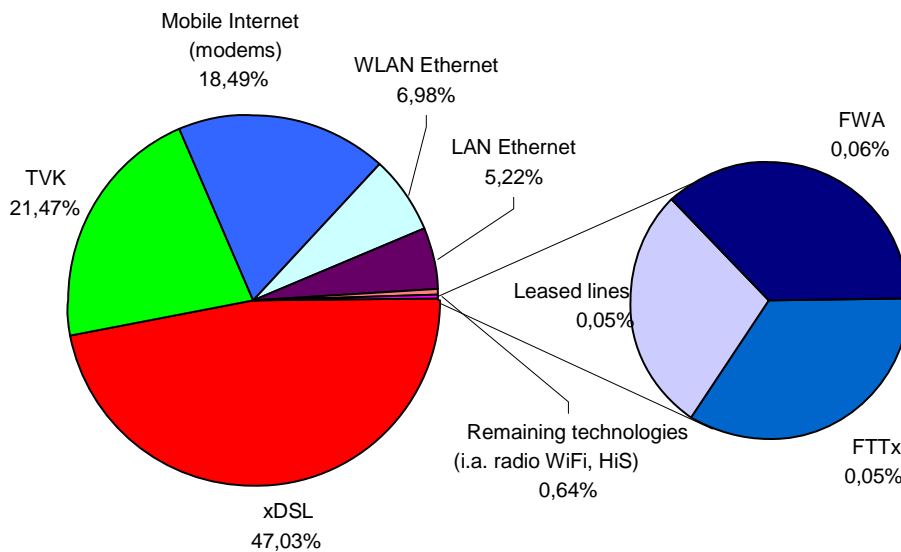


Source: OECD

While the share of xDSL lines and TVK cable modems does not differ significantly in Poland and in other OECD countries, infrastructure gap in terms of NGA networks is clearly visible. The data obtained from operators showed that in Poland there are just over 3,000 optical fibre access lines, which constitutes 0.05 per cent of all types of lines.

If users of wireless Internet access via modems offered by mobile operators are included in this calculation, then the situation in the market can be presented in the following way:

Chart 41. Broadband Internet access market in terms of used technologies in Poland, as of 31 December 2008.

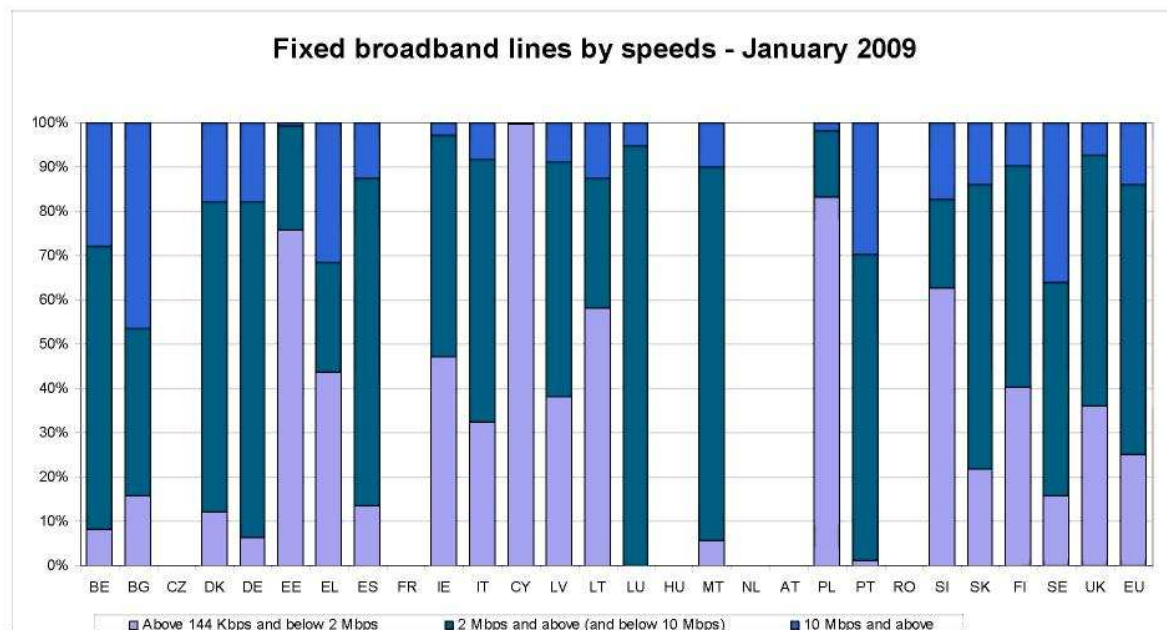


Source: UKE compilation based on information forms.

The three-year period of activities of mobile operators in the Internet access via wireless modems market brought significant changes. Currently, almost every fifth Internet user uses this technology. Certainly, a situation of double users, as each subscriber may have fixed and wireless access at the same time, cannot be excluded, but still the rate at a level comparable to TVK modems suggests that this segment develops dynamically.

While in terms of used access technologies Poland has results similar to other European Union countries, the lines people use are of much less bit rates.

Chart 42. Broadband Internet access market in terms of speeds, as of 31 December 2008.



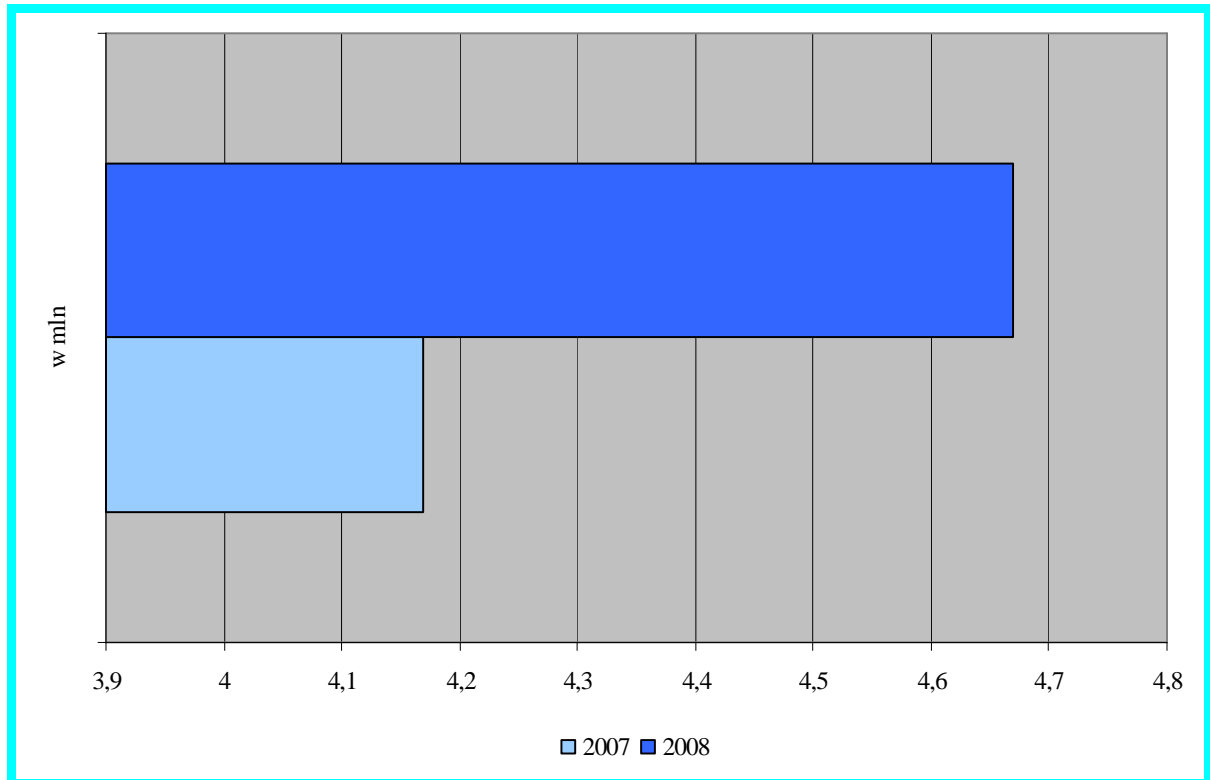
Source: 14<sup>th</sup> Implementation Report of the European Commission.

Poland has one of the highest shares of lines of 2 Mb/s bit rate. The majority of users in the European Union countries use lines of bit rate between 2 Mb/s and 10 Mb/s. The situation in Poland is a consequence of low quality of the access lines, especially in terms of the xDSL networks. Mainly TVK networks offer services with bit rate higher than 2 Mb/s on a larger scale.

#### 6.4.1. Fixed broadband Internet access

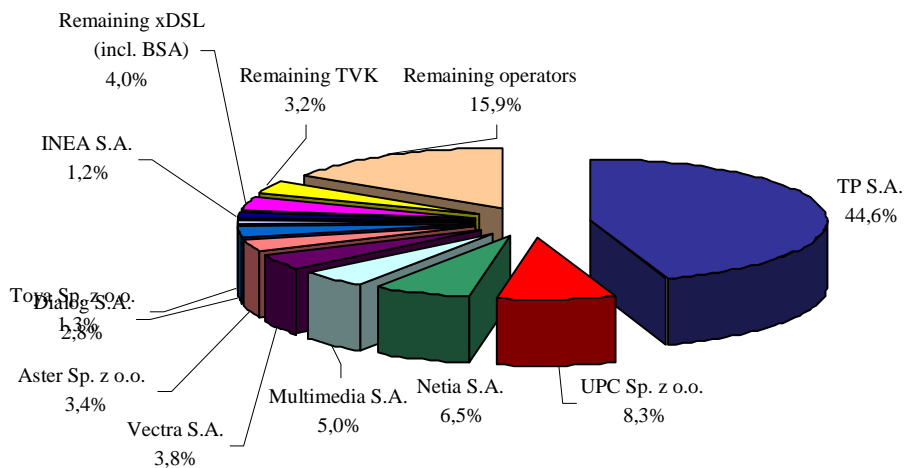
In 2008 the number of users of fixed broadband Internet access increased by almost 520 thousands persons reaching the level of 4.69 million Internet users, which constituted a 12 per cent increase compared to 2007. Out of this number only some 74 thousands new users chose the incumbent's offer.

Chart 43. Number of fixed Internet access users in Poland in 2007 – 2008, in millions.



Source: UKE compilation based on information forms.

Chart 44. Share in the fixed Internet access market in terms of users in 2008.



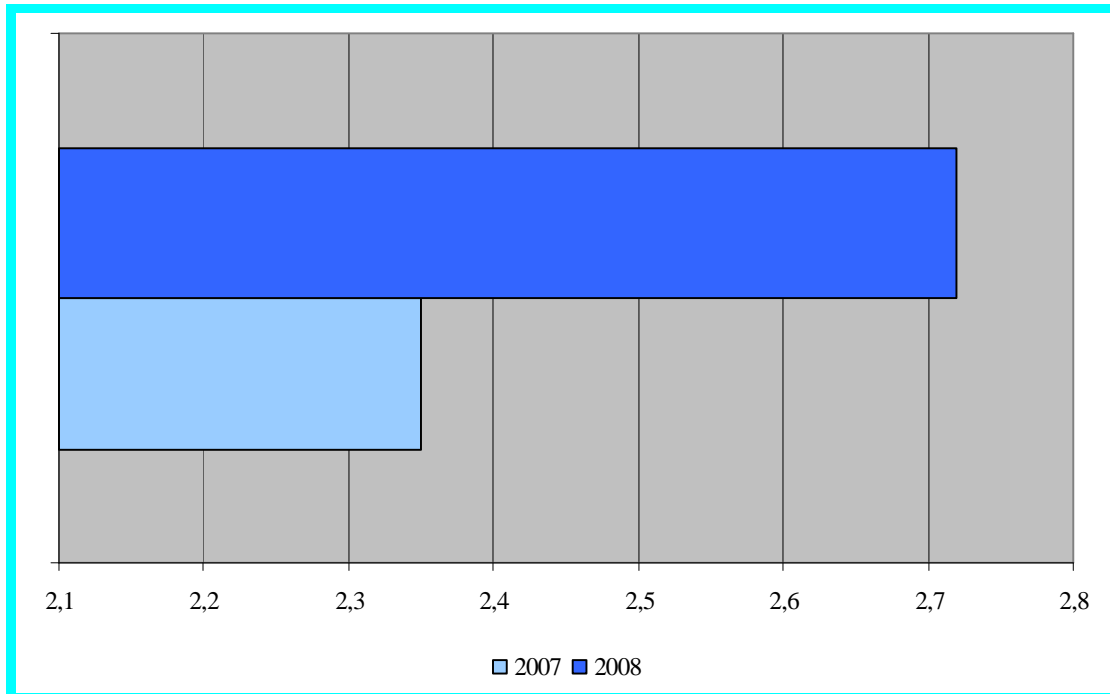
Source: UKE compilation based on information forms.

Compared to the previous year, TP S.A. decreased its share in the market by 4 percentage points to just fewer than 44 per cent. In the previous year, cable television operators still held high shares in the market. Currently, all cable television operators hold over 26 per cent of shares in the market. In terms of the number of users, Netia S.A. with its shares at the level of 6 per cent came third.

#### 6.4.2. xDSL lines (including BSA lines)

At the end of 2008 the number of users of Internet access in the xDSL technology (total of 2.72 million users) was decisive to claim it most popular among Internet users with fixed access. The dynamics of growth of new customers using Internet via xDSL modems amounted in 2008 up to 15 per cent.

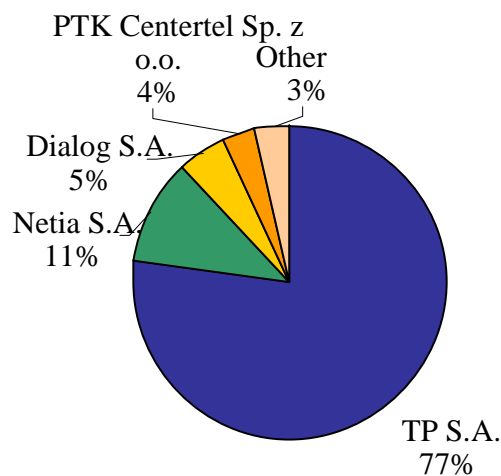
Chart 45. Number of users of Internet access services in Poland in 2007 – 2008, xDSL technology, in millions.



Source: UKE compilation based on information forms.

In 2008 the total number of Internet access users in the xDSL technology increased by some 360 thousands. A high growth in the number of subscribers in comparison with the previous year was observed by alternative operators, whose share in the market at the end of 2008 amounted to 22 per cent.

Chart 46. Share in the Internet access services market in terms of the number of users in 2008, xDSL technology, with lines based on BSA and LLU.



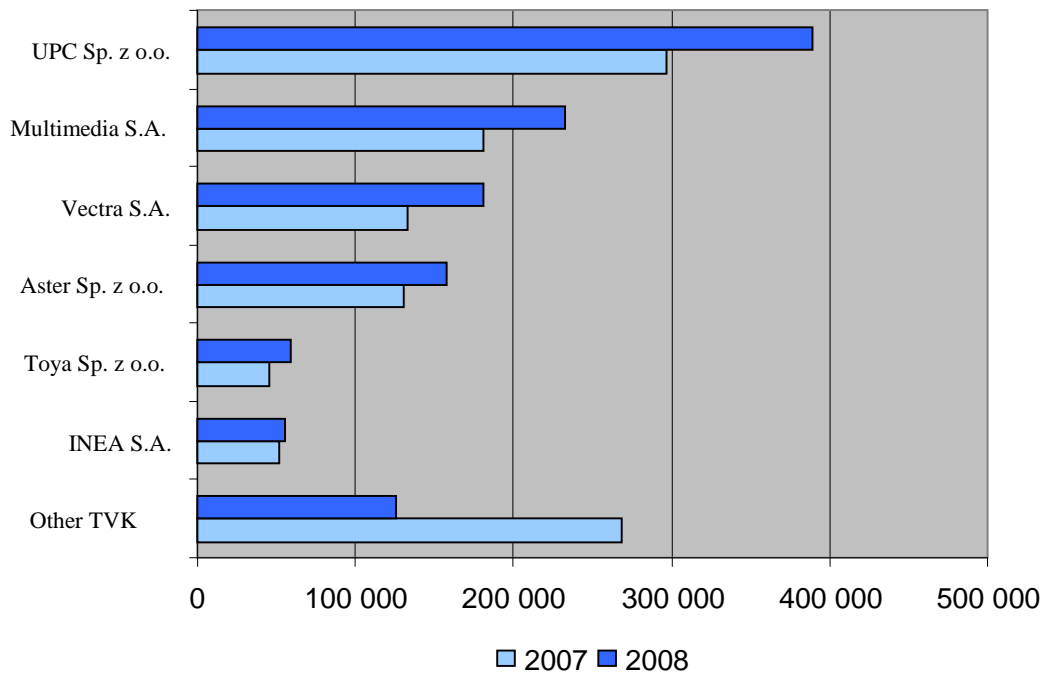
Source: UKE compilation based on information forms.

TP S.A. subscribers constitute the highest percentage of users among fixed Internet access users in the xDSL technology. Their share in the market at the end of 2008 amounted to 77 per cent and fell by 9 percentage points compared to the previous year. The share of Telefonica Dialog remained at a level similar to the level of shares from the previous year, while during the previous year the share of Netia S.A. increased to the level of 11 per cent. In 2008 the increase in the number subscribers using services of this operator amounted to over 76 per cent.

### 6.4.3. TVK cable modem

In 2008 in terms of popularity among the technologies of fixed Internet access in Poland the TVK technology came second, after the xDSL technology. The number of users of this technology in 2008 was over 1.2 million.

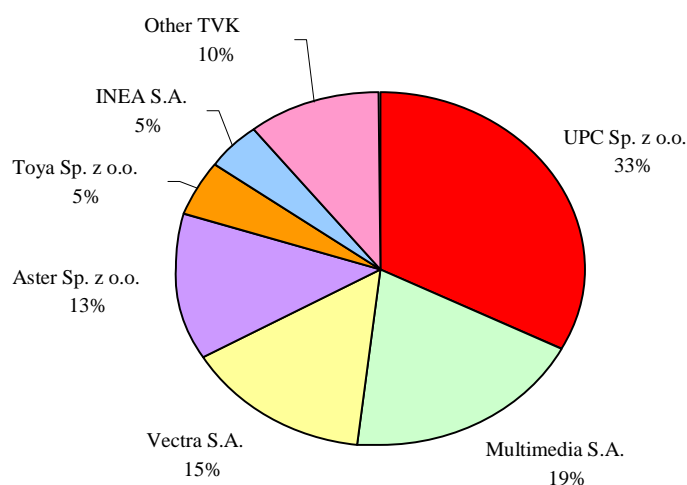
Chart 47. Number of users of Internet access in the TVK technology in Poland in particular networks in 2007 – 2008, in thousands.



Source: UKE compilation based on information forms.

All of the analysed providers of Internet access in the TVK technology are also cable television operators. UPC Polska Sp. z o.o. and Vectra S.A. noted a high increase in the number of users, over 30 per cent. At the end of 2008 the number of users of Internet access in the following four companies: UPC Polska Sp. z o.o., Vectra S.A., Grupa Aster and Multimedia Polska S.A. exceeded 900 thousands.

Chart 48. Share in the Internet access services market in terms of the number of users in 2008, TVK technology.



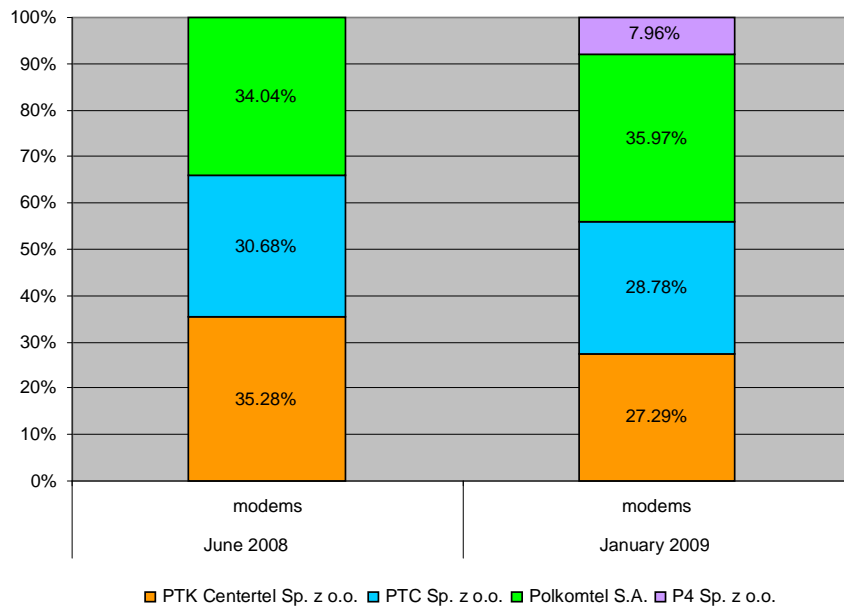
Source: UKE compilation based on information forms.

UPC Polska Sp. z .o.o., with a market share of 33 per cent, was the biggest cable television operator in Poland and at the same time the biggest provider of Internet access in the TVK technology. All undertakings noted an increase of shares in the Internet access market, although the pace of changes was differentiated. UPC Polska Sp. z o.o. observed a 6 percentage points increase, Vectra S.A. a 3 percentage points increase and Grupa Aster a 2 percentage points increase in this segment.

#### **6.4.4. Wireless modem in the networks of mobile operators**

Internet access via modems was characterised by a high dynamics of growth. At the end of 2008 over 1.06 million people used this type of access. Such significant dynamics results from the fact that this segment is in the stage of growth. Due to growing coverage of the UMTS technology, interest in the offers of mobile operators for Internet access is also growing. Currently, about 50 per cent of the country is covered by this type of network, thanks to which subscribers are able to use Internet access and HSDPA functionality (High Speed Downlink Packet Access) enabling data download at a speed of up to 7.2 Mbit/s.

Chart 49. Percentage share of particular operators in the market of broadband mobile Internet access via modems.



Source: UKE compilation based on information forms.

In the discussed period Polkomtel S.A. won the leading position in the market for the provision of Internet access over mobile networks by means of modems. This operator increased its share by almost 2 percentage points and at the end of 2008 had over 1/3 of shares in this market segment of broadband Internet access.

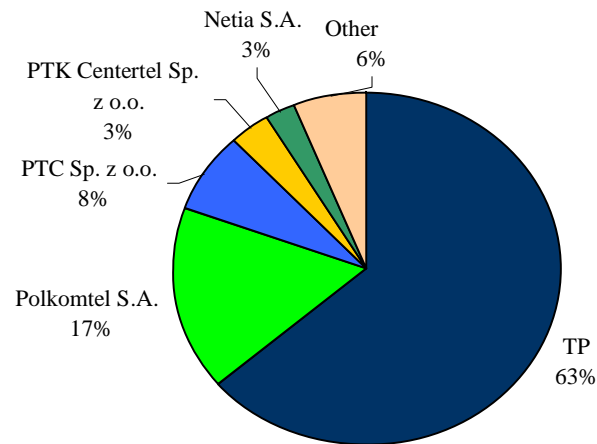
At the end of 2008 the penetration rate for Internet access via wireless modems amounted to 2.8 per cent and compared to other European Union countries this is a result at the level of the EU average.

#### 6.4.5. Dial-up Internet access

In 2008 379 thousands subscribers used dial-up technology in Poland. Compared to the previous year it is a slight fall from the level of 4 per cent. Despite such small change in the number of users in 2008 revenues from dial-up Internet access services in Poland decreased by over a half.

In 2008 the value of the dial-up market in Poland amounted to PLN 42.8 million, whereas in 2007 the value of this market was still over PLN 90 million.

Chart 50. Share of operators in the dial-up market in terms of revenues in 2008.



Source: UKE compilation based on information forms.

In 2008 the share of TP S.A. in the dial-up market in terms of generated revenues was at the level of 63 per cent. Thus the share of the incumbent significantly decreased compared to 2007, when it amounted to 70 per cent. In addition to the incumbent, mobile operators were the players in this market as they owned together 28 per cent of the dial-up market in 2008.

## 7. Mobile telephony

### 7.1. Market description

#### 7.1.1. Market entities

As of 31 December 2008 15 telecommunications undertakings operated in the domestic mobile market:

- PTK Centertel sp. z o.o. (Orange);
- Polkomtel S.A. (Plus, Simplus, Sami Swoi, 36.6);
- PTC Sp. z o.o. (Era, Tak Tak, Heyah);
- P4 Sp. z o.o. (Play) – MNO operating on the basis of domestic roaming in the Polkomtel S.A. network;
- emFinanase Sp. z o.o. (mBank mobile) – MVNO in Polkomtel S.A. network;
- Avon Mobile Sp. z o.o. (myAVON) – MVNO in PTK Centertel Sp. z o.o. network;
- Wirtualna Polska S.A. (Wpмоби) – MVNO in PTK Centertel Sp. z o.o. network;
- MNI Telecom S.A. (Simfonia, Ezo) – MVNO/MVNE in PTK Centertel Sp. z o.o. network;

In 2008 the following operators entered the market for the first time:

- Mobile Entertainment Company Sp. z o.o. (Mobilking) – MVNO in PTC Sp. z o.o. network;
- CP Telecom Sp. z o.o. (Carrefour Mova) – MVNO in Polkomtel S.A. network;
- MediaTel S.A. (telepin mobi) – MVNO in PTK Centertel Sp. z o.o. network;
- Cyfrowy Polsat S.A. – MVNO in PTC Sp. z o.o. network;
- Aster Sp. z o.o. – MVNO in PTK Centertel Sp. z o.o. network;
- Crowley Data Poland Sp. z o.o. (CROWLEY TeleMobile) – MVNO in PTK Centertel Sp. z o.o. network;
- Netia S.A. – MVNO in P4 Sp. z o.o. network.

Compared to the previous year, in 2008 a record-breaking number of 7 new operators entered the Polish market, all of which began commercial provision of mobile services in the business model of a virtual operator (MVNO) acting on the basis of another network operator's infrastructure.

CenterNet S.A. oraz Mobyland Sp. z o.o., operators, who were granted exclusive frequency licences in the following frequency ranges 1710-1730 MHz and 1805-1825 MHz, did not begin their activity.

### **7.1.2. Events**

In October the President of UKE issued decisions that established a new glide path for Mobile Termination Rates (MTR) in the mobile networks of PTK Centertel Sp. z o.o., Polkomtel S.A. and Polska Telefonii Cyfrowa Sp. z o.o..

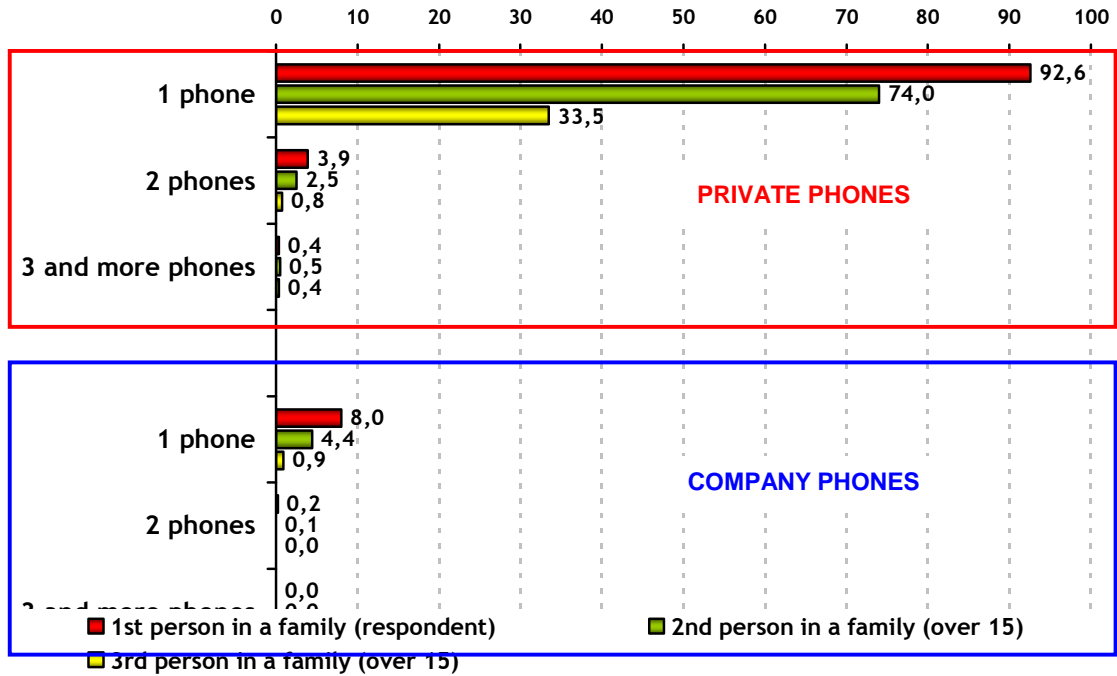
In December a decision on a general exclusive frequency licence in the E-GSM band (880.1 – 890.1 and 925.1 – 935.1 MHz) was issued for the following tender winners: P4 Sp. z o.o. and Aero 2 Sp. z o.o..

The market was determined also by further technical novelties such as the development of mobile payment services, start of TV signal test transmission in the DVB-H standard or appearance of an Apple iPhone, long-awaited by customers in Poland.

### **7.1.3. Consumer preferences**

The survey commissioned by UKE and carried out by CBM Indicator Sp. z o.o. showed that in 2008 a vast majority of Poles, i.e. 92.6 per cent used one mobile phone, while only 8 per cent had a company phone.

Chart 51. Number of mobile phones per household (in per cent, N=1328)

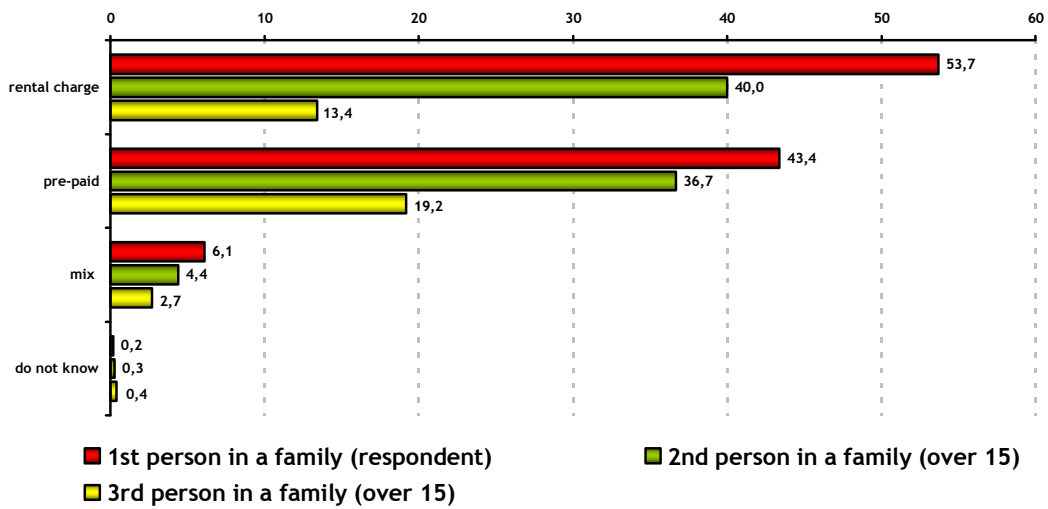


Source: *Telecommunications market in Poland in 2008. Individual customers*. CBM INDICATOR report from the consumer survey commissioned by UKE, December 2008.

Note: Results do not sum up to 100.00 per cent, because the respondents were given the possibility to provide multiple answers.

Also this year post-paid services used by some 54 per cent of the respondents enjoyed most popularity, followed by pre-paid (43 per cent) and mix type services (only 6 per cent). Unlike in 2007 post-paid services were the most popular ones among the youngest network users. This type of services was used by 3 per cent more respondents than the pre-paid services.

Chart 52. Forms of mobile phone uses (in per cent, N=1328).

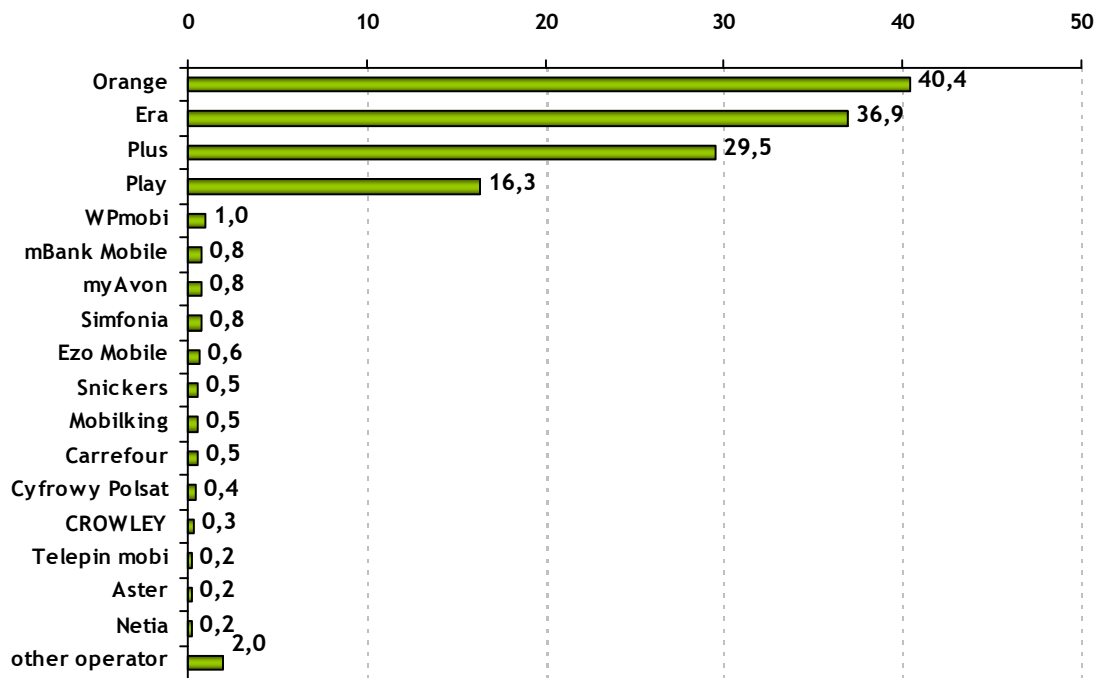


Source: *Telecommunications market in Poland in 2008. Individual customers.* CBM INDICATOR report from the consumer survey commissioned by UKE, December 2008.

Note: Results do not sum up to 100.00 per cent, because the respondents were given the possibility to provide multiple answers.

Similarly to 2007, the brands present in the domestic mobile market for many years enjoyed highest consumer confidence with Orange once again being the best recognised brand (recommended by 40 per cent of respondents), followed by Era and Plus. The consumer confidence towards Play almost tripled (recommended by 16 per cent compared to only 6 per cent in 2007).

Chart 53. Recommended mobile operators (in per cent, N=1328)



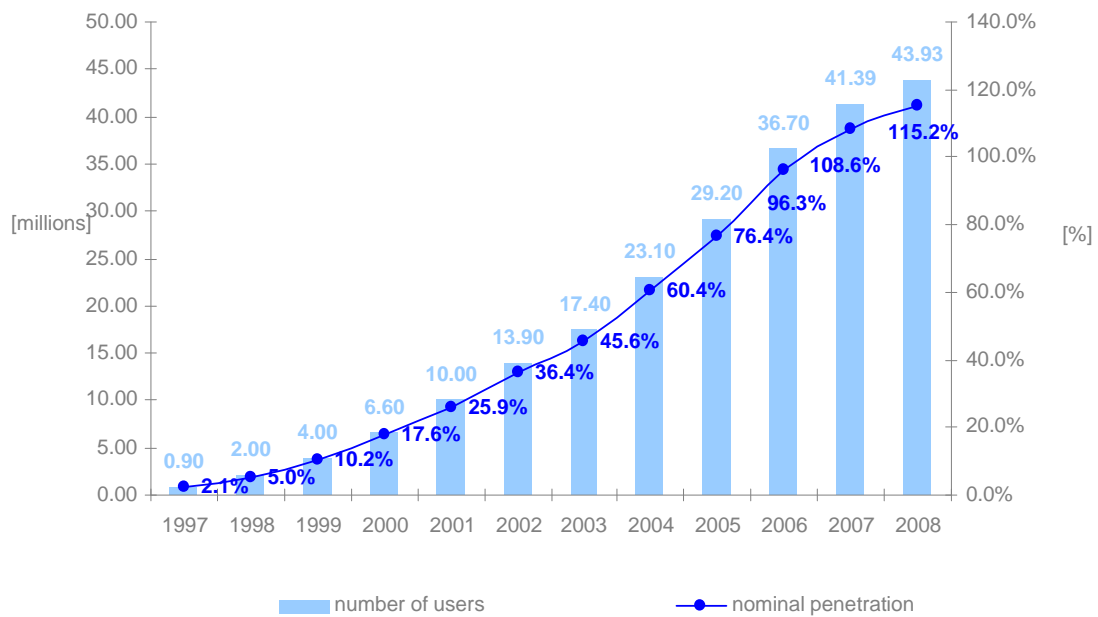
Source: *Telecommunications market in Poland in 2008. Individual customers.* CBM INDICATOR report from the consumer survey commissioned by UKE, December 2008.

Note: Results do not sum up to 100.00 per cent, because the respondents were given the possibility to provide multiple answers.

### 7.1.4. Number of users and penetration

In 2008 over 43 million consumers made use of mobile services in Poland, which meant penetration at the level of 115.2 per cent. However, UKE estimates that the actual market penetration at the end of 2008 fluctuated around the level of 97.5 per cent.

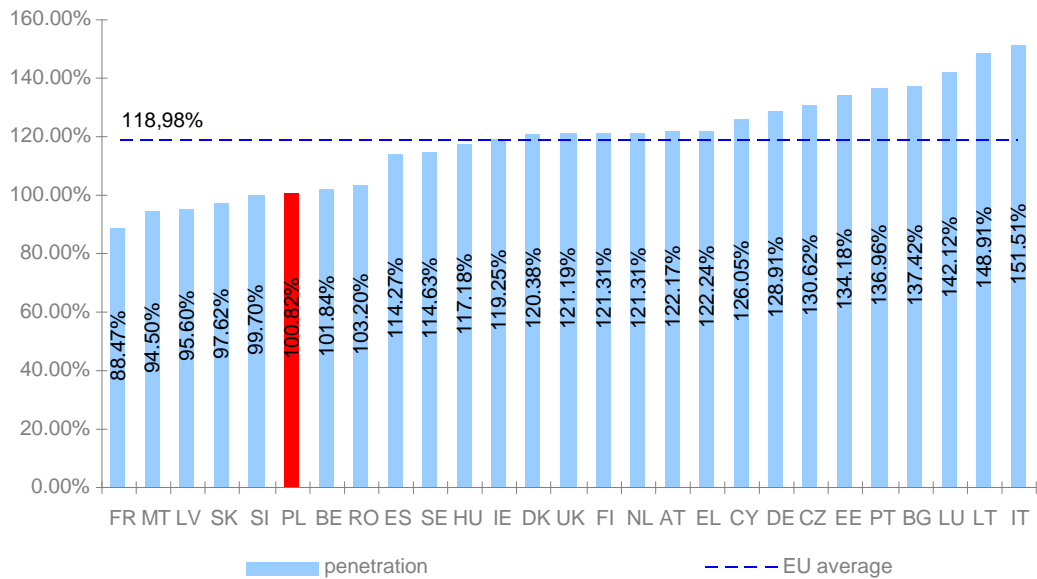
Chart 54. Nominal number of users and nominal market penetration in Poland.



Source: UKE compilation based on information forms.

In accordance with data presented by the European Commission in the 14<sup>th</sup> Implementation Report, in 2008 Poland ranked 22 out of all 27 European Union countries based on the market penetration criterion. The estimated penetration for Poland at the level of 100.82 per cent was below the European Union average, which equalled 118.98 per cent.

Chart 55. Market penetration in the European Union countries as of October 2008.



Source: UKE compilation on the basis of the 14<sup>th</sup> Implementation Report of the European Commission.

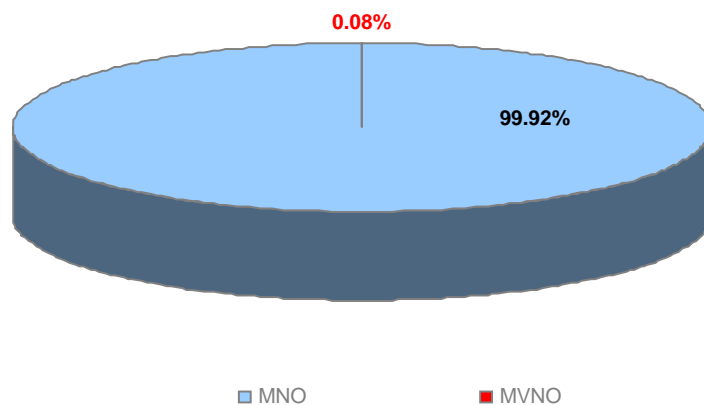
Note: Penetration in the 14<sup>th</sup> Implementation Report is based on the number of active users defined in accordance with individual assumptions of the European Commission.

## 7.2. Value of the market

The value of the mobile market, measured by operators' revenues amounted to almost PLN 19 billion, the majority of which was generated by infrastructural operators: PTK Centertel Sp. z o.o., Polkomtel S.A., PTC Sp. z o.o. and P4 Sp. z o.o.

Chart 56. Value of the market measured by revenues total obtained by mobile operators, and their distribution between operators [in PLN, without VAT].

Total revenues from mobile telephony: PLN 18 763 million



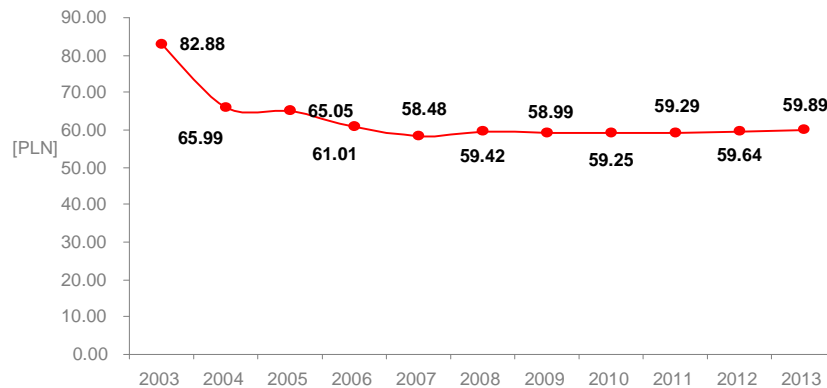
Source: UKE compilation based on information forms.

Note: The sum of revenues from fees charged from the end-users: service and terminal devices activation – mobile phones, subscriber fees, voice calls originated on the network, SMS sent, MMS sent, data transmission, out-bound

roaming, number portability services, premium rates services, contractual penalties and other charges from end-users, in PLN, without VAT.

In accordance with the forecast of Analysys Mason of December 2008, the average revenue per user (ARPU) in Poland amounted to PLN 59.42.

Chart 57. Forecast of the average aggregated ARPU of Polish mobile operators (as of December 2008).



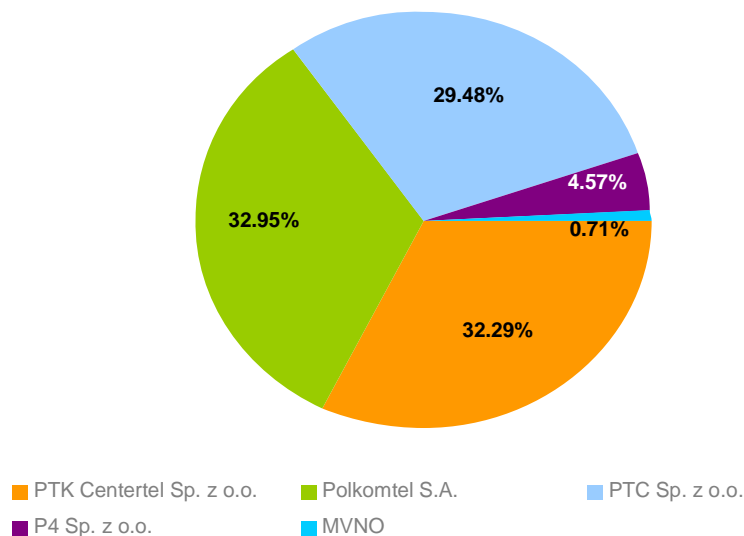
Source: Analysys Mason

Note: In accordance with an average exchange rate of the National Bank of Poland of 16 April 2009, EUR 1 = PLN 4.2965.

### 7.3. Market structure

Compared to previous years, 2008 did not bring any changes in the scope of the market structure. Operators present in the market for many years (PTK Centertel Sp. z o.o., Polkomtel S.A. and PTC Sp. z o.o.) still have significant advantage over their competitors in terms of the number of users. Market share of P4 Sp. z o.o. is systematically growing. Despite dynamic increase in the number of virtual operators, their share in the market this year also did not exceed 1 per cent.

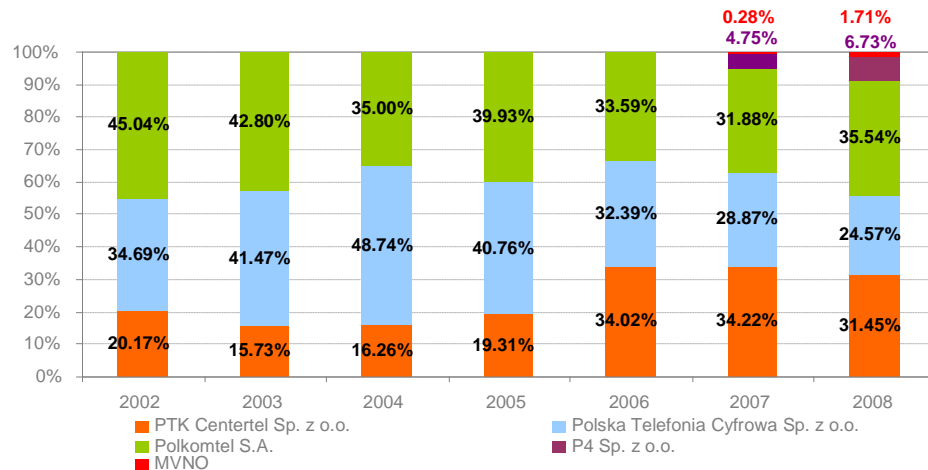
Chart 58. Shares of operators in the mobile telephony market in 2008 in terms of the number of users.



Source: UKE compilation based on information forms.

In 2008 the tendencies in the scope of distribution of new clients among the networks continued, i.e. the three major market players in practice divided the base of new users between them. Year by year P4 Sp. z o.o. achieves better results in winning new clients, outdistancing virtual operators, who in 2008 gained the result of about 2 per cent.

Chart 59. Distribution of new users between mobile operators.



Source: UKE compilation based on information forms.

## 8. Retail lease of telecommunications lines

### 8.1. Market description

In the scope of retail lease of telecommunications lines, the Polish Telecommunications Law regulates only the service of providing a minimum set of leased lines.

In 2008 the largest operators in the retail leased lines market, in terms of obtained revenues, included:

- Telekomunikacja Polska S.A.
- Exatel S.A.
- Telekomunikacja Kolejowa Sp. z o.o.
- GTS Energis Sp. z o.o.
- Crowley Data Poland Sp.z o.o.

The commercial offers addressed to customers in this market consist in making a permanent and dedicated line of certain signal transmission parameters available between two defined locations. The purchasers of retail leased lines service include mainly corporate customers – banks, energy distributors, insurance companies, central administration and other public institutions.

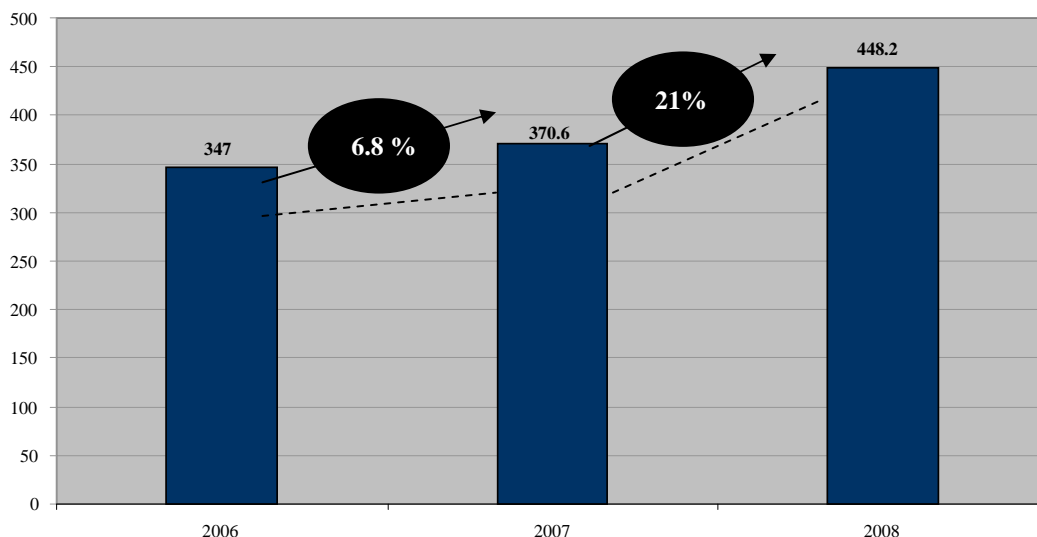
The following types of services are offered within the frames of this offer:

- analogue lines for 300 - 3400 Hz band of standard quality, radio and IT of low data transmission rate;
- digital lines (below 2 Mbit/s, 2 Mbit/s, above 2 Mbit/s);
- lambda DWDM (lease of optical wavelength in an optical fibre).

## 8.2. Value of the market

At the end of 2008 the value of the retail lease of telecommunications lines market amounted to over PLN 448 million.

Chart 60. Revenues in 2006-2008.



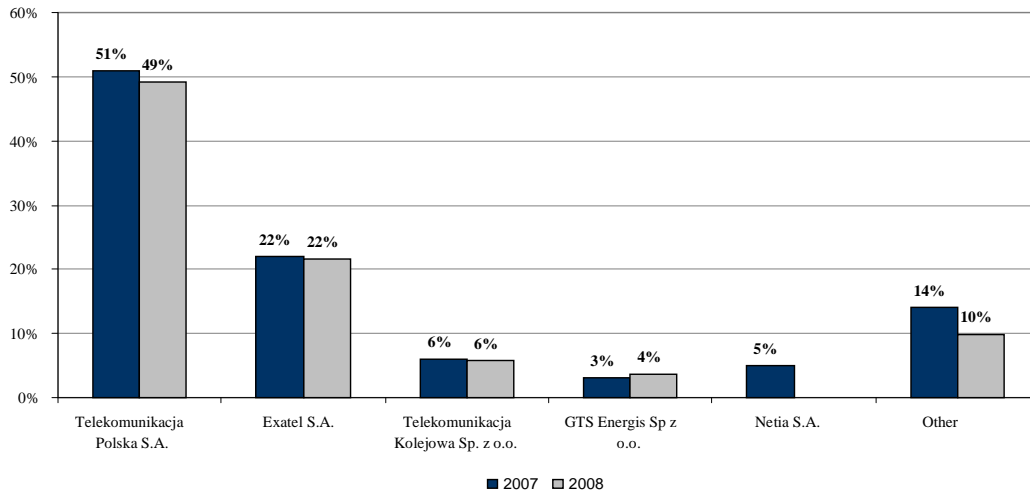
Source: UKE compilation based on information forms.

In comparison with 2007, revenues from retail leased lines services increased by 21 per cent and by 29 per cent compared to 2006. The growing value of revenues may be caused by the fact that the fees in the retail leased lines market are lower than fees in the wholesale market. Therefore, small and medium telecommunications undertakings, which provide broadband Internet access services built their retail offer not on the basis of lines offered by TP S.A. within the frames of wholesale leased lines, but on the basis of the retail leased line service offered by TP S.A. within the frames of its retail price list for domestic leased lines services. On the other hand, larger operators, who possessed their own infrastructure, tried to create a competitive offer in relation to the rates from the incumbent's price list. However, it should be emphasised that starting from 31 March 2009 a new price list for retail leased lines became effective and since then two price lists for retail leased lines have been functioning.

## 8.3. Market structure

Telekomunikacja Polska S.A. had the highest share in the retail leased lines market. Since 2002 this undertaking has unquestionably been the leader in terms of revenues and the number of leased lines in the retail leased lines market. In the analysed period the incumbent's market share was however observed to decline. Such alternative operators as Exatel S.A., Telekomunikacja Kolejowa Sp. z o.o. or GTS Energis Sp. z o.o. strengthen their share in the market. The decrease of TP S.A. share indicates a developing competition in this market.

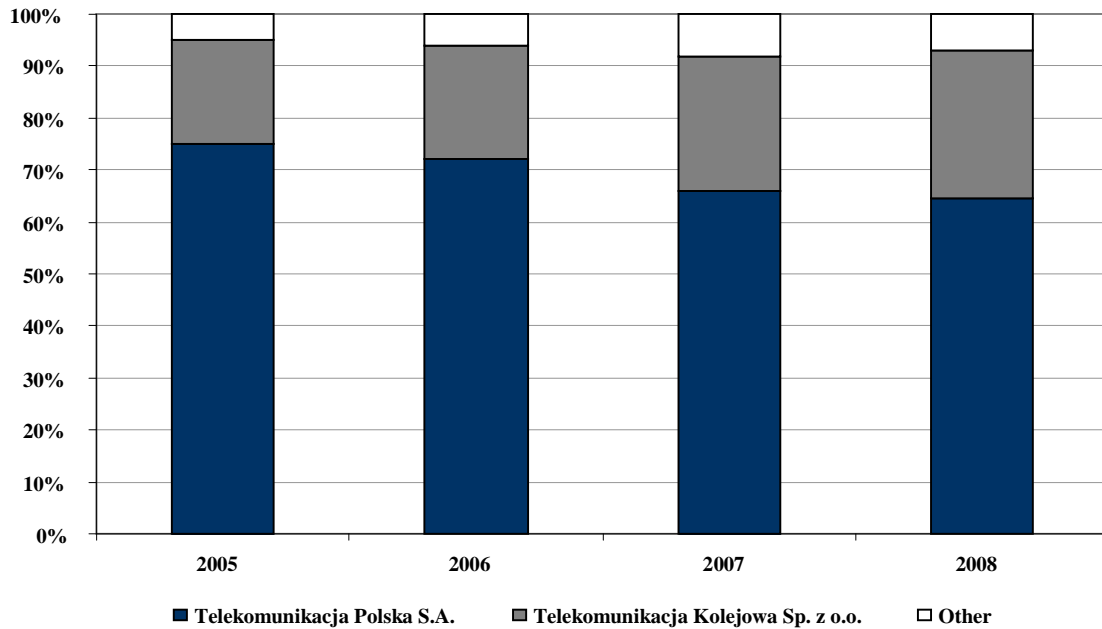
Chart 61. Percentage share of telecommunications undertakings in terms of revenues from the provision of retail leased lines in 2007- 2008.



Source: UKE compilation based on information forms.

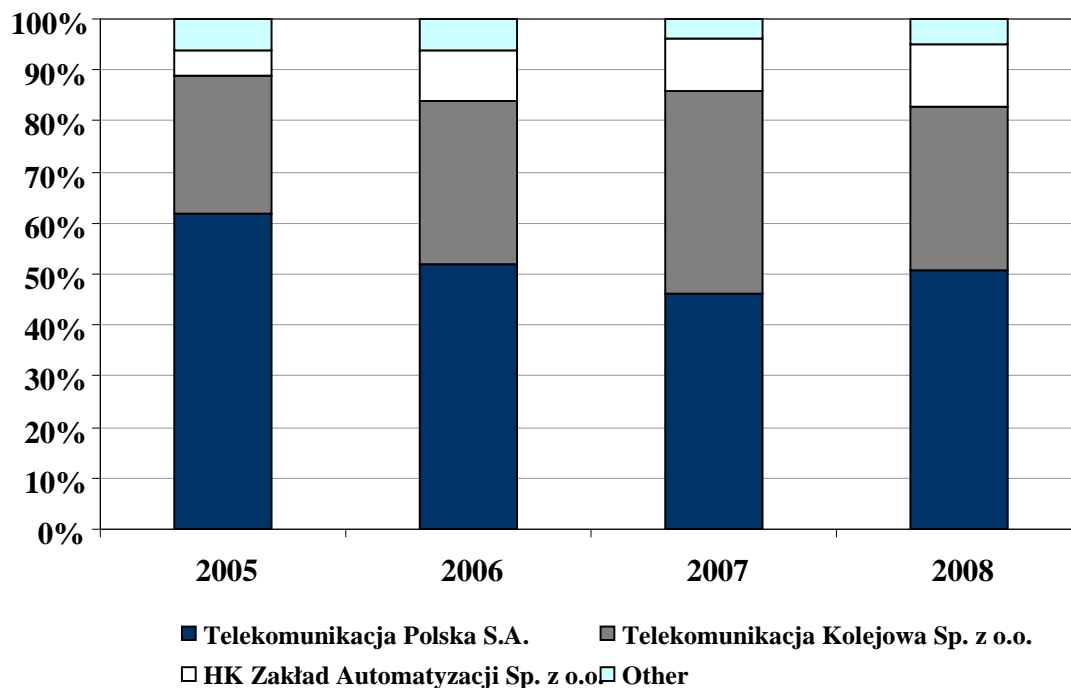
Shares of telecommunications undertakings in particular categories of lines, in terms of revenues and number of lines.

Chart 62. Percentage share of telecommunications undertakings in revenues from analogue lines in 2005 - 2008.



Source: UKE compilation based on information forms.

Chart 63. Percentage share of telecommunications undertakings in the number of analogue lines in 2005 - 2008.

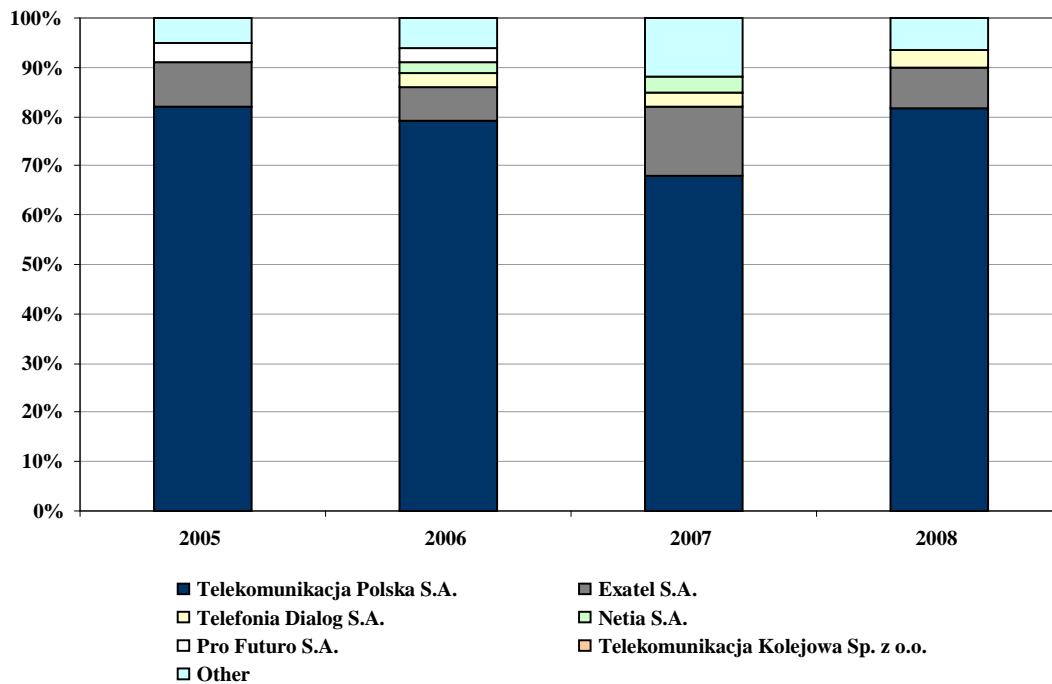


Source: UKE compilation based on information forms.

In 2005 – 2008 shares of Telekomunikacja Polska S.A. in the retail leased lines remained on a very high level in terms of revenues as well as in terms of the number of analogue lines. This proves a very strong position of this operator in the described market segment. Thanks to the best developed access infrastructure, TP S.A. is able to offer its services to a larger number of customers than alternative operators.

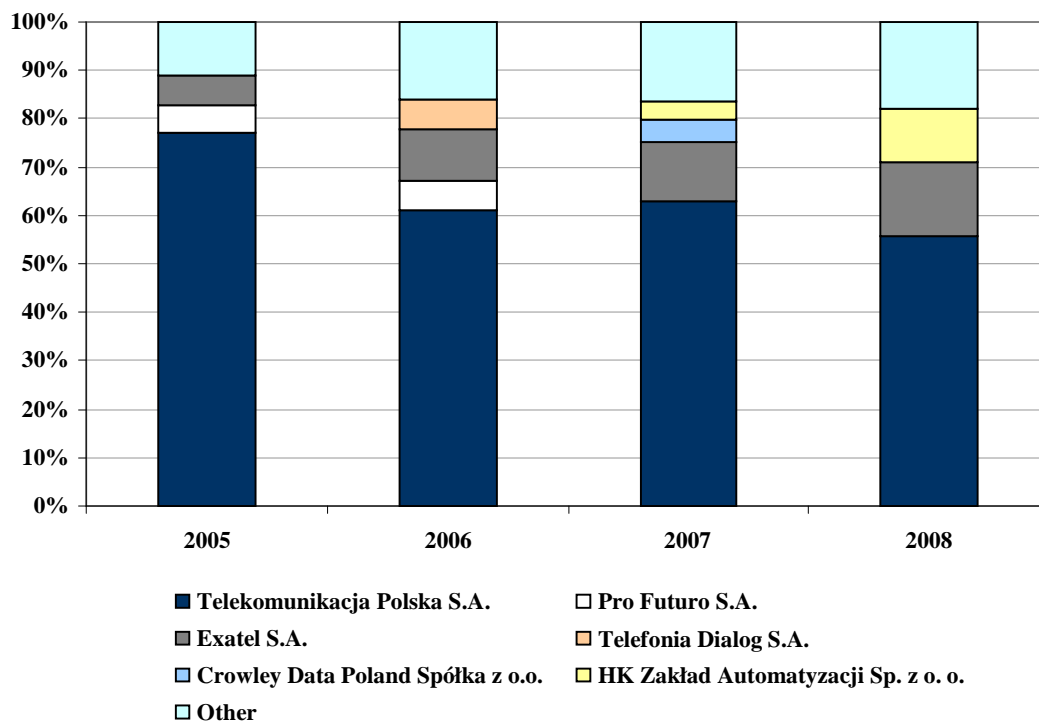
Another product offered by telecommunications undertakings in the retail leased lines market, are digital lines of capacity lower than 2 Mbit/s. In this segment Telekomunikacja Polska S.A. had the highest share in terms of owned number of leased lines as well as of obtained revenues.

Chart 64. Percentage shares of telecommunications undertakings in revenues from lines of capacity lower than 2 Mbit/s in 2005 - 2008.



Source: UKE compilation based on information forms.

Chart 65. Percentage shares of telecommunications undertakings in the number of lines of capacity lower than 2 Mbit/s in 2005 - 2008.

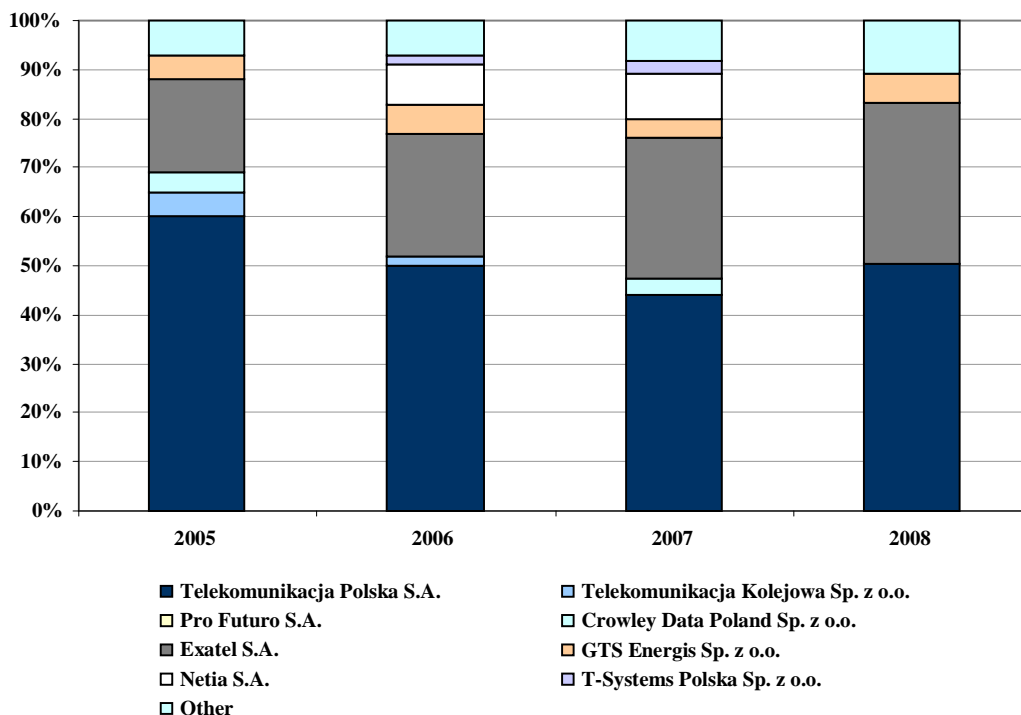


Source: UKE compilation based on information forms.

Both in the case of market shares measured by obtained revenues and by the number of lines, a tendency can be observed, which shows that the share of the largest operator in the retail leased lines with capacity lower than 2 Mbit/s since 2005 has been systematically falling. Only in 2008 the share of TP S.A. increased slightly in terms of revenues from lines with capacity lower than 2 Mbit/s. The observed decreases are significant both in the case of shares measured by revenues – until 2007 the share of TP S.A. decreased by 14 percentage points – and of shares measured by the number of lines. From 2005 to 2008 the share of TP S.A. in this market segment, measured by the number of lines, decreased by over 21 percentage points. Despite developing competition, the analogue lines segment and digital lines segment of capacity lower than 2 Mbit/s is still characterised by a great share of the incumbent, in terms of both – revenues and the number of lines. However, those two segments of the retail leased lines market are special, because in most cases of lines set up access infrastructure based on copper lines is used. In turn, the biggest access infrastructure based on copper cables is owned by TP S.A. This means that the company uses its advantage in terms of owned infrastructure for the provision of leased lines services in those two market segments.

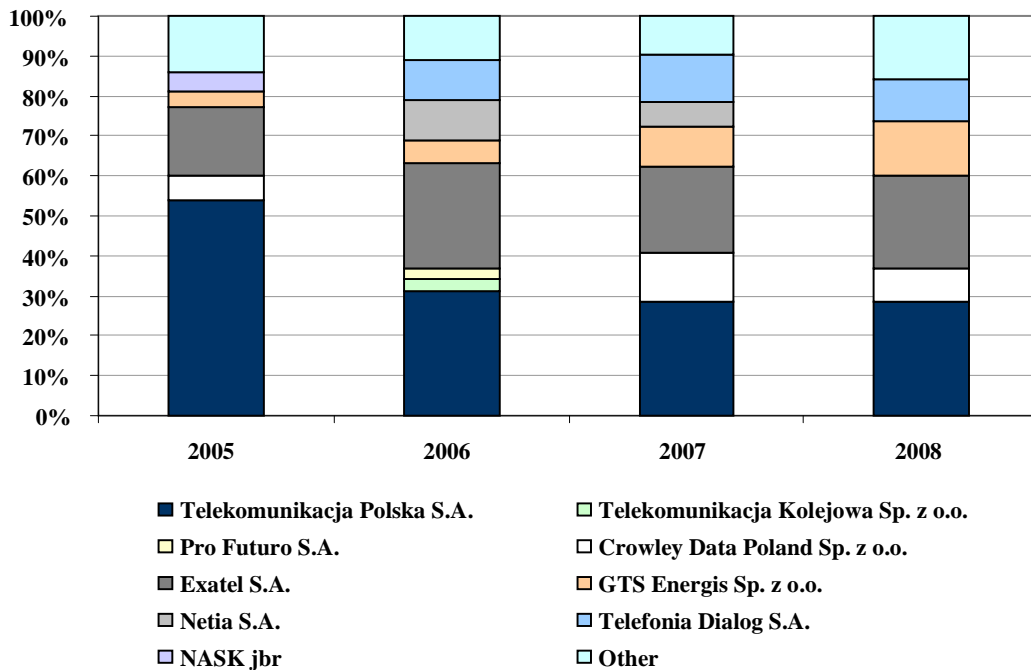
Lines with capacity of 2 Mbit/s are a completely different segment in terms of market share structure.

Chart 66. Percentage share of telecommunications undertakings in revenues from lines with capacity of 2 Mbit/s in 2005 -2008.



Source: UKE compilation based on information forms.

Chart 67. Percentage share of the telecommunications undertakings in the number of lines with capacity equal to 2 Mbit/s in 2005 – 2008.



Source: UKE compilation based on information forms.

In the segment of lines with capacity of 2 Mbit/s, the incumbent does not have such a high share in the retail leased lines market. In 2005 – 2008 the shares of this operator in terms of revenues remained at the level from 40 to 60 per cent, whereas the shares in terms of the number of lines were clearly lower and in the period from 2005 to 2008 decreased from 54 per cent to 29 per cent. The decrease in TP S.A. shares corresponds to the increase in the shares of alternative operators in this market segment. Exatel S.A. holds a significant share in the described segment. In 2008 the share of this operator, in terms of revenues, amounted to about 33 per cent, while in terms of the number of lines to 24 per cent. None of the remaining alternative operators have gained a market share in this segment, measured by revenues, greater than 10 per cent. In 2008 GTS Energis Sp. z o.o. and Telefonica Dialog S.A. managed to obtain market shares in terms of lines with capacity of 2 Mbit/s equal to 14 and 10 per cent respectively.

While the position of TP S.A. does not seem to be at risk in the segment of analogue lines and lines with capacity lower than 2 Mbit/s, despite declining market share, its position in the segment of lines with capacity equal to 2 Mbit/s faces greater competition from alternative operators.

## **WHOLESALE SERVICES MARKET**

### **9. Cooperation between operators**

#### **9.1. Cooperation in the scope of interconnection**

##### **9.1.1. Market structure**

One of the key elements of the policy conducted by the President of the Office of Electronic Communications in the scope of cooperation between operators were works on the adoption of reference offers on access to the incumbent's network.

On 8 April 2008 the President of UKE issued a decision which approved the reference offer of TP on telecommunications access in the scope of interconnection (RIO).

The following tables present changes in the scope of the settlement rates for call termination and origination on the incumbent's network, defined in the reference offers RIO 2006 and RIO 2008.

Table 5: Comparison of fees for call termination on TP network defined in the reference offers RIO2006 and RIO2008.

<b>Termination on TP Network</b>									
	<b>Zonal (PLN/min)</b>			<b>In the transit area (PLN/min )</b>			<b>Beyond the transit area (PLN/min )</b>		
	<b>Area 1</b>	<b>Area 2</b>	<b>Area 3</b>	<b>Area 1</b>	<b>Area 2</b>	<b>Area 3</b>	<b>Area 1</b>	<b>Area 2</b>	<b>Area 3</b>
<b>RIO 2006</b>	0.0248	0.0186	0.0124	0.0360	0.0270	0.0180	0.0525	0.0393	0.0262
<b>Decision of 07.04.08</b>	0.0273	0.0205	0.0137	0.0325	0.0243	0.0162	0.0478	0.0368	0.0239
<b>Change</b>	<b>10.08%</b>	<b>10.22%</b>	<b>10.48%</b>	<b>-9.72%</b>	<b>-10.00%</b>	<b>-10.00%</b>	<b>-8.95%</b>	<b>-6.36%</b>	<b>-8.78%</b>

Source: UKE own compilation.

Table 6: Comparison of fees for call origination on TP network defined in the reference offers RIO2006 and RIO2008

<b>Origination on TP network</b>						
	<b>Zonal (PLN/min )</b>			<b>In the transit area (PLN/min )</b>		
	<b>Area 1</b>	<b>Area 2</b>	<b>Area 3</b>	<b>Area 1</b>	<b>Area 2</b>	<b>Area 3</b>
<b>RIO 2006</b>	0.0248	0.0186	0.0124	0.0360	0.0270	0.0180
<b>Decision of 07.04.08</b>	0.0273	0.0205	0.0137	0.0325	0.0243	0.0162
<b>change</b>	<b>10.08%</b>	<b>10.22%</b>	<b>10.48%</b>	<b>-9.72%</b>	<b>-10.00%</b>	<b>-10.00%</b>

Source: UKE own compilation.

Moreover, the Office was constantly working on issues related to settling the disputes that arose between individual operators and in the course of proceedings carried out, in 2008 the President

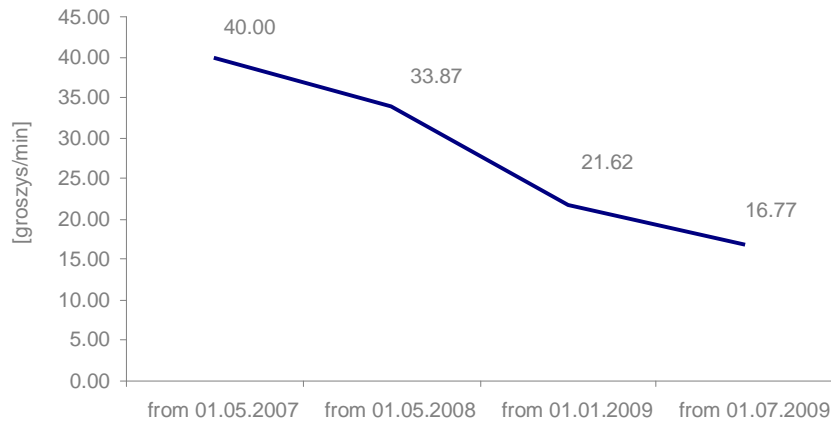
of UKE issued 104 settling decisions, 24 decisions dismissing the carried out procedures and 13 decisions refusing to settle the dispute, as well as 86 decisions defining the deadlines for negotiations between the parties to a dispute.

The settling decisions concerned mostly the following subjects of disputes between operators:

- adjustment of terms and conditions of agreements in the scope of implementation of the settlement rules based on the flat interconnection rate (pol. PSI - Płaska Stawka Interkonektowa);
- adjustment of terms and conditions of interconnection agreements in the scope of adjusting service definitions and settlement rates to the reference offer RIO 2008;
- adjustment of terms and conditions of agreements on access in the scope of broadband data transmission to the TP reference offer of 6 May 2008;
- adjustment of terms and conditions of agreements on access to local loop via access to telecommunications network nodes for the purpose of sale of broadband data transmission service (BSA service) in the scope of resignation from ordering BSA service for a particular subscriber line;
- establishment of settlement conditions on the basis of Mobile Termination Rates (MTR).

In 2008 the President of the Office of Electronic Communications issued the following decisions on adjustment of rates for voice call termination on public mobile telephone networks of the following operators: Polkomtel S.A., PTK Centertel Sp. z .o.o. and PTC Sp. z .o.o. In those decisions the President of UKE imposed an obligation to adjust the rate for voice call termination on public mobile telephone networks (MTR rates) from 1 January to 30 June 2009 to the level of PLN 0.2162 per minute of call, regardless of the time and type of day (flat interconnection rate), and from 1 July 2009 to the level of PLN 0.1677 per minute of call during the day. Moreover, in the decisions concerned, the President of UKE obliged the operators to present annually the justification for their MTR rates on the basis of costs incurred, in accordance with the data for the last, closed financial year not later than one hundred and twenty calendar days (120) from the end of the aforementioned year.

Chart 68. MTR glidepath for PTK Centertel Sp. z o.o., Polkomtel S.A. and PTC Sp. z o.o.



Source: UKE.

On 1 October 2008 the President of UKE presented for consultation her position on the symmetry of voice call termination rates in mobile telephone networks. The following entities agreed upon the necessity to introduce symmetrical rates for call termination on mobile networks:

- Telekomunikacja Polska S.A.;
- Polska Telefonia Komórkowa CENTERTEL Sp. z o.o.;
- Polkomtel S.A.

P4 Sp. z o.o. and Centernet Mobile acknowledged that at the moment of entry to the telecommunications market of a new operator only asymmetrical model of call termination settlements will allow for the creation of competitive opportunities for alternative operators.

In 2008 the process of issuing regulatory decisions for telecommunications undertakings operating in the market for the provision of call termination service on particular public fixed telephone networks continued.

Moreover, the President of UKE issued resolutions on closing the proceedings for the following relevant markets:

- market for the provision of call transit services in the public fixed telephone network;
- market for the provision of access and call origination on public mobile telephone networks.

### 9.1.2. Market structure

Fixed networks operators conducting their activities in the interconnection market are entities providing telecommunications services to end-users via points of interconnection of their own networks with networks of other operators (in most cases it is a TP S.A. network). Currently in Poland, apart from the incumbent, i.e. TP S.A., other significant market participants, i.e. those who own shares exceeding 3 per cent in terms of revenues in this market segment, include:

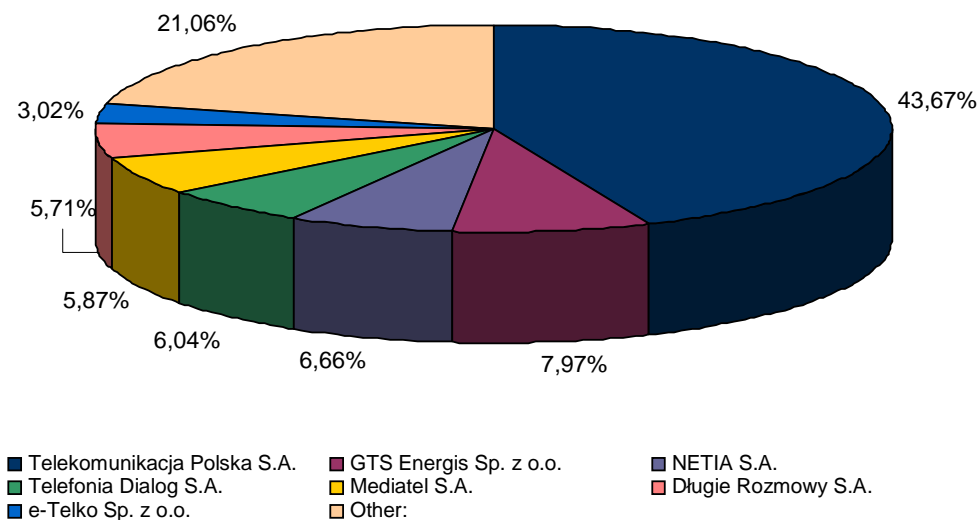
- GTS Energis Sp. z o.o.

- Telefonía Dialog S.A.
- Mediatel S.A.
- Długie Rozmowy S.A.
- e-Telko Sp. z o.o.

At the end of 2008 the operators listed above, together with TP S.A., generated revenues from interconnection calls in the amount of approximately PLN 1.34 billion, which constitutes almost 79 per cent share in the interconnection market for calls in fixed networks. In the previous year (2007) the group of the biggest operators reached about 81 per cent share in the interconnection market, and two years earlier (in 2006) 82 per cent.

The share of the aforementioned group of operators is slowly decreasing by 1 or 2 percentage points annually. A similar situation is observed for one of the largest operators – TP S.A. In 2008 the incumbent’s share in the revenues from calls provided to other operators decreased compared to 2007 by 5 percentage points. This proves that the interconnection market is becoming more and more competitive. Also the amount of revenues generated by the above mentioned fixed-line operators from interconnection in 2008 was lower than the value for the previous year by almost PLN 200 million.

Chart 69. Percentage share of fixed network operators in the revenues from interconnection in 2008.



Source: UKE compilation based on information forms.

Telecommunications undertakings, holding less than 3 per cent of shares in terms of revenues obtained in the interconnection market, are included in the “other” category.

The largest share in the interconnection market was held by the incumbent, whose share at the end of 2008 amounted to almost 43,7 per cent. GTS Energis Sp. z o.o. came second with its share of almost 8 per cent in the market concerned. The subsequent positions belong to Netia S.A. (with almost 7 per cent share) and Telefonía Dialog S.A. (with its market share slightly exceeding 6 per cent). Telefonía Dialog S.A. is followed by Mediatel S.A. and Długie Rozmowy S.A. The last of the operators on the above chart, i.e. e-Telko Sp. z o.o., closed the year 2008 with the

share in total revenues from the exchange of interconnection traffic at the level of slightly above 3 per cent.

## **9.2. Access to the local loop and sub-loop**

### **9.2.1. Market description**

Access to the local loop gives an alternative operator the possibility to provide its own voice telephony services, broadband Internet access and other services using the TP S.A. subscriber line, depending on technical possibilities.

As an operator with significant market power, Telekomunikacja Polska S.A. was obliged to prepare offers defining reference conditions for access to network and services to be used by competing operators. One of the offers was a reference offer on terms and conditions of agreements on access to the local loop (Local Loop Unbundling – LLU) and associated facilities.

The LLU reference offer includes unbundling of local loops and local sub-loops in a way that would ensure full or shared access. Telekomunikacja Polska S.A. unbundles active subscriber lines and inactive subscriber lines (but subscriber connection is ensured by an alternative operator) for an alternative operator, while keeping technical parameters that ensure the provision of any regulated service.

Within the frames of unbundling TP will ensure free of charge, regularly updated General Information as defined in the LLU reference offer and will provide the services including:

- unbundling of active subscriber lines and inactive subscriber lines in a way ensuring full or shared access;
- collocation for an alternative operator under the terms and conditions defined in an agreement on access, a collocation agreement, a detailed collocation agreement or agreements concluded for other regulated services;
- connection of alternative operator's devices necessary to connect the subscriber loop to the network of an alternative operator;
- other services connected with the activation and maintenance of subscriber lines and collocation;
- allowing for alternative operator's correspondence cable intended for the provision of access to be placed in the so called "zero" man-hole when the alternative operator orders correspondence cable to a remote location.
- provision of the correspondence cable to the remote location with restriction that TP will not undertake the provision of cables longer than 500 meters.

On 5 October 2006 the President of UKE introduced into the market the TP reference offer in the scope of unbundling of subscriber loops and local subscriber sub-loops. The introduction of the TP reference offer in the scope of unbundling local subscriber loops and local subscriber sub-loops to legal turnover started the process of unbundling subscriber loops by TP for other operators.

On 3 April 2007, acting pursuant to Article 38 of the Administrative Code, the President of UKE issued decisions that changed the reference terms and conditions of agreements on access to local subscriber loops and associated facilities for full and shared access. This decision repealed the appealed part of the decision and introduced new regulations in the offer.

By her decision of 28 November 2008 the President of UKE changed and approved the draft “Telekomunikacja Polska reference offer stating reference terms and conditions of agreements on access to local subscriber loops and associated facilities for full and shared access” (LLU offer - Local Loop Unbundling).

The key change in the LLU reference offer is establishing a new price list. The President of UKE saw the necessity of intervention in the scope of periodic fee for local loop unbundling, which is the main factor for alternative operators to take investment decisions. This fee was established in the amount of PLN 22 for full access to the loop. Another significant change is lowering the costs related to the subscription fee for collocation<sup>6</sup>.

### **9.2.2. Market structure**

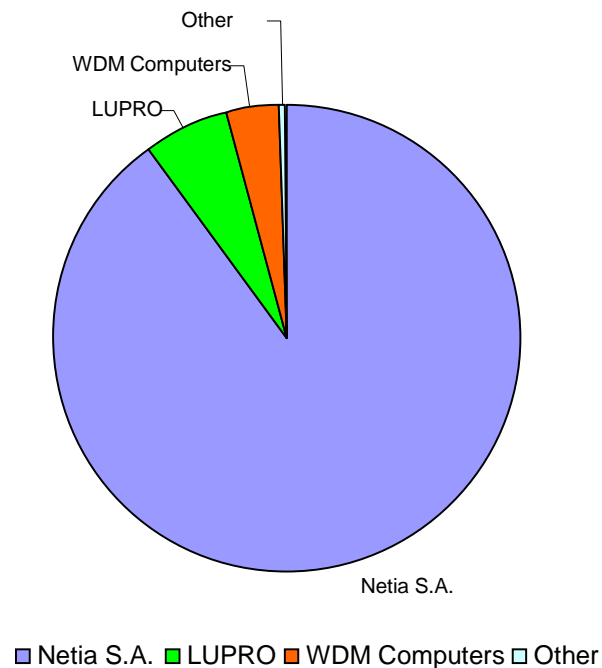
In 2008 Telekomunikacja Polska S.A. was the only entity, which provided the service of wholesale access to network infrastructure in fixed locations (access to local subscriber loop and sub-loop). By the end of 2008 TP S.A. concluded 11 agreements (plus 5 decisions) in this scope with alternative operators (of which 8 agreements were concluded in 2007). The following telecommunications operators signed agreements with TP S.A.:

GTS Energis Sp. z o.o., Netia S.A., LUPRO, CETI S.C., Firma Handlowo-Uslugowa KOMPEX, WDM Computers, AB Space Communications, Espol Sp. z o.o., P.P.H.U. Elektroniki i Informatyki POLTECHNICS, PT Novum Sp. z o.o., PTK Centertel Sp. z o.o., Exatel S.A.

Chart 70: Shares in the number of purchased services of access to local loops and sub-loops, full and shared access in 2008.

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<sup>6</sup> Collocation – within the frames of the collocation agreements concluded for the purpose of access and other interconnection services, making lease, physical space or technical devices available in buildings or near the buildings in a distance of not more than 50 m, where the access point to TP network is located, in order to place or connect necessary equipment of the alternative operator, which is connecting its own network to the TP network or using other regulated services, in order to connect the network of the alternative operator to TP network for the purpose of access.



Source: UKE compilation based on information forms.

In 2008 Netia S.A. used the highest number of local loops. In 2008 other operators, whose share in the amount of purchased access was hardly noticeable, also joined the market. Small number of operators using the service of wholesale access to infrastructure proves small interest of alternative operators in this service. The domination of Netia S.A. in the amount of access purchased from TP causes that the wholesale infrastructure access market (LLU) is limited to one significant market participant on the demand side.

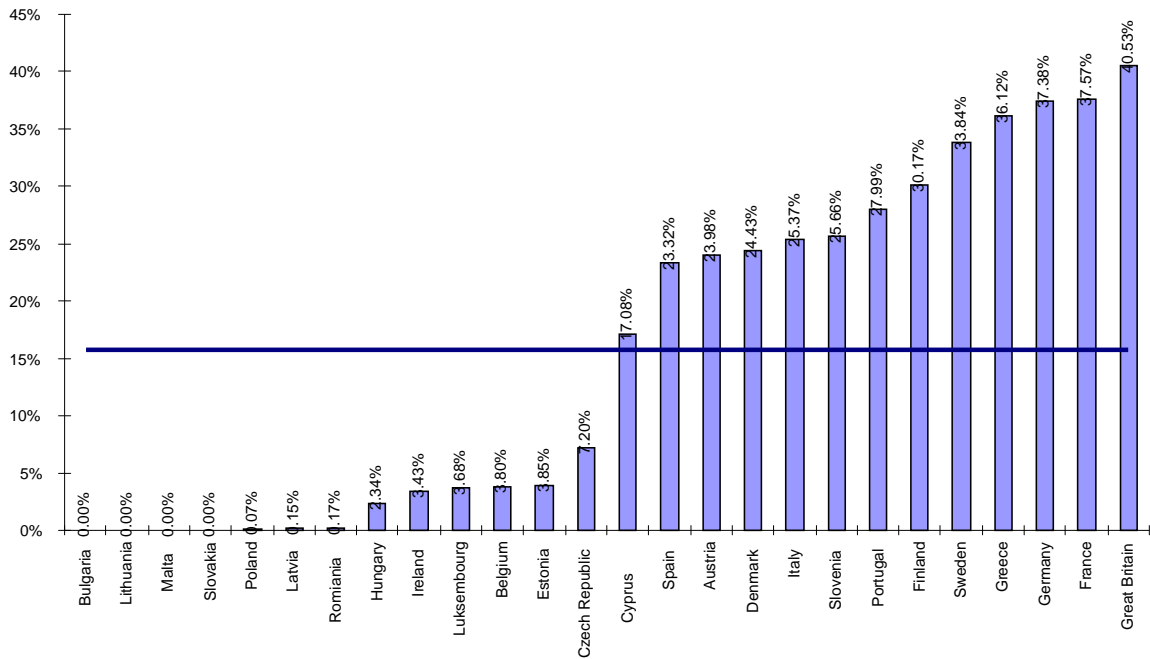
The key technology used to provide retail services based on LLU is the DSL technology. Today offering this type of lines on the target market is the main incentive for alternative operators to purchase wholesale network infrastructure access service in fixed location (LLU). Thanks to this technology all modern services of the “triple play” type may be offered. The DSL technology allows for using existing copper lines to send a digital signal without disturbing voice services.

The main indicator of the level of the LLU service development is LLU penetration measured as the percentage of DSL lines offered by means of LLU compared to the total number of DSL lines owned by the incumbent. This indicator is used by the ECTA to assess the development of broadband services in its “Broadband Scorecard” reports and to assess the condition of regulation in the “Regulatory Scorecard” reports.

In 2008 the incumbent unbundled 1632 local loops and sub-loops, which constitutes only 0.07 per cent of its DSL lines.

Chart 71: LLU penetration measured as % of the DSL lines offered by means of LLU compared to the total number of DSL lines owned by the incumbent.<sup>7</sup>

<sup>7</sup> Without the Netherlands, where most data is treated as confidential.

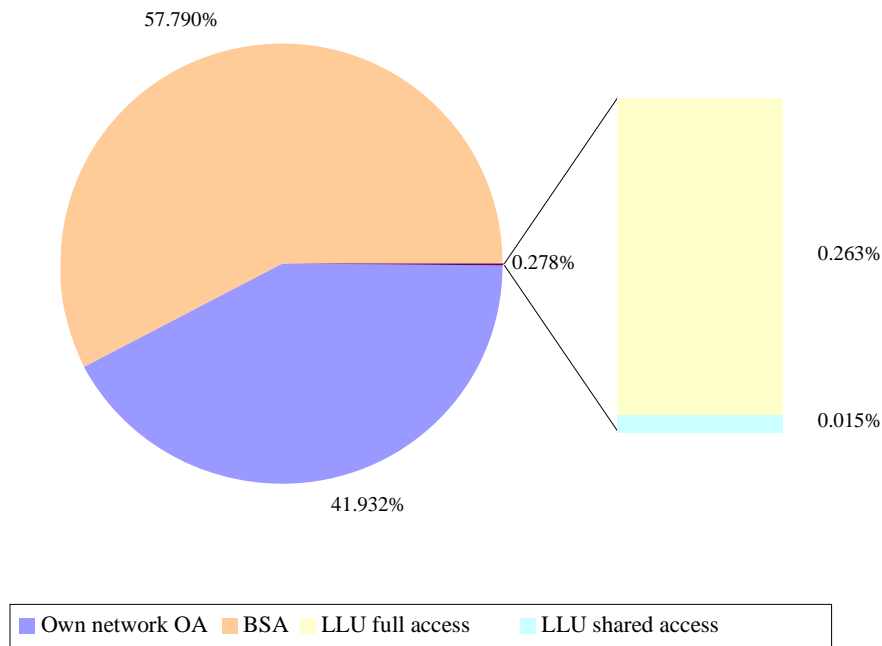


Source: UKE compilation on the basis of the 14<sup>th</sup> Implementation Report of the European Commission.

In the above chart, the leading position is held by Great Britain, which is undoubtedly due to the functional separation carried out in this country. The lowest levels were reached by countries, where the BSA service and simple resale still dominate. The Polish LLU market is completely at its initial stage of development; penetration of only 0.07 per cent is a result of current greater popularity of the BSA service among alternative operators due to price relations between these services. The gap of the LLU development in Poland is huge compared to the average calculated based on the aforementioned values for particular countries (15.7 per cent).

On the DSL broadband market the share of lines offered on the basis of local loops and sub-loops is small, which is a result of the current regulatory strategy for wholesale services which in particular promotes BSA services.

Chart 72: Share of unbundled subscriber loops in the number of the DSL lines offered to end-users by alternative operators.

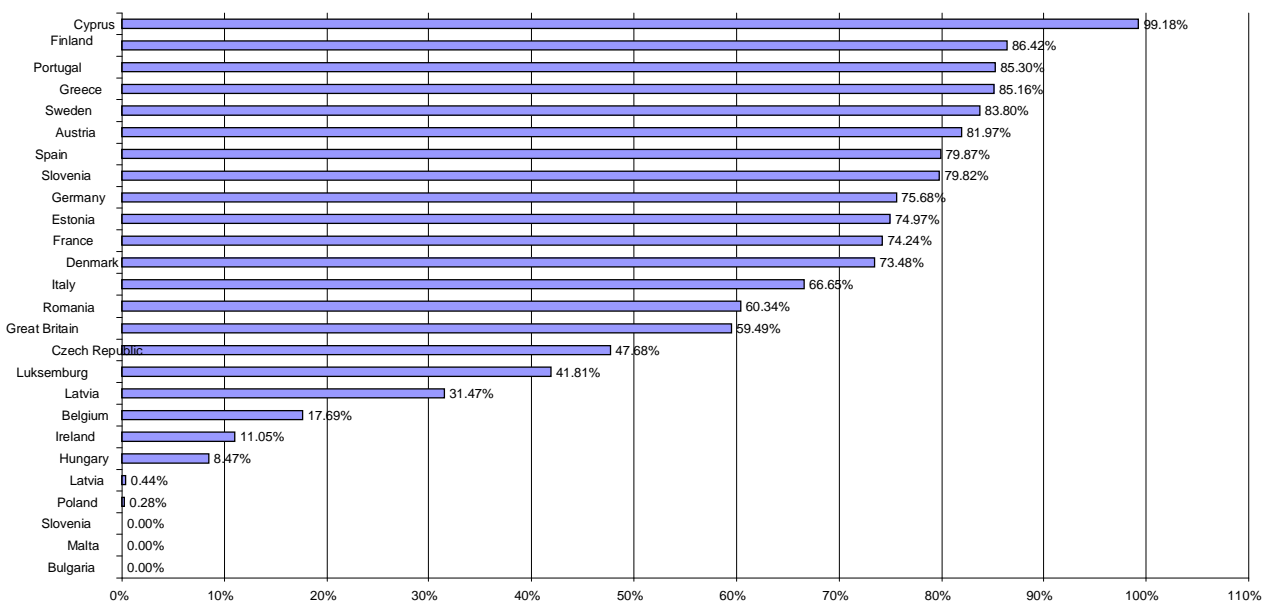


Source: UKE compilation on the basis of the 14<sup>th</sup> Implementation Report.

The above chart shows a small share of the DSL lines based on the LLU service over which services are offered to end-users. This small (only 0.278 per cent) share of services offered on the basis of LLU is divided into full (0.263 per cent) and shared (0.015 per cent) access. The share of BSA access (57.8 per cent) and the share of DSL lines (41.9 per cent) offered by means of alternative operators' own network represent the highest shares.

In the European Union countries the share of DSL lines offered on the basis of LLU differs significantly from the share in Poland. It proves that those countries reached the next level of the investment ladder after BSA, i.e. LLU.

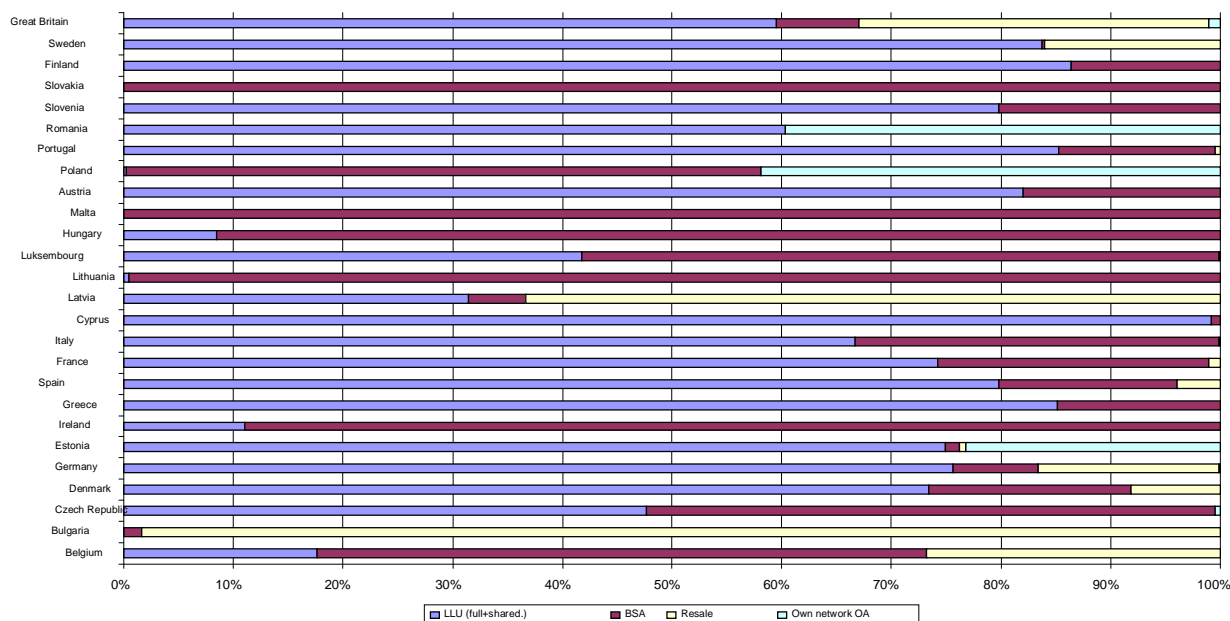
Chart 73: Percentage share of DSL lines offered via LLU (by alternative operators).



Source: UKE compilation on the basis of the 14<sup>th</sup> Implementation Report of the European Commission.

The aforementioned chart shows that in most European countries DSL lines are offered on the basis of the wholesale LLU offer. The BSA service and resale constitute the smaller part among all types of DSL access.

Chart 74: Percentage shares of DSL lines offered via BSA, LLU, resale and alternative operators' own networks.



Source: UKE compilation on the basis of the 14<sup>th</sup> Implementation Report of the European Commission.

The above chart shows the dominance of the LLU service in countries which currently apply regulatory strategy directed towards the promotion of the LLU service. Slovakia, Malta and Lithuania have almost 100 per cent share of the BSA service, Bulgaria of simple resale, while in Poland DSL lines offered on the basis of alternative operators' own infrastructure and via BSA dominate. BSA also dominates in Ireland, mainly because of the highest LLU fee in the European Union (EUR 16.43).

### 9.3. Wholesale broadband access and data transmission services

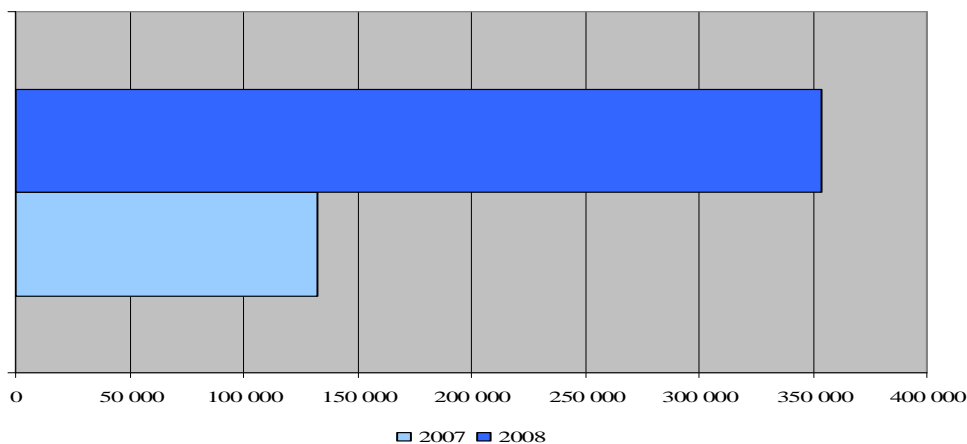
#### 9.3.1. Market description

On 6 May 2008 the President of UKE approved an offer stating reference conditions of telecommunications access in the scope of broadband access service, including broadband data transmission service, which was subsequently changed in November 2008.

By the end of 2008, 23 interconnection agreements were concluded on this basis.

The number of lines over which alternative operators provide the BSA service, increased by over 220 thousands compared to 2007 and at the end of 2008 amounted to over 350 thousands.

Chart 75: Number of local subscriber loops and sub-loops unbundled for the purpose of the Bitstream Access reference offer by TP S.A. in 2007 – 2008.



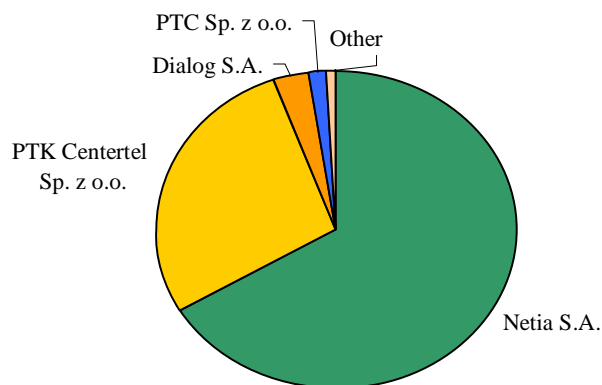
Source: UKE compilation based on information forms.

### 9.3.2. Market structure

At present, the following entities provide the BSA service based on agreements concluded with the incumbent: Netia S.A., Telefonía Dialog S.A., PTC Sp. z o.o. and PTK Centertel Sp. z o.o. Despite many signed agreements, the four aforementioned alternative operators hold 99 per cent of shares in the number of the BSA lines over which their own broadband access services are provided.

The BSA-based revenues generated by alternative operators in the retail market amounted to over PLN 120 million.

Chart 76: Percentage share in terms of the number of BSA lines used by alternative operators in 2008.



Source: UKE compilation based on information forms.

Netia S.A. holds the highest share in the market of broadband access services provided on the basis of the BSA reference offer. PTK Centertel Sp. z o.o. comes second in terms of the number of lines.

### 9.3.3. Current BSA<sup>8</sup> reference offer

The subject of the current BSA reference offer, approved by the President of UKE on 4 November 2008, is the issue of ensuring by Telekomunikacja Polska access to the Local Subscriber Loop via telecommunications network nodes for the purpose of broadband data transmission (BSA) using the telecommunications network infrastructure of the incumbent.

Thanks to this offer an alternative operator, who concludes an agreement with TP, is able to provide its own broadband data transmission services. Within the framework of access to the Local Subscriber Loop, used for the provision of broadband access, subscriber lines with DSLAM cards, data transmission networks and ATM nodes where Service Access Points are provided were made available to alternative operators by Telekomunikacja Polska. The current reference offer distinguishes four such service access points. These are the levels of DSLAM, ATM and managed IP and unmanaged IP.

Within the framework of the service concerned, Telekomunikacja Polska is obliged to carry out activities connected with provision of Service Access Points, to carry out activities connected with activation and maintenance of unbundled subscriber lines and to carry out other activities connected with the provision of the service, namely:

- Provision of General information
- Option change
- Installation of TP devices in the domicile of a Subscriber
- technical surveillance
- TP intervention and supervision
- charging fees for activities performed by TP from Operator in accordance with the Price List

Fees for alternative operators were based on the “retail price minus” methodology. The level, on which an alternative operator obtains access to the service, also influences the price. The rates for access may be established individually between alternative operators and the incumbent, but cannot be higher than those resulting from the BSA reference offer. The wholesale prices of broadband access are presented below.

Table 7: Wholesale prices of the BSA.

xDSL	ADSL	ADSL	ADSL	ADSL	ADSL
Option in kbit/s	256	512	1024	2048	6144
effective from	16 October 2008		to	31 March 2009	

<sup>8</sup> The Reference Offer of 2008.

<b>Retail basic offer</b>	"neotrada tp - Internet dla kaźdego" 24 months	"neotrada tp - Internet dla kaźdego" 24 months	"neotrada tp - Internet dla kaźdego" 24 months	"neotrada tp - Internet dla kaźdego" 24 months
<b>Retail basic offer</b>	49.10	57.30	73.69	106.48
<b>R(ATM-UBR-xDSL)</b>	23.69	27.65	35.56	51.38
<b>R(IPm-xDSL)</b>	27.27	31.82	40.92	59.13
<b>R(IPum-xDSL)</b>	37.97	44.32	56.99	82.35

Source: TP S.A., the BSA Reference Offer of 2008.

The lowest costs are on the ATM level, as an alternative operator is much closer to an end-user, to whom broadband access services are being offered. Thanks to this, an offer allowing for competitive conditions of providing broadband access services by alternative operators was created.

## **9.4. Wholesale leased lines**

### **9.4.1. Market description**

The wholesale market of telecommunications leased lines services is divided into two markets:

- market for the provision of terminating segments of leased lines;
- market for the provision of trunk segments of leased lines.

On 23 October 2008 the President of UKE issued a decision, in which it was stated that the national market for the provision of terminating segments of leased lines is not competitive. In relation to that Telekomunikacja Polska was designated as an undertaking with significant market power and regulatory obligations were imposed on the company.

In the case of the second of the markets mentioned, in the nearest future the President of UKE is going to issue a decision imposing regulatory obligations on TP S.A. concerning routes between 740 cities where the TP network is not duplicated and where no competition exists. The only obligation to be imposed in the entire territory of Poland (also including routes where the TP network is duplicated) will be an obligation of regulatory accounting.

In 2008 provisions of the current reference offer for telecommunications leased lines did not change. The last change in the provisions of the reference offer concerned, stating the reference terms and conditions of concluding agreements for the provision of telecommunications leased lines between TP and other operators, was introduced on 31 October 2007.

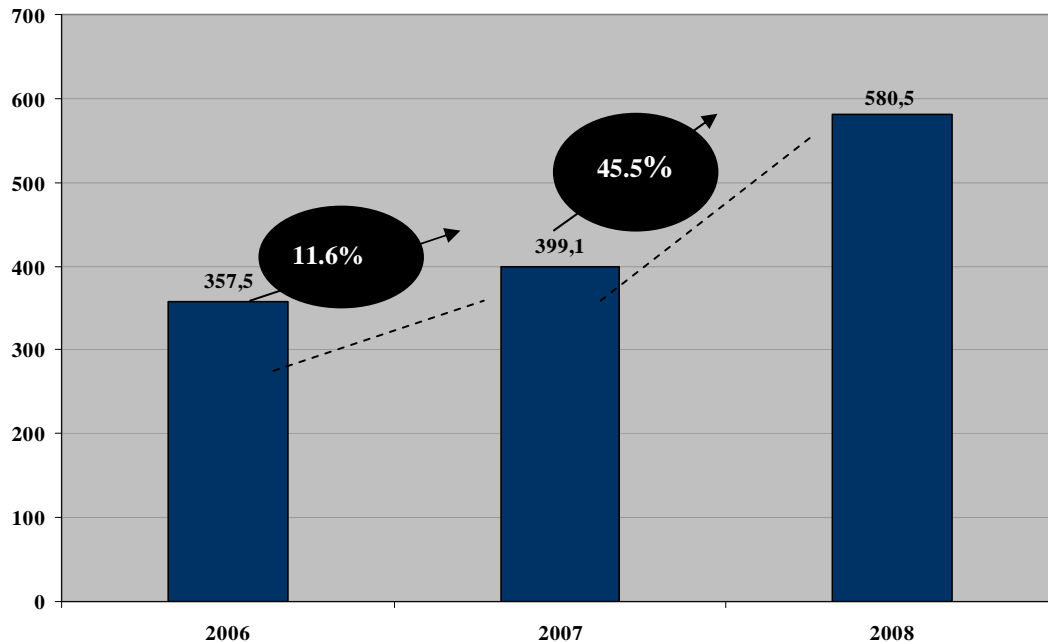
The content and particular provisions of the current offer for leased lines will be changed in relation to the issued decision for the market of terminating segments of leased lines and the decision to be issued for the market of trunk segments of leased lines.

### **9.4.2. Value of the market**

At the end of 2008 the value of the market of telecommunications leased lines amounted to almost PLN 580 million. The total value of revenues from the lease of analogue lines amounted

to almost PLN 8 million, while revenues from the lease of digital lines amounted to PLN 572.5 million.

Chart 77. Revenues in 2006 - 2008.



Source: UKE compilation based on information forms.

In 2008 revenues from the provision of wholesale leased lines increased by over 45 per cent compared to the previous year. However, it should be highlighted that revenues from analogue lines, which were not included for 2006 and 2007 because the relevant items were not listed in the reporting forms, were additionally included in the total value of revenues for the analysed accounting year.

#### 9.4.3. Market structure

In 2008 the largest operator in the wholesale leased lines market in terms of revenues and the number of leased lines included:

- Telekomunikacja Polska S.A.
- Exatel S.A.
- Telekomunikacja Kolejowa Sp. z o.o.
- Netia S.A.
- GTS Energis Sp. z o.o.

The remaining part of the market was divided between few minor entities, for which the provision of leased lines services is an additional type of telecommunications activity.

In 2008 the largest operators in the market for terminating segments of leased lines in terms of the number of terminating segments included:

- Telekomunikacja Polska S.A.
- Exatel S.A.
- Netia S.A.
- GTS Energis Sp. z o.o.
- Telefonía Dialog S.A.
- Crowley Data Poland Sp. z o.o.
- TP Emitel Sp. z o.o.

In 2008 the largest operators in the market for trunk segments of leased lines in terms of the number of lines included:

- Telekomunikacja Kolejowa Sp. z o.o.
- Telekomunikacja Polska S.A.
- Exatel S.A.
- TP EmiTel Sp.z o.o
- Polska Telefonía Cyfrowa Sp. z o.o
- Polkomtel S.A.

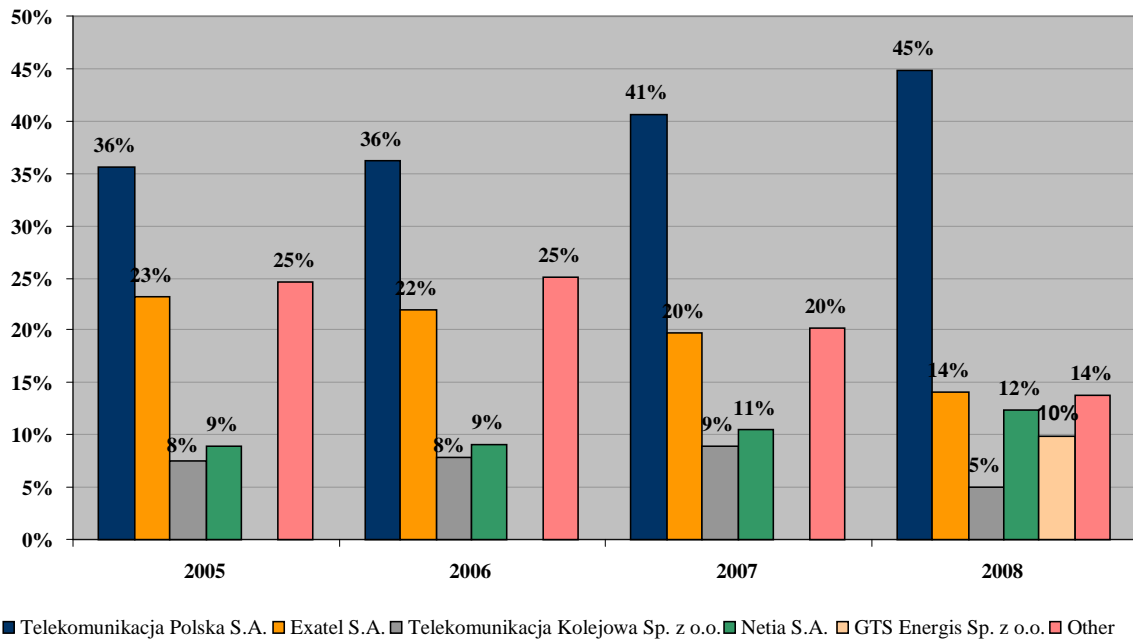
Within the frames of wholesale leased lines services an additional service was established, the so-called end-to-end lines. The end-to-end line is provided between locations of which none is a network node. From the infrastructural point of view, the end-to-end line consists of terminating segments and a trunk segment of leased lines. Viewed as a service end-to-end lines comprise one product (service) that consists in setting up a leased line in order to ensure signal transmission between particular locations. In this case end-to-end lines were treated as separate market segment. In 2008 the largest operators in terms of the number of lines who provided this service included:

- Telekomunikacja Polska S.A.
- GTS Energis Sp. z o.o
- GTS Polska Sp. z o.o.

In 2008 TP S.A. was the largest telecommunications undertaking in the wholesale leased lines market, treated as a whole without distinction into the two aforementioned wholesale markets and in the scope of provision of the end-to-end lines services. This operator held the highest shares in the described market measured by the number of lines as well as by revenues from those lines. The incumbent not only has the highest number of lines at its disposal among telecommunications undertakings present in the analysed market, but also has the greatest potential in the form of its own infrastructure, which allows for increasing the sales volume.

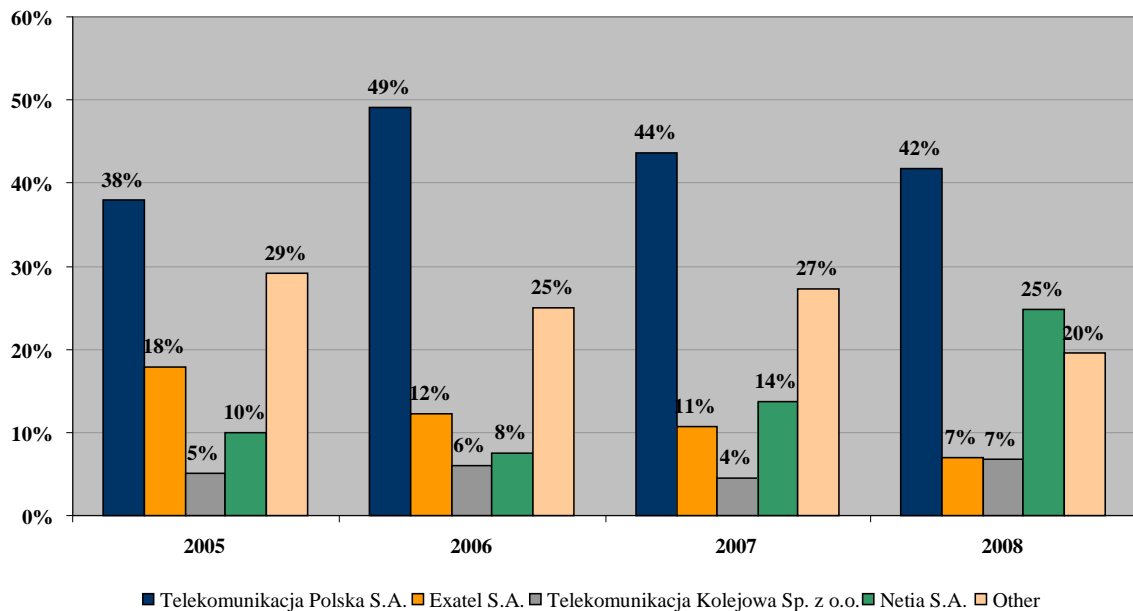
Year by year the incumbent leases more lines, which proves the constant development of this service and increasing demand.

Chart 78. Percentage share of telecommunications undertakings in revenues from wholesale lease of telecommunications lines in 2005 - 2008.



Source: UKE compilation based on information forms.

Chart 79. Percentage share of telecommunications undertakings in the number of lines in 2005-2008.



Source: UKE compilation based on information forms.

The incumbent's share in the wholesale market of leased lined changed significantly between 2005 and 2008. Following large growth in 2006, the share reduced over the subsequent two years. Still TP share in 2008 was higher than in 2005. A slight decrease of the incumbent's share

in 2008 probably results from the fact that in 2007 end-to-end lines were not included in the analysis, while in 2008 the position of an alternative operator Netia S.A. strengthened. The share of this operator, measured in terms of the number of lines in 2007 – 2008, increased by 11 percentage points. In the case of this operator the highest increase in the number of lines was related to end-to-end lines. Shares of TP measured by revenues from those lines remained in the discussed period on the same level, while an increase by 5 percentage points was observed in 2006 – 2007 and by 4 percentage points in 2007 – 2008. The reason for this difference between an increase in the number of lines and increase of revenues from those lines may be the implementation in 2007 of an amended reference offer for the provision of wholesale leased lines services by TP S.A. by the President of UKE. The new offer changed, among others, the prices for leased lines. Reduced prices led to increased demand for wholesale leased lines provided by TP S.A. At the same time, the number of lines leased by TP S.A. to other telecommunications undertakings increased, but, as a result of lower prices, its revenue failed to increase proportionally to the increase in the number of lines.

Thanks to the wholesale leased lines service provided by TP S.A., alternative operators are able to provide competitive retail services contributing to the development of the telecommunications market in Poland. Additionally telecommunications leased lines constitute for operators a kind of basis for the provision of other telecommunications services related to LLU and BSA and further for retail services provided to end-users.

## **10. Radio and television broadcasting**

### **10.1. Market description**

Services offered in this market include analogue or digital broadcasting transmission using terrestrial broadcasting transmission network infrastructure.

4 types of this kind of service can be distinguished:

- analogue radio broadcasting;
- digital radio broadcasting;
- analogue television broadcasting;
- digital television broadcasting;

Due to appointing TP Emitel Sp. z o.o. as an undertaking with significant power in this relevant market, the President of UKE imposed regulatory obligations on TP Emitel in the scope necessary to ensure access to TP Emitel's own infrastructure. TP Emitel Sp. z o.o. was obliged to submit a draft reference offer on telecommunications access in order to provide broadcasting services.

On 28 November 2007 the President of UKE issued a decision on the approval of the "Reference offer of TP Emitel on telecommunications access in order to provide broadcasting services".

In 2008 still only test transmission of television programmes in the DVB-T and DVB-H technology was carried out. Tests in the digital technology were carried out by TP Emitel and INFO TV.

On 27 February 2009 an announcement of the President of the National Broadcasting Council on the possibility of obtaining a licence to distribute television programme by means of frequencies

of channels in the DVB-T standard was published. Therefore, the launch of the first digital multiplex covering selected areas of Poland is planned for the end of September 2009.

In accordance with the adopted strategy of implementation of terrestrial digital television in Poland, terrestrial digital broadcasting services will completely replace analogue services by the end of 2014.

Broadcasting transmission services include:

- broadcasting of signals from transmitters of telecommunications undertakings to end-users of radio and television programmes,
- signal feed – transmission of radio and television programmes intended for broadcasting from radio or TV studios (normally located in larger agglomerations) to individual transmission centres that constitute a broadcasting network in the whole country,
- signal feed services for the purposes of contribution and content building – delivery of radio and television signals to studios from mobile studios or from fixed production facilities to other production, transmission, radio or television studios in order to compile them into programmes. These services are provided to aggregators, producers or broadcasters.

Analogue broadcasting transmission services are provided in licensed radio bands with effective radiated powers (ERP) determined by the regulator using:

- low effective radiated power terrestrial broadcasting station (ERP up to 1 kW),
- medium effective radiated power terrestrial broadcasting station (ERP from 1 to 10 kW),
- high effective radiated power terrestrial broadcasting station (ERP over 10 kW),
- radio relay systems to the broadcasting facility of a telecommunications undertaking in order to provide analogue/digital transmission of radio/television programmes distributed from the broadcasting station,
- fixed line (optical fibre or copper cable) to the broadcasting facility of a telecommunications undertaking in order to provide analogue/digital transmission of radio/television programmes distributed from the broadcasting station,
- satellite link to the broadcasting facility of a telecommunications undertaking in order to provide analogue/digital transmission of radio/television programmes distributed from the broadcasting station.

## **10.2. Market structure**

Customers forming the demand side of the market include two types of entities. The first one is radio and television broadcasters, interested in delivering their programme offer to end-users by means of transmission over terrestrial broadcasting networks. Radio and television broadcasters, who want their analogue offer to be delivered to the highest possible number of end-users, have to use terrestrial broadcasting networks services. Among terrestrial transmission networks, only TP Emitel has a large network at its disposal, which may ensure access to a huge number of end-users. The second type of players creating demand includes transmission network operators (i.e. possible competitors of TP Emitel) who, if they wish to provide competitive services to broadcasters compared to services provided by TP Emitel, would have to have access to the infrastructure of this operator. Despite the fact that their infrastructure allows them to function, though to a very limited extent, they practically pose no threat to TP Emitel.

In 2008 the following entities were present in the market concerned

1. TP Emitel Sp. z o.o.
2. RS TV S.A.
3. Polskie Sieci Nadawcze Sp. z o.o.
4. INFO TV FM Sp. z o.o.
5. Zbigniew Gumuliński
6. OPERATOR FM Anna Obertaniec.

Shares of operators were calculated in terms of revenues from the provision of broadcasting services in Poland in 2008.

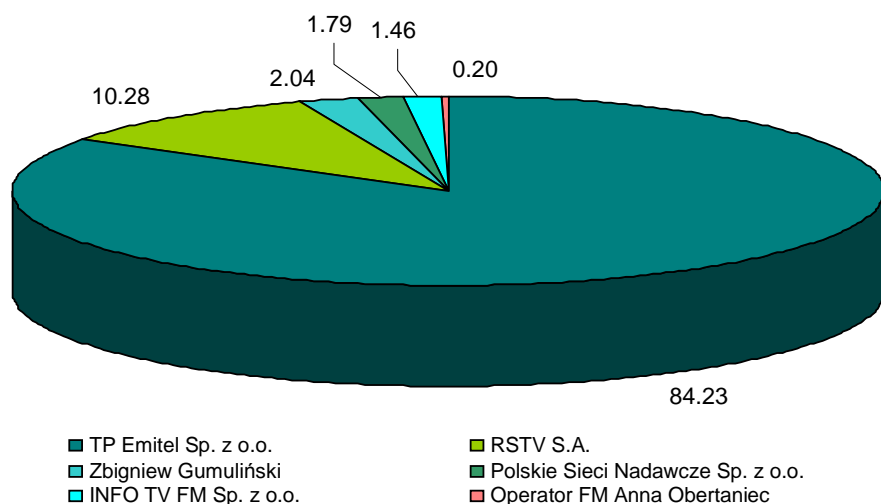
Table 8. Shares of particular operators in the broadcasting transmission market to deliver broadcast content to end-users in 2008.

Item	Name of operator	2008
1	TP Emitel Sp. z o.o.	84.23%
2	RSTV S.A.	10.28%
3	Zbigniew Gumuliński	2.04%
4	Polskie Sieci Nadawcze Sp. z o.o.	1.79%
5	INFO-TV-FM Sp. z o.o.	1.46%
6	OPERATOR FM Anna Obertaniec	0.20%

Source: UKE compilation based on information forms.

The following chart illustrates the share of particular telecommunications undertakings in the broadcasting transmission market to deliver broadcast content to end-users in 2008.

Chart 80. Shares of telecommunications operators in the broadcasting transmission market in 2008.



Source: UKE compilation based on information forms.

In 2008 TP Emitel Sp. z o.o. obtained the highest share (over 84 per cent) in the broadcasting transmission market in terms of generated revenues. The share of the next operator – RSTV S.A. at the end of 2008 amounted to slightly over 10 per cent, that is eight times less than the share of TP Emitel. The share of the third operator – Zbigniew Gumuliński, amounted to over 2 per cent, while the remaining operators obtained small shares in the market concerned – they did not exceed 2 per cent. The total share of three operators, i.e. INFO TV FM Sp. z o.o., Polskie Sieci Nadawcze Sp. z o.o. and OPERATOR FM Anna Obertaniec amounted to 3.5 per cent at the end of 2008.

Compared to 2007 the share of the largest operator, i.e. TP Emitel Sp. z o.o., increased by 3 percentage points, while the share of the second operator – RSTV S.A. increased by 1 percentage point. The shares of other operators remained on the similar level as in the previous year. INFO-TV-FM Sp. z o.o. noted the highest increase in this group – its share in total revenues from broadcasting transmission market increased in 2008 by 0.5 percentage point compared to 2007.

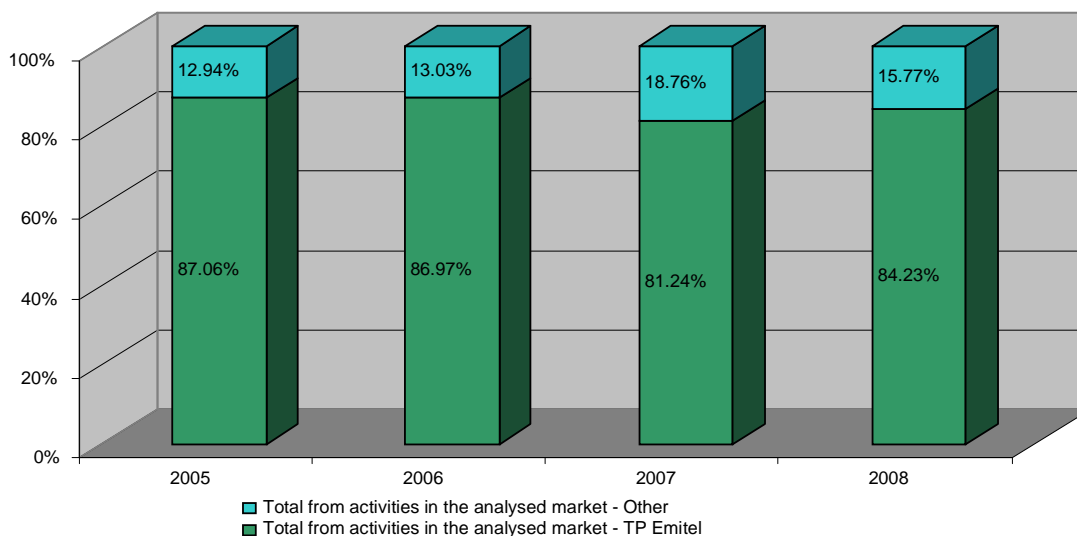
Table 9. Information about the change of shares of particular entities in the broadcasting transmission market divided into particular types of services.

		2005	2006	2007	2008
total from activities in the analysed market	<b>TP Emitel</b>	<b>87.06%</b>	<b>86.97%</b>	<b>81.24%</b>	<b>84.23%</b>
	Other	12.94%	13.03%	18.76%	15.77%
analogue radio	<b>TP Emitel</b>	<b>90.20%</b>	<b>88.89%</b>	<b>85.16%</b>	<b>86.61%</b>
	Other	9.80%	11.11%	14.84%	13.39%
analogue television	<b>TP Emitel</b>	<b>85.14%</b>	<b>86.01%</b>	<b>85.14%</b>	<b>82.75%</b>
	Other	14.86%	13.99%	14.86%	17.25%
digital terrestrial television	<b>TP Emitel</b>	<b>77.78%</b>	<b>72.56%</b>	<b>0.00%</b>	<b>94.41%</b>
	Other	22.22%	27.44%	100.00%	5.59%

Source: UKE compilation based on information forms.

TP Emitel Sp. z o.o. remained the leader in the broadcasting transmission market to deliver broadcast content to end-users in all of its segments. The operator increased its share in almost each of the discussed market segments. The only exception is the share in the market for television signal broadcasting in the analogue technology where the share of TP Emitel decreased slightly in 2008 compared to the previous year. The highest increase was noted in the segment of television signal broadcasting in the DVB-T technology, where in 2008 the share of this operator increased by almost 22 percentage points compared to 2006. In accordance with the data for 2007, submitted by TP Emitel Sp. z o.o., this operator did not provide such services in 2007.

Chart 81. The share of TP Emitel Sp. z o.o. compared to the share of other telecommunications undertakings which provide services of radio and television programmes distribution in Poland in 2005 - 2008.



Source: UKE compilation based on information forms.

Fluctuations in the annual shares of TP Emitel Sp. z o.o. in the last 4 years presented in the chart, i.e. from 2005 to 2008 were as follows:

- in 2005 – 2007 the shares of the incumbent decreased, and the highest decrease (by 7 percentage points) occurred in 2007,
- in 2008 the share of TP Emitel increased by 3 percentage points.

Fluctuations in the shares of the incumbent may result from the fact that in 2007 a new entity appeared, which incorrectly filled form no. 9. Due to the fact that verification of the correctness of data included in the form concerned was carried out after the 2007 Report was published, this entity was included in the statistics.

## 11. Conclusions

2008 was another year which brought many significant and dynamic changes in the telecommunications market both for the telecommunications undertakings and for the end-users. Those changes concerned the size of the market, its structure and competitiveness. 2008 resulted in a significant increase in the availability of telecommunications services and diversity of offers, especially those from alternative operators.

One of the first conclusions arising from the analysis of data collected by UKE within the framework of annual reporting is a constantly developing recession in the fixed-line telephony market. All analysed parameters of this market decreased. The customers make fewer calls and the revenues from this segment also decrease. Despite lower prices of calls, the possibility to choose an operator and better possibilities to select an attractive offer for the customer, the above tendencies seem impossible to stop.

On the other hand, the mobile telephony market is developing dynamically, in terms of the number of users as well as in terms of the number of calls and their total duration. New entities providing services in this market appeared. In 2008 the nominal penetration of this market exceeded 115 per cent and was higher by 10 per cent than in 2007. Mobile telephony operators offer their customers various service packages adjusted to individual customers' needs. Slowly, mobile telephony is replacing fixed-line telephony.

While analysing the Internet access market it can be noted that the number of Internet lines increased together with their capacity. The implementation of the so-called BSA., i.e. Internet access via TP network, offered by alternative operators is also worth noting. Although this offer does not cause an increase in access on the whole market scale, it has a clear impact on prices and diversity of market offers proposed by particular operators. Significant disproportions in access to those services, depending on the region of the country or the size of an agglomeration, may be worrying. Citizens of larger cities have the possibility to choose telecommunications service from among several providers and several technologies, while in the case of non-urbanised areas access to this type of services is much more difficult. The solution to this problem is an increasing development of wireless Internet access technology.

Double play and triple play services, offered by cable networks, become more and more popular. Customers of cable networks, within the frames of one rental charge may have access also to the following services: fixed-line telephony or broadband Internet access. The statistics show that the aforementioned services are popular among individual users. The only disadvantage is the presence of cable operators only in big cities.

The European Union countries have recognised the development of the information society, in which a citizen of the Community will be provided with access to modern communications technologies as their priority. Faced with this challenge, the Polish telecommunications market still needs further efficient actions on the part of the entities operating in this market as well as of the Regulator as some segments are still characterised by large disproportions compared to the European Union countries.

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