In the last decade the telecommunications and informational technologies sector has become one of the most dynamic and viable sectors of the economy in the Republic of Moldova. Investments and implementation of advanced technologies generated a real revolution in this sector. In less than ten years the fixed and mobile telephony and data transport services (Internet) have undergone rapid development. The range of additional services, such as calling number identification, videoconference, ADSL, voice mail, IP-telephony, pre-paid card services, etc. has become considerably broader. Also, there has been registered a rapid evolution of telecommunications sector structure. The number of networks and network types that need interconnection, such as fixed telephony networks, mobile telephone networks, Internet networks, cable TV companies, etc. has appreciably increased.

A. Telecommunications and Informational Technologies Service Market

According to Sociology and Statistics Department the **Gross Domestic Product (GDP)**, in 2003 was equal to 27297[1] mln. Lei, which means a 6,3% increase (in real terms) as compared with 2002. **The GDP structure per** resource category has not modified much, services covering 50.8%.

The GDP increase was determined basically by gross value added growth in the industry - by 12.1% and services - by 8.2% (including transport and communications - by 8.8 %).

The total volume of services provided to the population reached 5126,9 mln. Lei or by 12,5% more as compared with 2002.

In comparison with 2002 the volume of telecommunications and informational technologies services, as calculated on basis of separate service revenues, has increased by 39,4%, thus reaching 1,98 billion lei. These data prove that the growth in the telecommunications and informational technology sector exceeds the GDP growth by 6.3 times.

	2003		**2002 in % as compared with 2001**
	Mln. lei	In % as compared with 2002	
Total volume of telecommunications and informational technologies services	1982	139,4	129,0

Table 1: Total volume of communications services
Source: ANRTI

[1] Average exchange rate for 2003:
- Euro - 15,74 lei
- USA Dollar- 13,94 lei

The share of communications services within the GDP equaled to 7,2% in 2003 as compared with 6,3% in 2002. The share of telecommunications services in the gross value added of services amounts to 14,3%, in comparison with the index 12,3 registered in 2002.

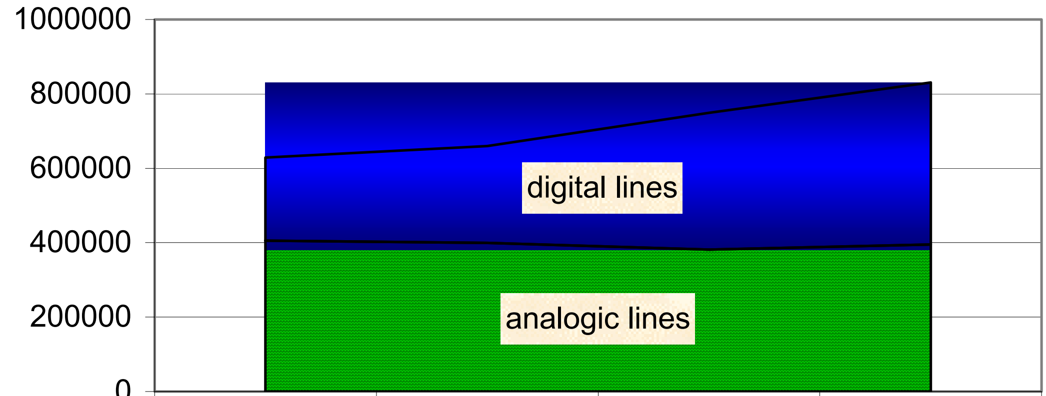
Investments made in the telecommunications and informational technologies sector equaled to 710 mln. lei in 2003.

B. Fixed Telephony Networks and Services

On December 31 2003 in the republic of Moldova 13 companies were registered as authorized to provide fixed local telephony services, only two of which - JSC „Moldtelecom" and SC „Calea Ferata" - provided these services.

Availability of services

During the 1990s the fixed telephony penetration rate almost doubled, while in 2000-2003 this index per 100 people increased by 2%.



	2000	2001	2002	2003
digital lines	223267	260579	368320	435201
analogic lines	405275	399642	381043	395290

Figure 1: Increase in the number of telephone lines, lines
Source: ANRTI

Though the last decade was marked by a continuous growth of telephone penetration, this index has been one of the lowest in Europe so far, and the share of analogue connections still remains rather high.

Network Digitalization

In the recent years the Republic of Moldova has displayed a firm tendency of fixed telephony network digitalization. This factor substantially contributes to the improvement of the services provided.

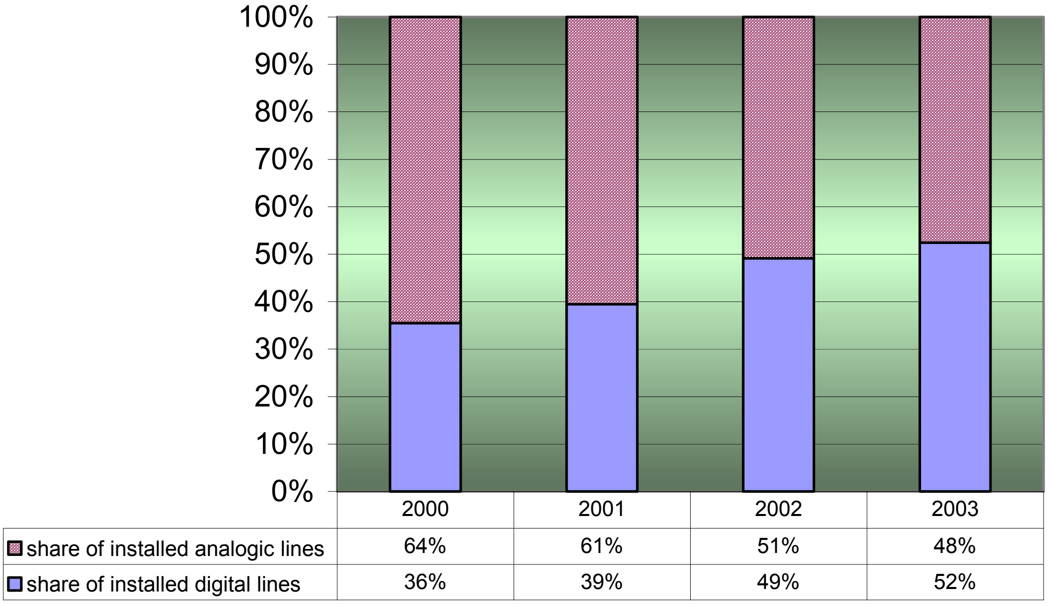


Figure 2: Share of installed digital capacity, %
Source: ANRTI

Although the digitalization process of the fixed telephony network advances continually, the digitalization rate is low in comparison with the one in Central Europe and EU countries, where this process has practically been finalized. Fig.3)

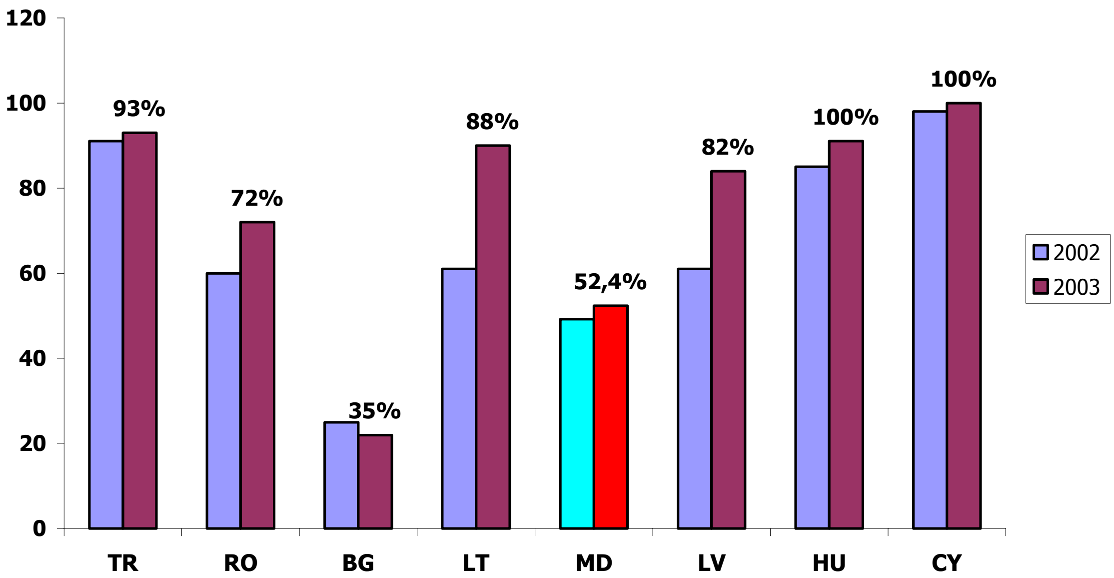


Figure 3. Fixed networks digitalization rate in comparison with countries - EU candidates, 2002-2003, %
Source: *IBM 4th Report on Monitoring of EU Candidate Countries, ANRTI*

Investments
In 2003, the total volume of investments in the fixed telephony was equal to approximately 452 mln. lei (more than 28,7 mln. Euro). The following key points have been highlighted in investment-making; switch capacity extension and connection of new subscribers; switch updating, development and building in rayon towns; switch and local loop development and updating in rural areas. In comparison with 2002 investments have decreased by 19%.

The Republic of Moldova ranks among the first few countries in South East Europe, where the fixed telephony sector, in 2002-2003, registered an ascending evolution: the value of this market in 2003 exceeded the level registered in 2002 by 26,7%. (Fig. 4), mostly owing to the implementation of the tariff re-balancing first stage for basic public telecommunications services, provided by JSC Moldtelecom, to the increase in the number of subscribers, consumption behavior, as well as implementation of new technologies and services.

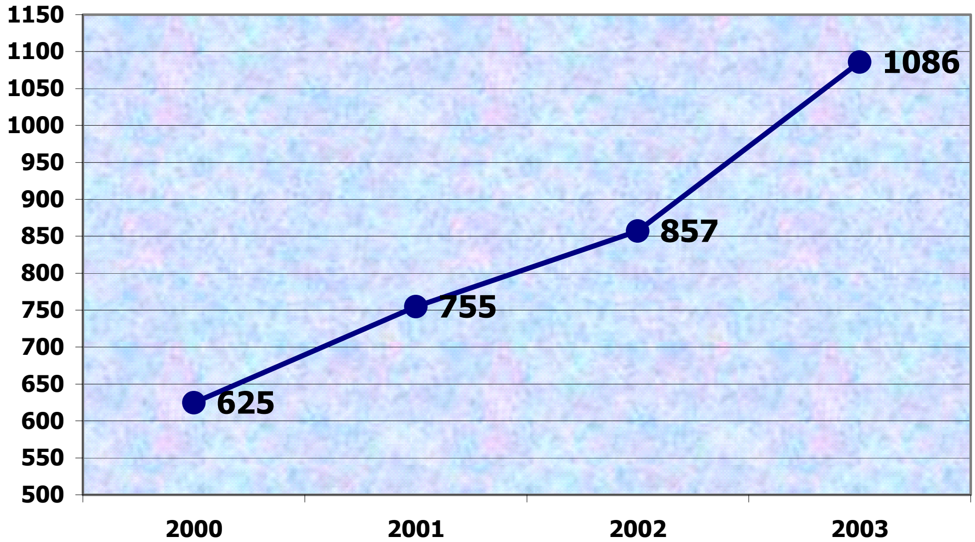


***Figure 4*: Fixed Telephony Market Value, mln lei**
Source*:* *ANRTI*

Since the fixed telephone, unlike the mobile, represents a utility for the whole family, it is worth taking into account the index of telephone penetration per households. This figure will show the share of families possessing home telephone lines.

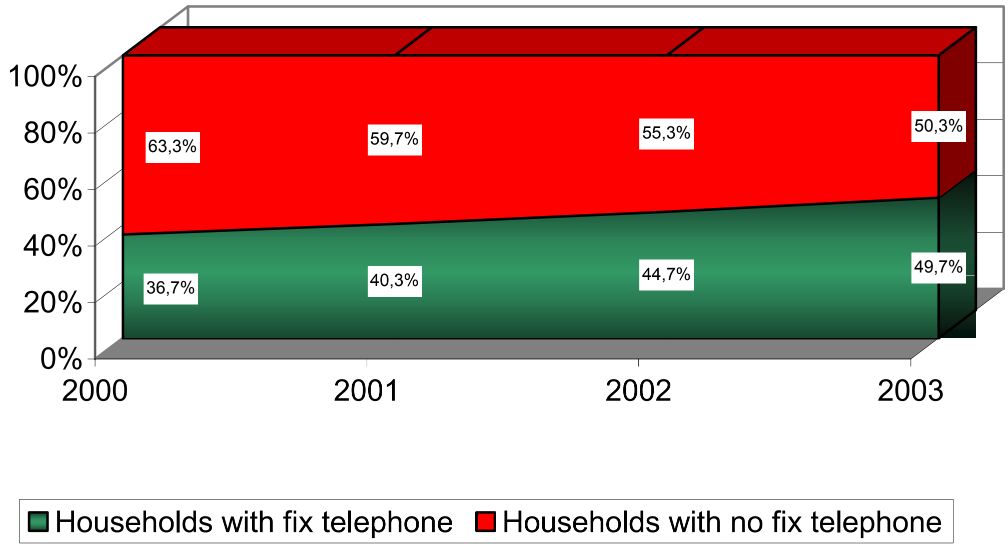


***Figure* 5**: Households penetration index, %
Source: ANRTI

Although the index of telephone penetration per households is improving year by year, this process is still a major problem for Moldova. Half of the number of families does not have a telephone line at home, which affects their life quality. Finding a solution to this issue will enhance the implementation of Universal Service in this country and ensure public access to communications services.

It should be mentioned that recently the number of fixed telephony subscribers in rural areas has increased, within the total number of subscribers:

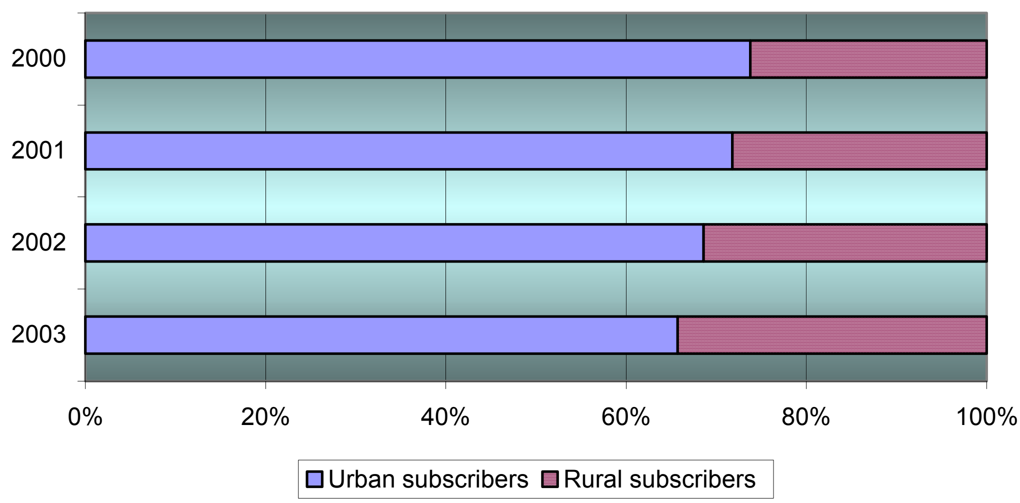


***Figure* 6**: Evolution of households' connectivity, %
Source: ANRTI

Fixed Telephony Subscribers

During 2003 the tendency of growth in the number of subscribers persisted. This tendency can be represented as follows.

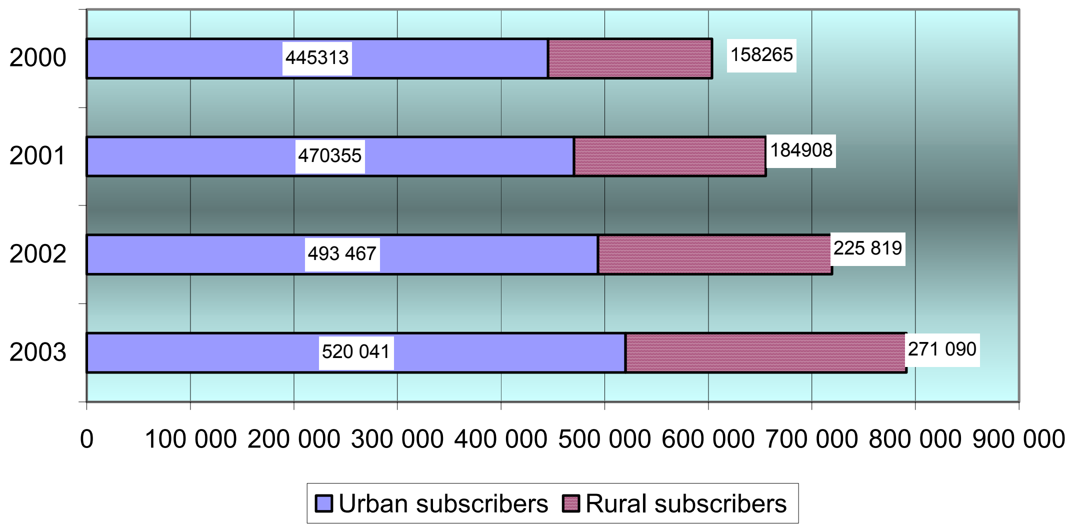


Figure 7: Evolution of the number of subscribers
Source: ANRTI

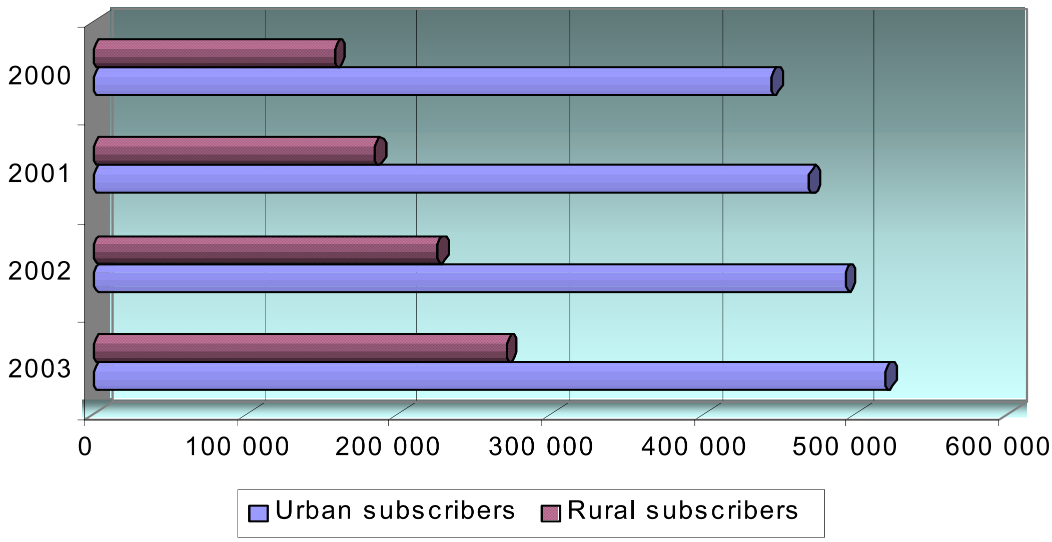
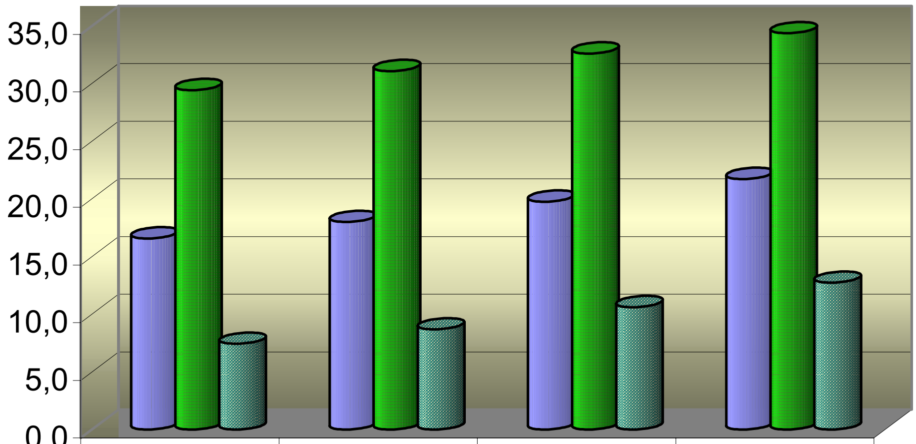


Figure 8: Evolution of subscribers per types of locations, subscribers
Source: ANRTI

Fixed Telephony Penetration

At the end of 2003 the penetration rate of the total number of telephone lines was equal to 21,7%.



	2000	2001	2002	2003
penetration rate	16,6	18,0	19,7	21,7
urban penetration rate	29,4	31,1	32,6	34,3
rural penetration rate	7,4	8,7	10,6	12,7

Figure 9: Indices of fixed telephony penetration, %
Source: ANRTI

Though the penetration rate registered a slight increase, it is one of the lowest compared with the neighboring countries, (Figure 10). As a result of complete telecommunications market liberalization, this index is expected to grow.

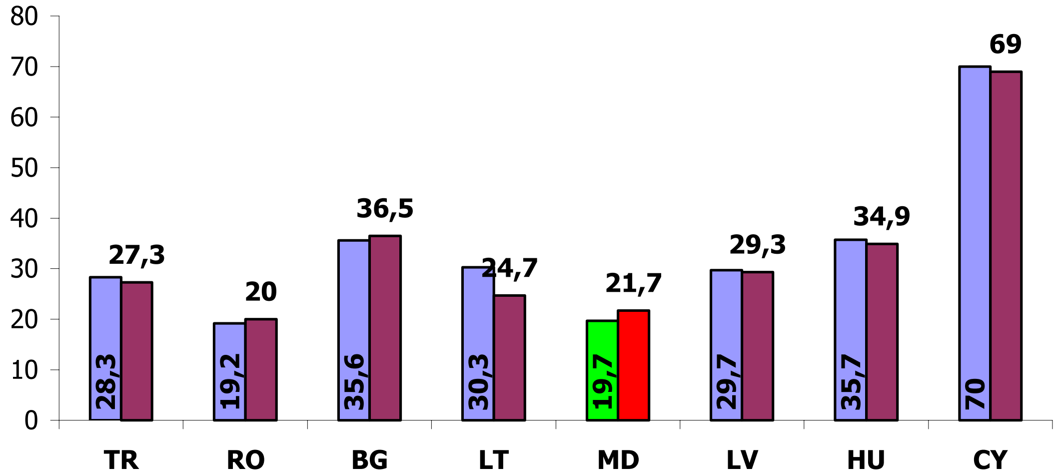


Figure 10: Fixed telephony penetration in Central European countries, %
Source: *IBM 4th Report on Monitoring of EU Candidate Countries, ANRTI*

Monthly Average Revenue per User – ARPU

The revenue generated by long-distance, international service provision and mobile connections prevail in the structure of average revenue per user. Local services generate only 22% of revenue.

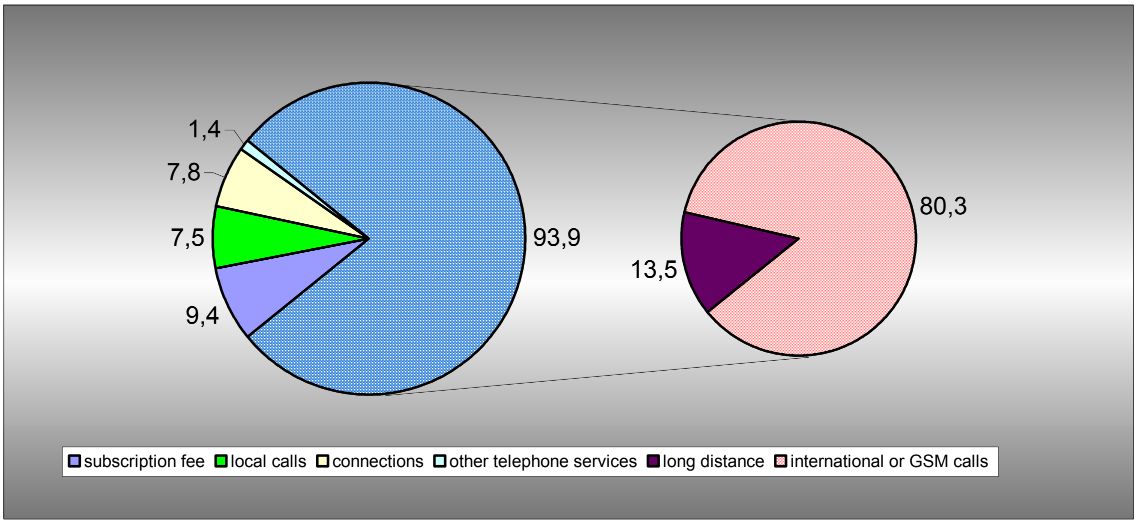


Figure 11: Structure Monthly Average Revenue per User, lei monthly
Source: ANRTI

Regime of Interconnection with the Public Fixed Telephony Network of JSC Moldtelecom

For the purpose of fair competition, ANRTI imposed a series of obligations on JSC Moldtelecom regarding the interconnection between the fixed public telephony network they operate and the installed telecommunications network, operated or provided by other operators, thus establishing the legal regime for voice services, data services (Internet Dial-up), fax and image.

Thus, JSC Moldtelecom is obliged to allow interconnection at all network points where technically feasible, respectively at all local and transit switches, with the view to carrying out interconnection at local or international level.

ANRTI required that JSC Moldtelecom comply with the principles of transparency and non-discrimination and imposed the obligation to make available for every operator requesting interconnection all the services and information necessary to interconnect, including the co-location service and other technical facilities for installation, connection, operation and maintenance of collocated equipment.

The principle of transparency has been accomplished by publishing the Reference Interconnection Offer on the JSC Moldtelecom Web site. The offer includes the description of interconnection service package offered by JSC Moldtelecom, technical and commercial conditions, including tariffs for these services.

C. Mobile Telephony Networks and Services

The mobile telephony market in Moldova was opened in 1997. As a result of an international tender, the first license, with the exclusive right to provide GSM cell mobile telephony services for 5 years, was granted to JSC Voxtel in august 1997, and in October 1998 this operator launched the first GSM mobile telephony network in Moldova.

In November 1999 the Government granted the second mobile telephony license to JSC Moldcell, an operator ranked second in the tender called in 1997. In April 2000 JSC Moldcell launched its network for commercial operation.

Currently, the above-mentioned operators provide generation II GSM mobile cell telephony services.

Frequency band	**Technology used**	***Operators***	**Shareholders**
900 MHz	**GSM**	Voxtel JSC	51% France Telecom Mobile (FTM), France 30% Moldavian Mobile Telephone Bis 10% Moldtelecom JSC., Moldova 5% IFC 4% Mobilrom JSC, Romania
		Moldcell JSC	89% Fintur Holdings B.V., Holland 11% Molfintur LLC

Table 2: Mobile telephony operators in the Republic of Moldova
Source: *ANRTI*

As a result of competition between the two operators, mobile telephony services underwent rapid development. Thus, the annual growth of the number of subscribers amounts to 110 – 130 thousand, while the mobile telephony market value registered an annual increase of 110 –150 mln. Lei.

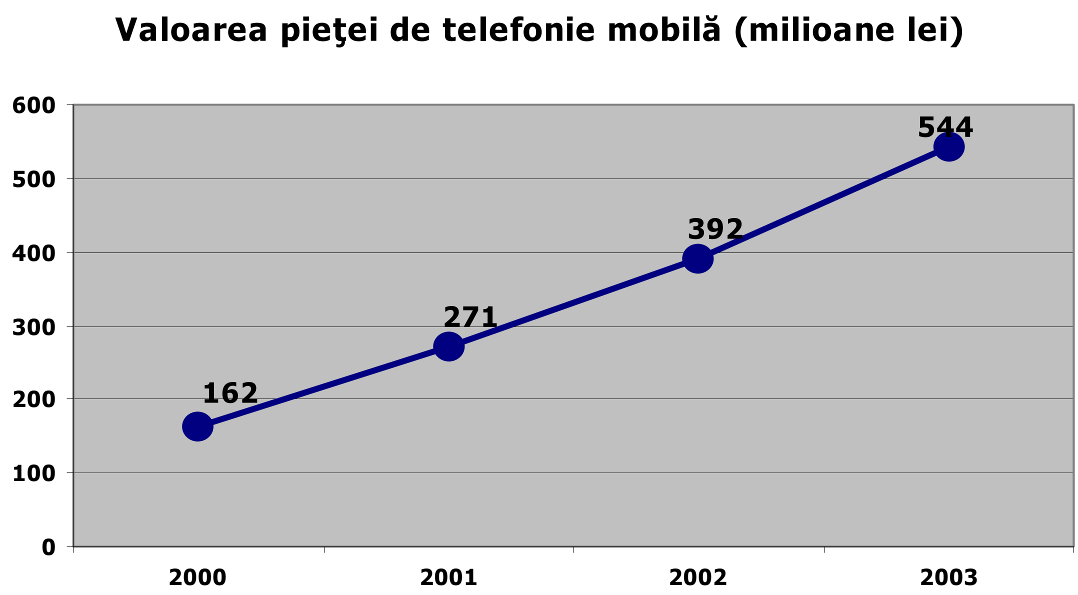


Figure 12: **GSM mobile telephony market value, mln. Lei**
Source: ANRTI

Subscribers

It can be noted from the information obtained by ANRTI that the population have been reserved in requesting services offered by GSM operators. This behavior was caused by the reduced purchasing power and inaccessible prices for the provided services, as well as insufficient territorial coverage.

The situation in this respect improved as a result of tariff drop and growth of purchasing capacity.

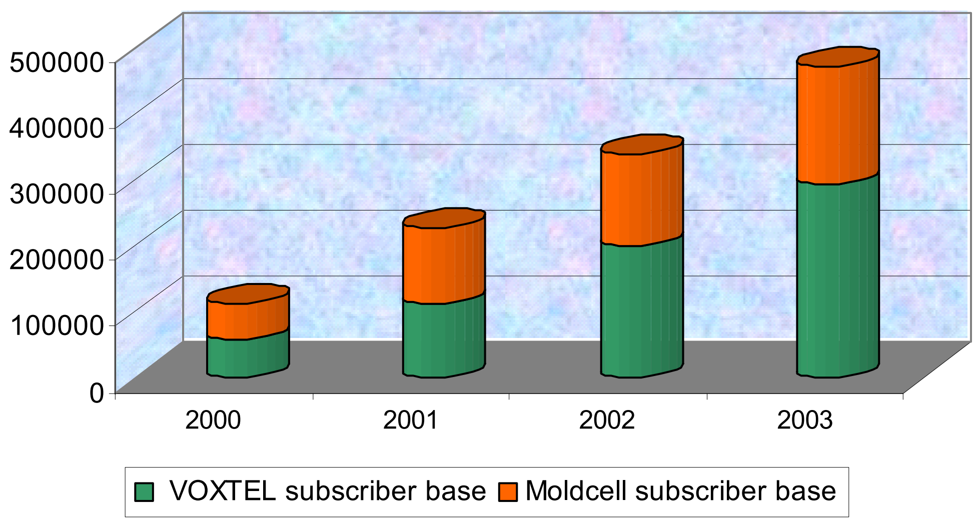
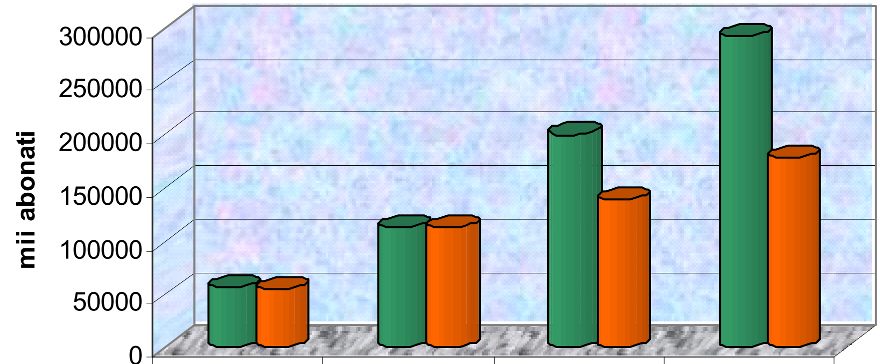


Figure 13: Evolution of subscriber base, subscribers
Source: ANRTI



	2000	2001	2002	2003
Voxtel subscribers base	56660	112260	199692	291593
MOLDCELL subscribers base	54875	112506	138603	177814

Figure 14: Evolution of subscriber base, subscribers [2]
Source: ANRTI

The mobile subscribers demand was and is based on pre-paid services, in 2003 - 86% for Voxtel GSM, and 91% for Moldcell GSM.

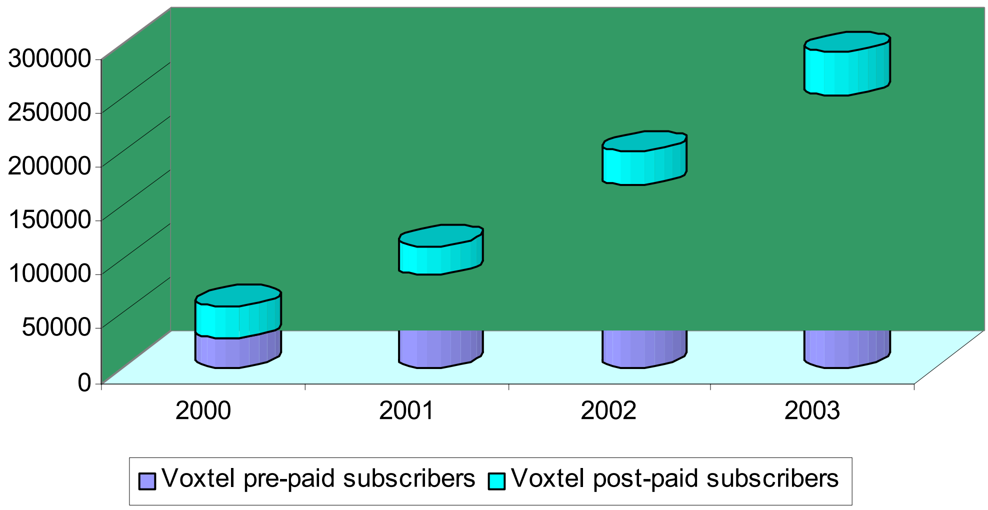


Figure 15: The dynamics and structure of Voxtel subscriber base, subscribers
Source: ANRTI

[2] Hereafter the number of JSC Moldcell subscribers at the end of 2003 is the one estimated by ANRTI

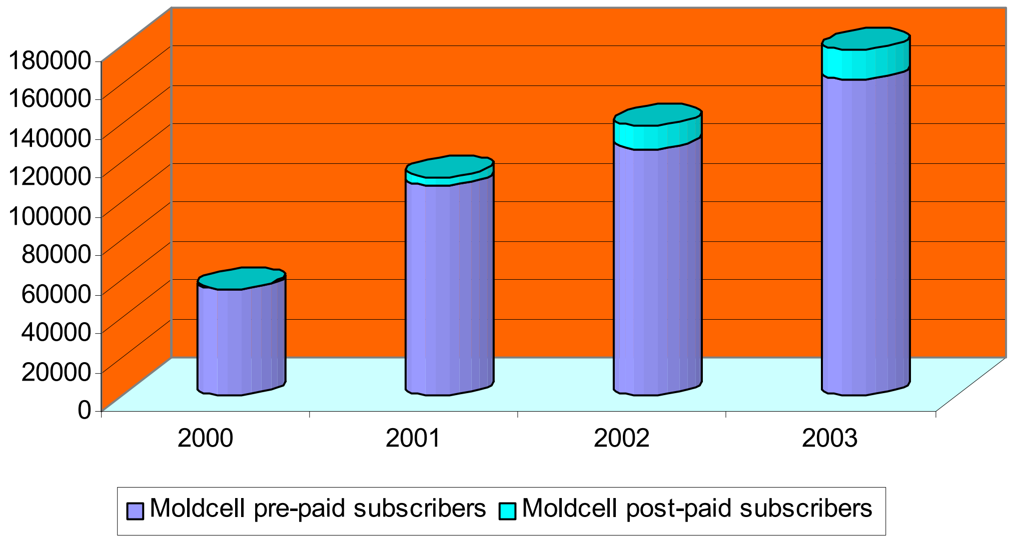


Figure 16: The dynamics and structure of Moldcell subscriber base, subscribers
Source: ANRTI

According to the number of subscribers, in 2000, the mobile service telephony market was divided between the two operators as 51 to 49 in favor of JSC Voxtel, while in 2003, respectively, 62 to 38, also in favor of JSC Voxtel.

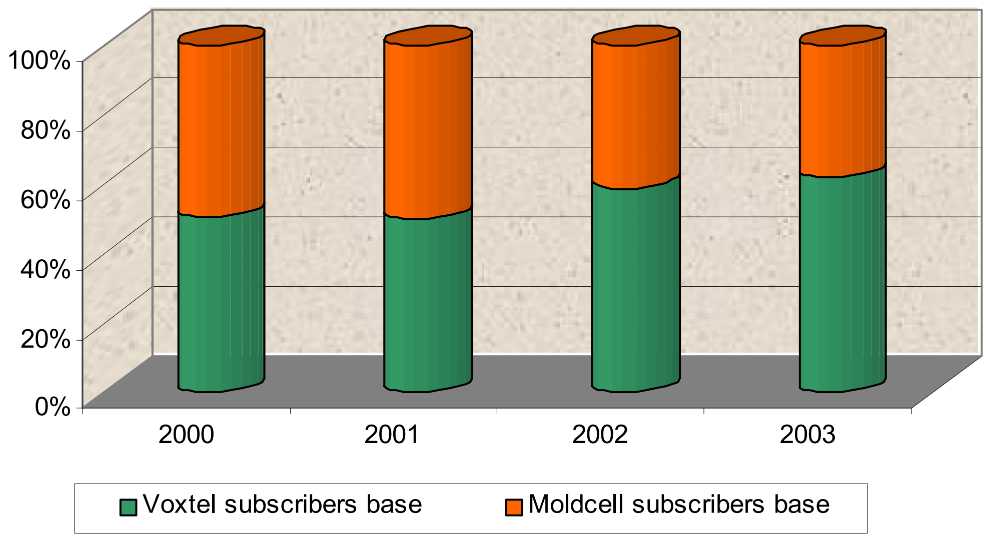
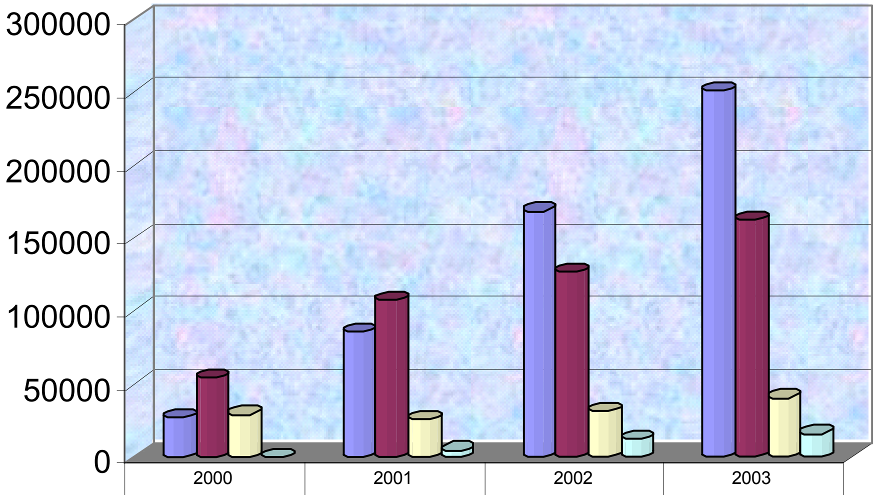


Figure 17: Evolution of market structure according to number of subscribers, %
Source: ANRTI

For pre-paid services, in 2000, the two operators divided the market as 36 to 64 in favor of JSC Moldcell, and at the end of 2003, respectively, 61 to 39 in favor of JSC Voxtel.

The segment of post-paid services was divided between the two operators, in 2003, as follows: 72% for JSC Voxtel and 28% for Moldcell.



	2000	2001	2002	2003
Voxtel pre-apid subscribers	27188	86182	168525	251184
Moldcel pre-paid subscribers	54339	107769	126632	161928

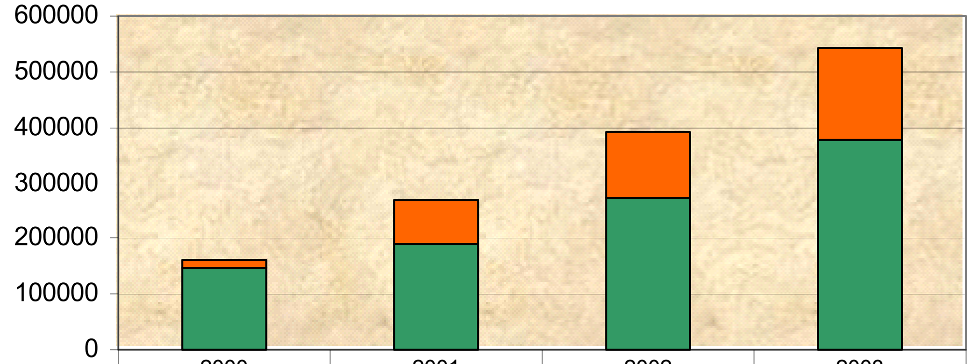
Figure 18: Number of pre-paid and post-paid subscribers, subscribers

Source: ANRTI

In the period 2001-2003 the growth rate for the number of mobile subscribers was 111%.

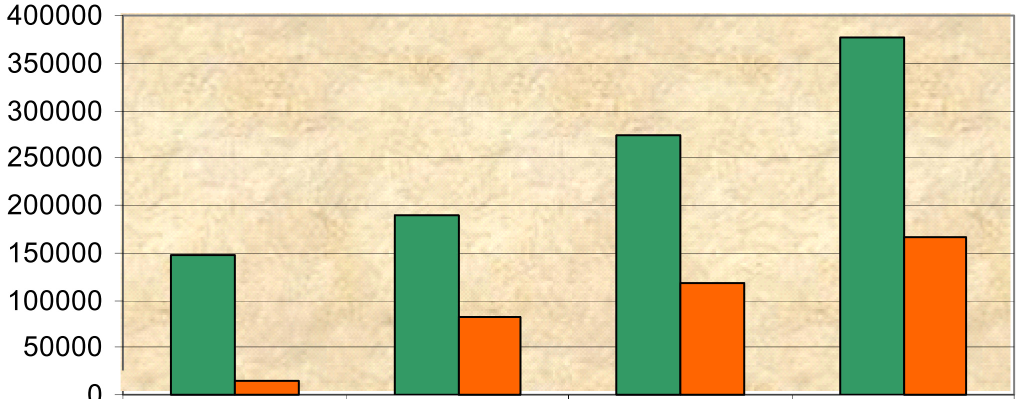
Revenues

The volume of services provided by the two mobile telephony operators equaled, in 2000, to 162 mln. lei, while in 2003 - 545 mln. Lei. According to the collected revenue, in 2000, JSC Voxtel collected 91% of the total revenue registered by the two operators, and in 2003 - 69%.



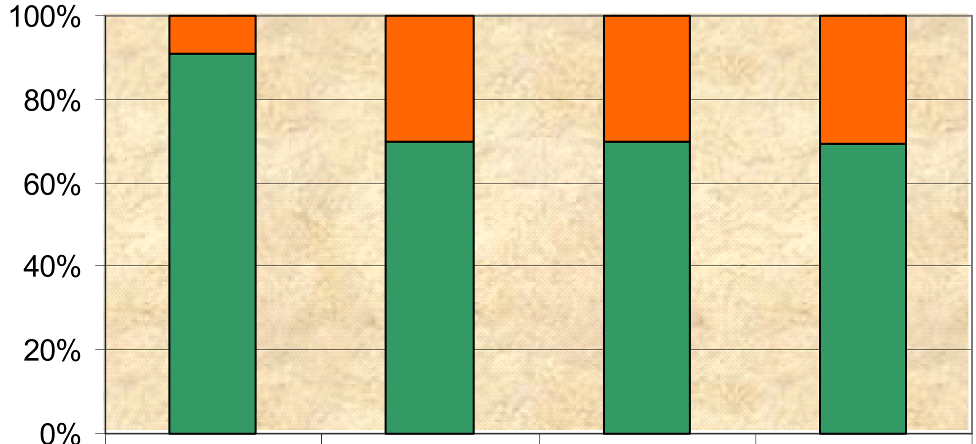
	2000	2001	2002	2003
Moldcell revenue	14344	81495,0	118604,0	166753,0
Voxtel revenue	147611	189561,6	273557,2	377279,0

Figure 19: Market value and structure, thousand lei
Source: ANRTI



	2000	2001	2002	2003
Voxtel revenue	147611	189561,6	273557,2	377279,0
Moldcell revenue	14344	81495,0	118604,0	166753,0

Figure 20: Revenue Comparative Evolution, thousand lei
Source: ANRTI



	2000	2001	2002	2003
Moldcell revenue	14344	81495,0	118604,0	166753,0
Voxtel revenue	147611	189561,6	273557,2	377279,0

Figure 21: Market structure according to revenue, thousand lei
Source: ANRTI

Average revenue per user (ARPU) in 2003 amounted on average to 112,3 lei monthly. In 2000 this index reached 208,4 lei/monthly. In 2003 as compared with 2002 ARPU for both operators diminished by about 3,3 %.

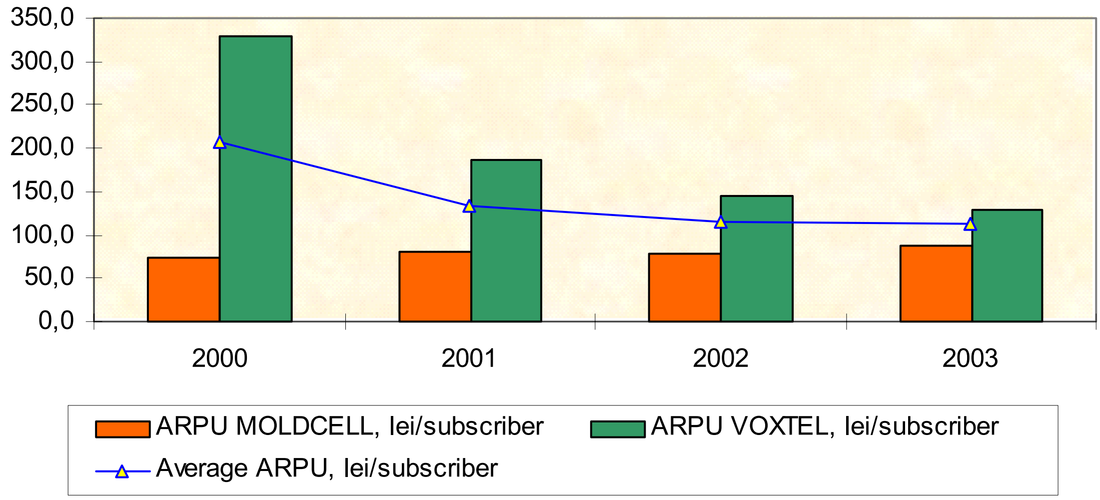


Figure 22: The dynamics of Average revenue per user (ARPU), lei/month/user
Source: ANRTI

Traffic

The data below show the calls and traffic evolution mobile telephony in the period 2000-2003.

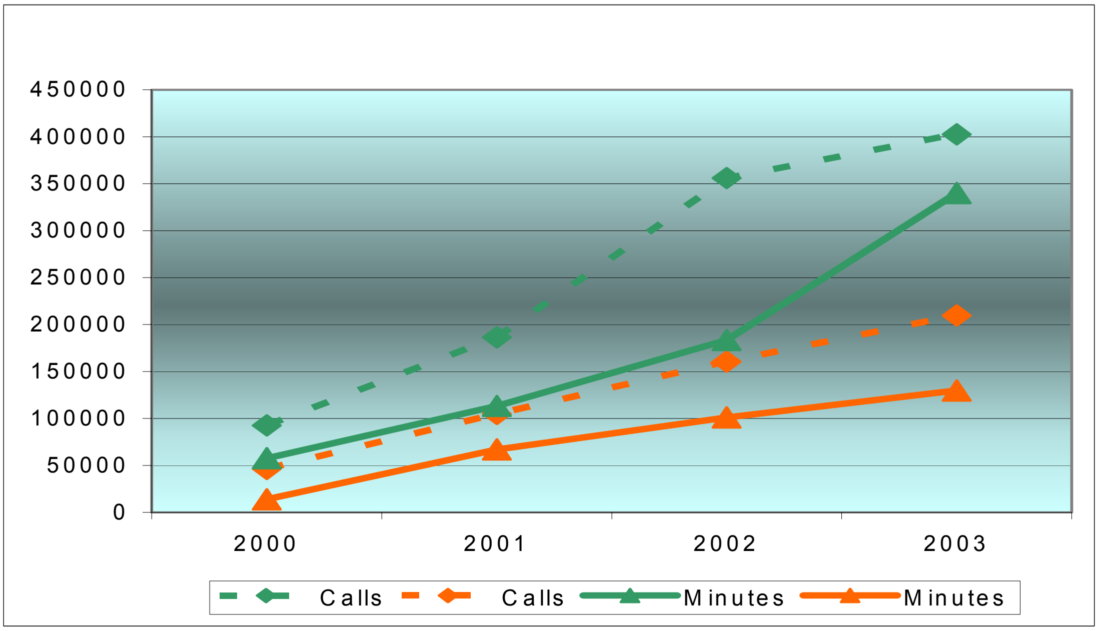


Figure 23: Evolution of the number of calls and minutes in the networks of mobile telephony operators
Source: ANRTI

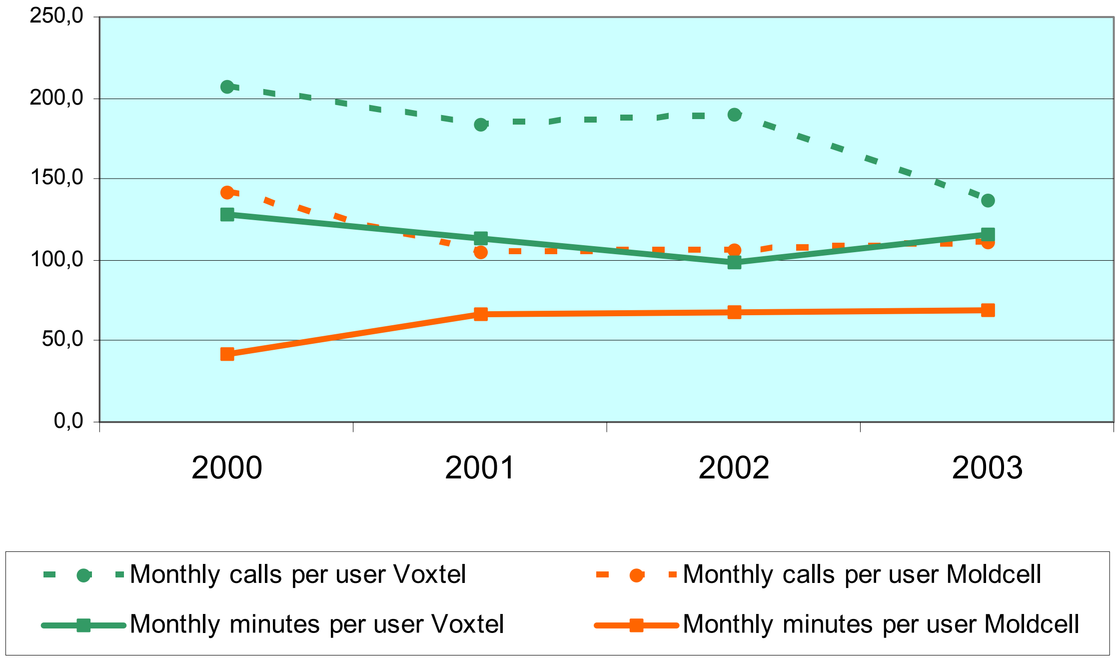


Figure 24: Evolution of monthly traffic per user
Source: ANRTI

Mobile subscribers generate traffic prevalently with other networks.

At the beginning of JSC Voxtel activity the traffic in own network reached only 28%. In 2001 and 2002 it increased to 42-43%, while in 2003 it reduced to 26%.

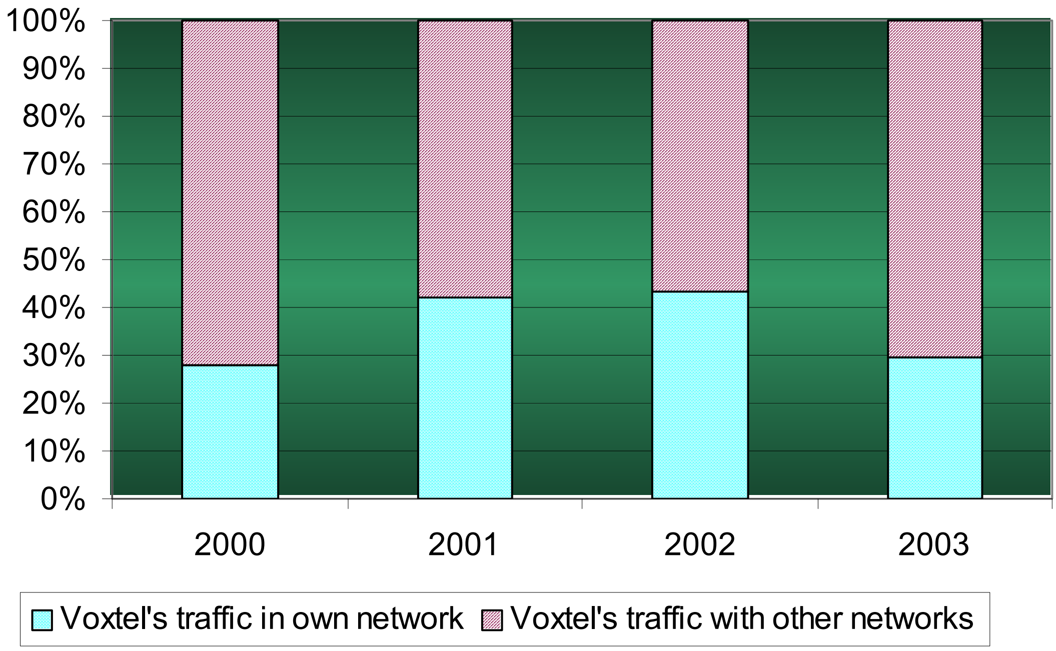


Figure 25: Voxtel traffic structure, %
Source: ANRTI

JSC Moldcell, in 2000, reached the figure of 23% traffic in own network, and during 2001-2002 the company registered a slight growth from 33% to 39%, followed by a reduction to 35% in 2003.

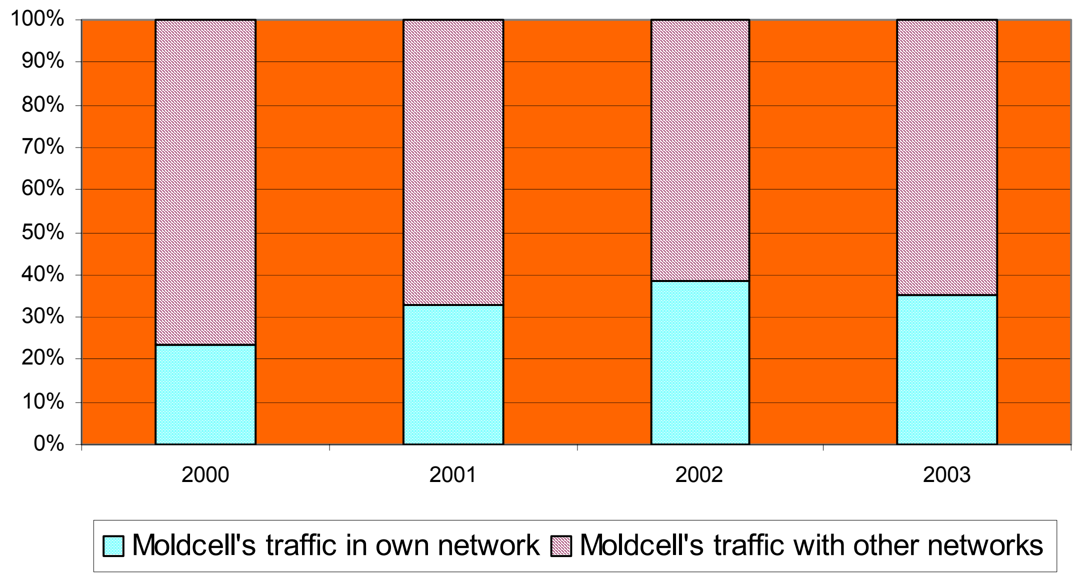


Figure 26: Moldcell traffic structure, %
Source: ANRTI

Investments

The sum of investments made in mobile telephony in 2003 amounted to 167 mln lei (about 10,4 mln euro), i.e. 26,8% of the total investments made in telecommunications.

At the end of 2003, the coverage area of each mobile operator's network,- JSC Voxtel and JSC Moldcell - exceeded 66% of territory and 79% of population (table 3). Nevertheless, due to the existent economic conjuncture, the mobile telephony penetration still remains lowest in comparison with this index in countries-EU candidates (13,2% at the end of 2003, see figure 27), wile the potential is very high.

	Voxtel JSC	**Moldcell JSC**
Coverage [Territory]	66,73%	75,2%
Coverage [Population]	79,85%	80,6%

Table 3: Mobile networks coverage area
Source: *Mobile operators*

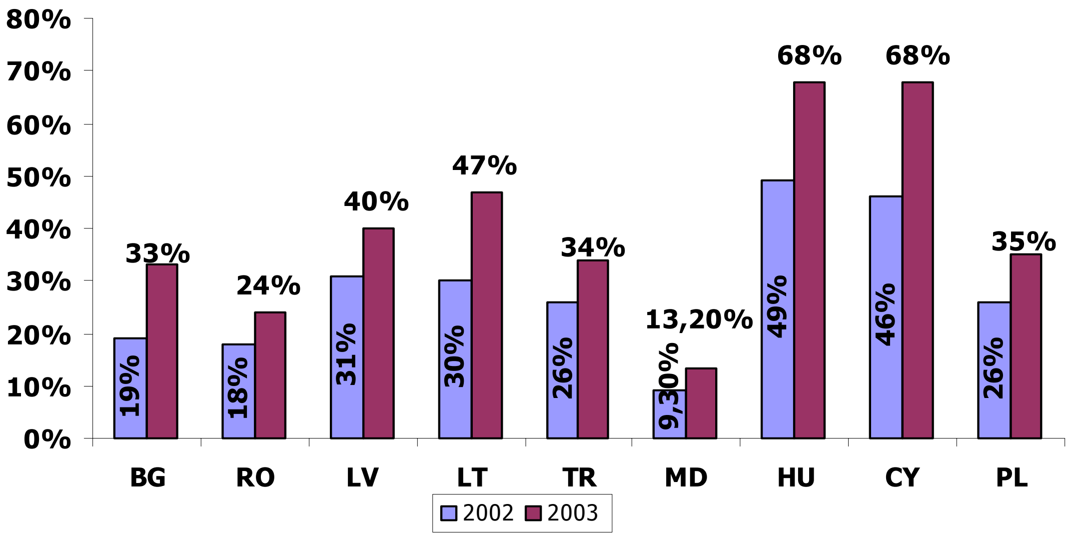
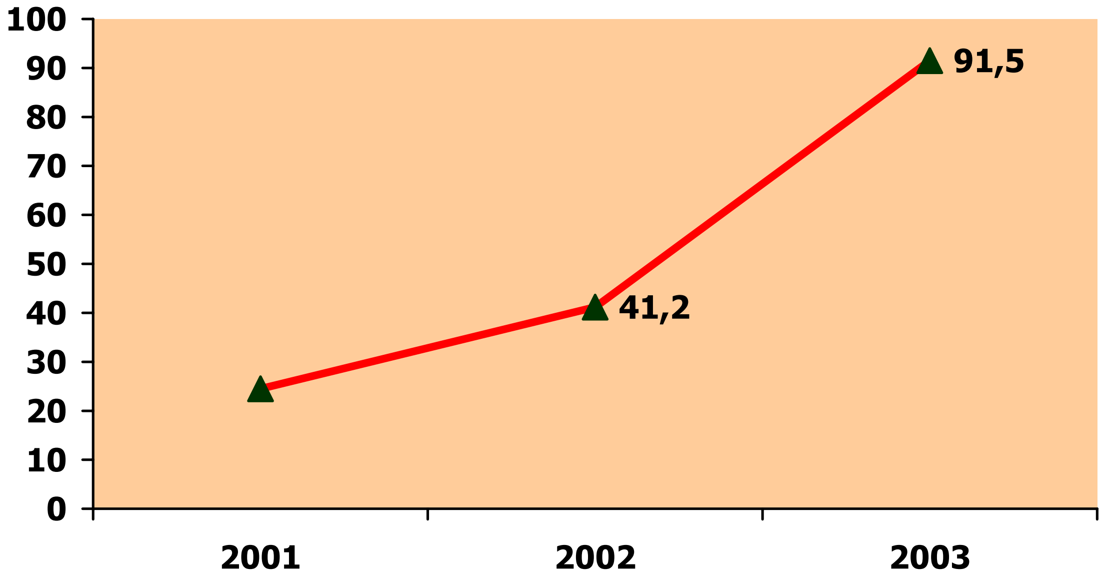


Figure 27: Mobile telephony penetration in Moldova as compared with countries-EU candidates, 2002 - 2003, %
Source: *IBM 4th Report on Monitoring of EU Candidate Countries, ANRTI*

D. Data transport networks and services and access to Internet



Data transport services, access to Internet represent 5,3% of the total value of the telecommunications market in the Republic of Moldova. The value of the market of these services registered a 122% growth in 2003 as compared with 2002.

Figure 28: Value of data transport services market, mln. lei
Source: ANRTI

Before 01.01.2004, 279 companies were authorized to offer informatics services, including 72 – data transport via terrestrial and/or VSAT, 50, 50 – IP-telephony services, etc. The main services provided on the market are: VoIP, access to Internet, etc. (Figure 29).

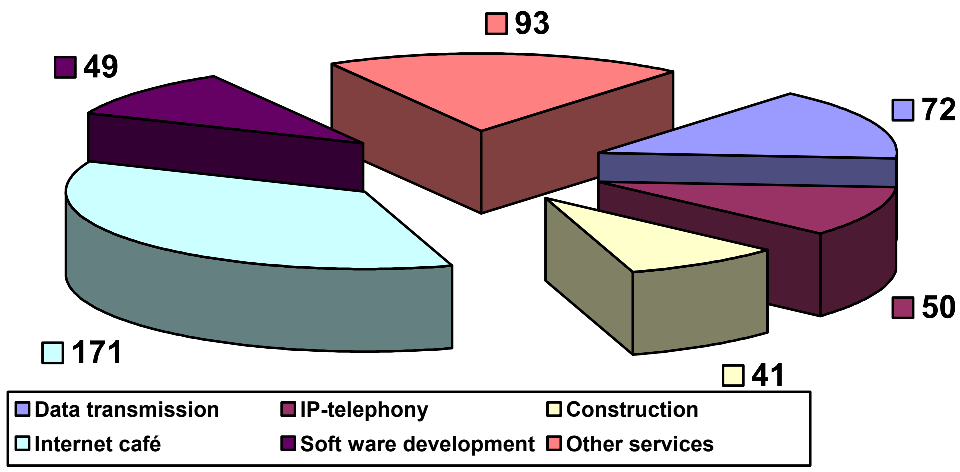


Figure 29: Structure of licenses issued in telecommunications and informatics services, per type of service
Source: ANRTI

Though the number of operators licensed to provide informatics services is relatively big, the share of active operators on the market is relatively small. Such a situation is caused mainly by market conjuncture and the competition that developed on this market segment. (figure 30)

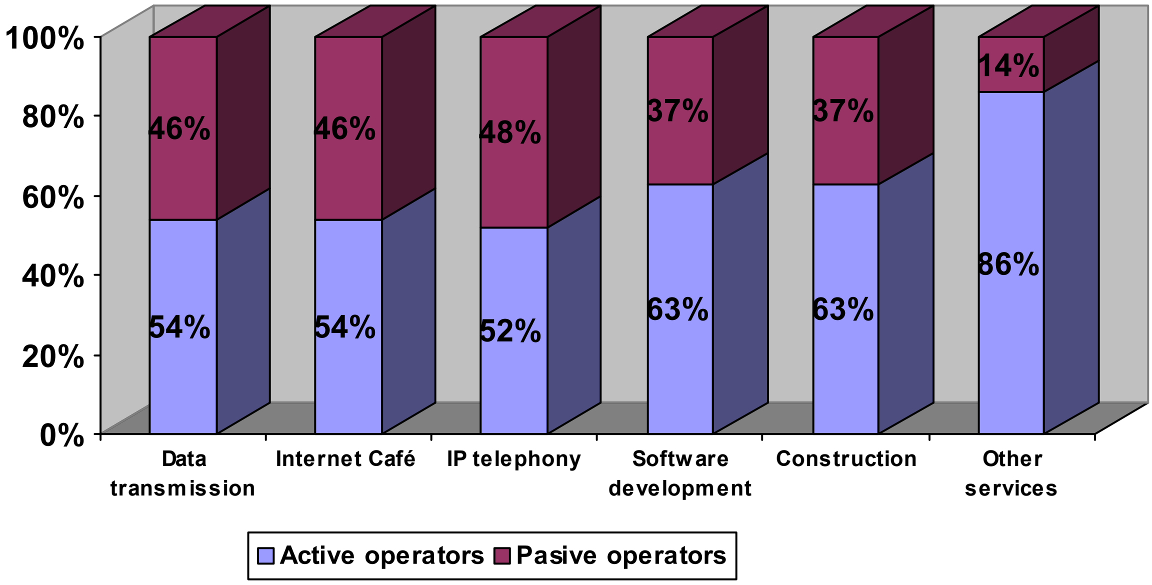


Figure 30: Share of active operators (2003), %
Source: ANRTI

In the period 2002-2003, the number of broadband connections registered a 4% growth. It was mainly due to the increase of connections via coaxial cable, offered to residential users.(Figure 31).

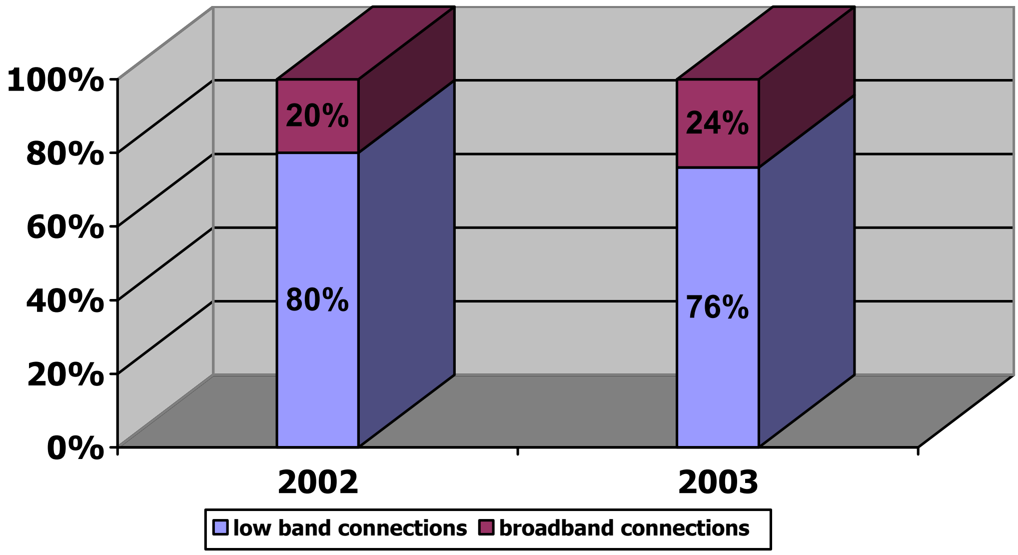


Figure 31: Share of broadband connections in the total number of dedicated connections, %
Source: ANRTI

Internet access services via Dial-Up are subject to a special regulatory regime, a regulatory distinction being made between

Dial-Up calls and usual telephone calls http://www.anrti.md/ro/acte/hotar.htm#hot45 .

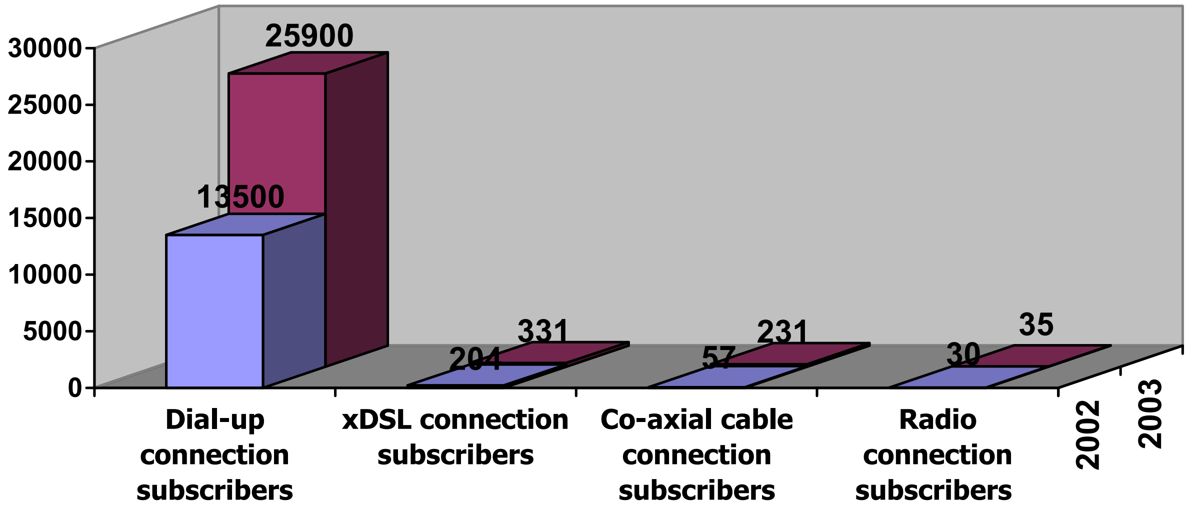


Figure 32: Number of access to Internet subscribers, subscribers
Source: ANRTI

The growth in the Internet use for many services creates prerequisites for the extension of Internet access market. Thus, the percent of Internet users grew by 60% in 2003 as compared with 2002.

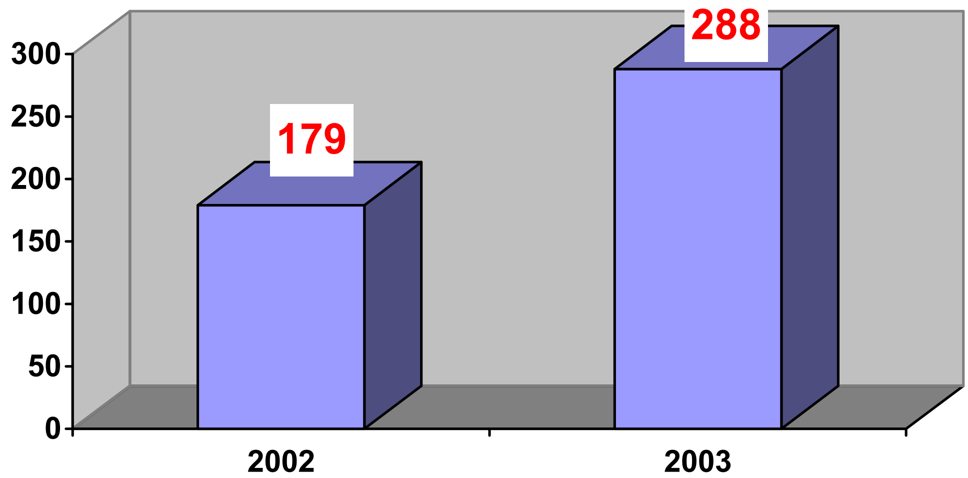


Figure 33: Estimated number of Internet users, thousand users
Source: ANRTI

Though in 2003 Internet access penetration rate was rather low, according to estimations made by ANRTI, the global Internet network is going to become the most preferred method of communication in the nearest future.

E. Conclusions

To conclude, it can be stated with certainty that the citizens' growing necessity to be provided high-quality services, at affordable prices, full liberalization of the market, implementation of new technologies are major factors that will determine the further development of telecommunications in the Republic of Moldova. According to the estimations made by ANRTI, in the near future new operators will enter the market, as an alternative to the national fixed telephony operator JSC Moldtelecom, as well as data transport operators, IP-operators and others.

It is for these reasons that ANRTI emphasizes clear priorities in their activity, such as: harmonization of the existent regulatory framework with the European standards, enhancing the development of fair competition, creating favorable conditions for investments in such an important sector of national economy, as well as protection of communications services users' rights.