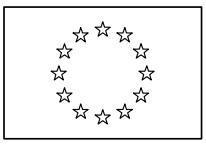

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COMMISSION STAFF WORKING DOCUMENT
ANNEX TO THE

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

EUROPEAN ELECTRONIC COMMUNICATIONS REGULATION AND MARKETS 2006 (12th REPORT)

{COM(2007) 155 final}

ANNEX 2

MARKET OVERVIEW

SOURCES OF DATA PRESENTED IN THIS ANNEX

Figures in sections 1 (fixed market), 2 (consumers' choice of fixed operators), 3 (public network interconnection), 4 (mobile subscribers and operators), 5 (number portability) and 6 (prices for LLU) were provided by the National Regulatory Authorities (NRAs) in response to a questionnaire on regulatory market data sent by the Commission in July 2006.

Data on mobile subscribers (section 4) refer to October 2006 and come from the NRAs unless otherwise specified.

Data in section 6 on broadband access are provided by the NRAs and the national ministries through the Electronic Communications Committee (COCOM). Data have been collected since July 2002 three times a year, in January, June and October. The figures in this report refer to 1 October 2006 unless otherwise specified.

Information in sections 7and 8 (PSTN and retail leased lines prices) and partly in section 4 (mobile tariffs) is taken from a study carried out for the Commission by Teligen, Harris Interactive UK. These data are collected from primary sources (i.e. directly from the incumbent operators and new entrants) and checked by the NRAs. All NRAs, with the exception of Ireland, Italy, Latvia, Slovenia and Poland provided comments and approved these data.

A validation meeting with representatives from NRAs took place in November 2006. Furthermore, a draft version of the charts in this annex (excluding section 7, 8 and 4.4) was distributed to the NRAs before this report was finalised.

TABLE OF CONTENTS

1. FIXED MARKET

This section looks at the number of fixed telecommunications operators (fixed voice telephony and network services) and at the level of competition in the fixed market. It includes data on the number of fixed network operators and public fixed voice telephony operators authorised to provide public voice telephony and to operate a public network at July 2006. The estimated number of players actually active in the fixed market and the incumbents' market shares in the fixed voice telephony market have also been shown.

Data on the number of operators refer to July 2006, while data on the incumbents' market shares in the fixed voice telephony market refer to the end of 2005.

Information have been provided by national regulatory authorities.

1.1. Players in the fixed market

Under the new regulatory framework for electronic communications, operators are only subject to a general authorization regime. Undertakings may be required to submit a notification but may not be required to obtain an explicit decision or any other administrative act. Granting of individual rights of use is required only for scarce resources such as radio spectrum or numbers.

Given the above, the database set up by the national authorities may be very different across the Member States and may include a variety of operators: fixed network operators, service providers, voice over IP services, cable operators as well as wireless local loop, and mobile and satellite operators for the fixed part of their networks and services.

Some Member States are now not able to provide detailed information on the number and types of services provided by the operators that may include other services in addition to public telephony and/or public network services. Therefore, the figures on the number of operators should be considered only as estimates. Furthermore, in some Member States the figure for 2006 is not comparable with the previous implementation reports given the change in the authorization regime.

The figures do not take into account operators acting as resellers or offering services based exclusively on pre-paid cards. The figures include cable TV operators that also provide voice telephony or network services.

Concerning the operators providing voice over IP services, they are excluded in Belgium, Czech Republic, Greece, Cyprus, Luxembourg, Hungary, Poland, and included in Estonia, France, Latvia, Malta, Austria, Portugal and Sweden. In Belgium, Ireland, Lithuania VoIP operators are included only if they provide a PATS1-like service. No information is available for Denmark, Spain, Italy, The Netherlands, Slovakia and Finland. In Germany and United Kingdom some VoIP operators might be included.

While it is difficult to measure the exact difference since 2005, data shows that there has been an increase in the number of operators authorised to provided fixed services, even if to a

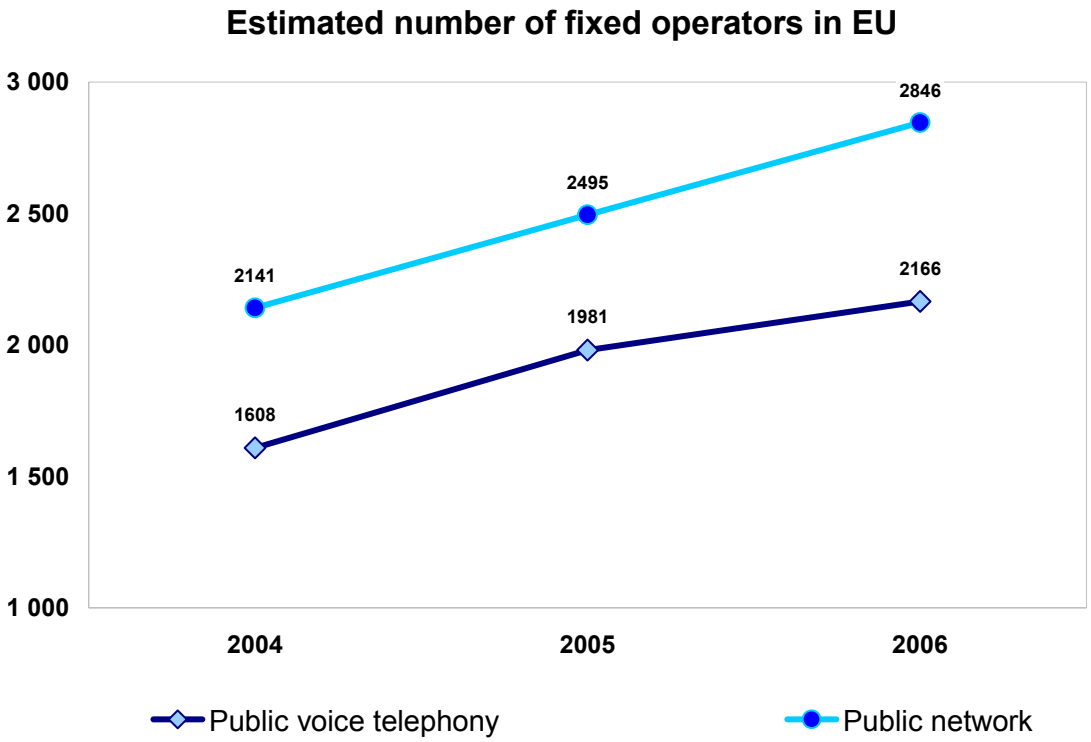
[1] PATS = Publicly Available Telephone Service as opposed to ECS (Electronic Communication Services) operators who have less obligations (number portability, authorizations).

lower extent than in previous years. Around 50% of the authorised operators were actually providing services as of July 2006.

As of December 2005 the total number of major competing operators (i.e. operators that along with the incumbent operator have a combined market share of around 90% of the global telephony market) in the EU is around 94. Only in seven Member States there are five or more major competing operators. In six new Member States, competition is still at an early stage with the incumbents' retaining more than 90% of the market and a low level of competiton mainly concentrated in the international calls market.

Data on the number of operators were provided by the national regulatory authorities and refer to July 2006. Data on the number of major competing players refer to December 2005.

Figure 1



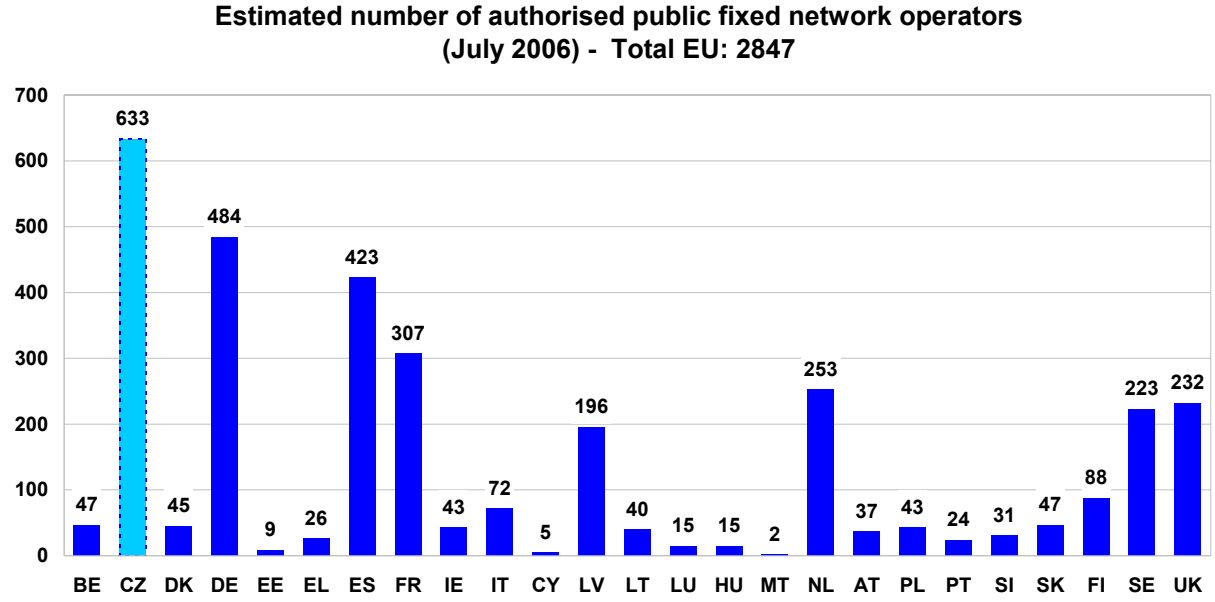
The figure for public network operators does not include Denmark (for both 2005 and 2006) and the number of public network operators for Czech Republic in 2006 refers to 2005.

1.1.1. Public fixed network operators

The chart below shows the estimated number of network operators. Public network operators are defined as operators that install, manage and operate a telecommunications transmission network to provide public telephony services or public network services in the whole national territory, whatever the geographical scope of the service. In Austria, the following figure includes also all operators either owing proprietary infrastructure and/or using local loop unbundling (LLU) and operators offering leased line services over proprietary infrastructure.

As of July 2006 there were a total of around 2800 network operators in the EU. In some countries data are not comparable with previous reports due to a change in the national data collection or to different figures provided by NRAs.

Figure 2

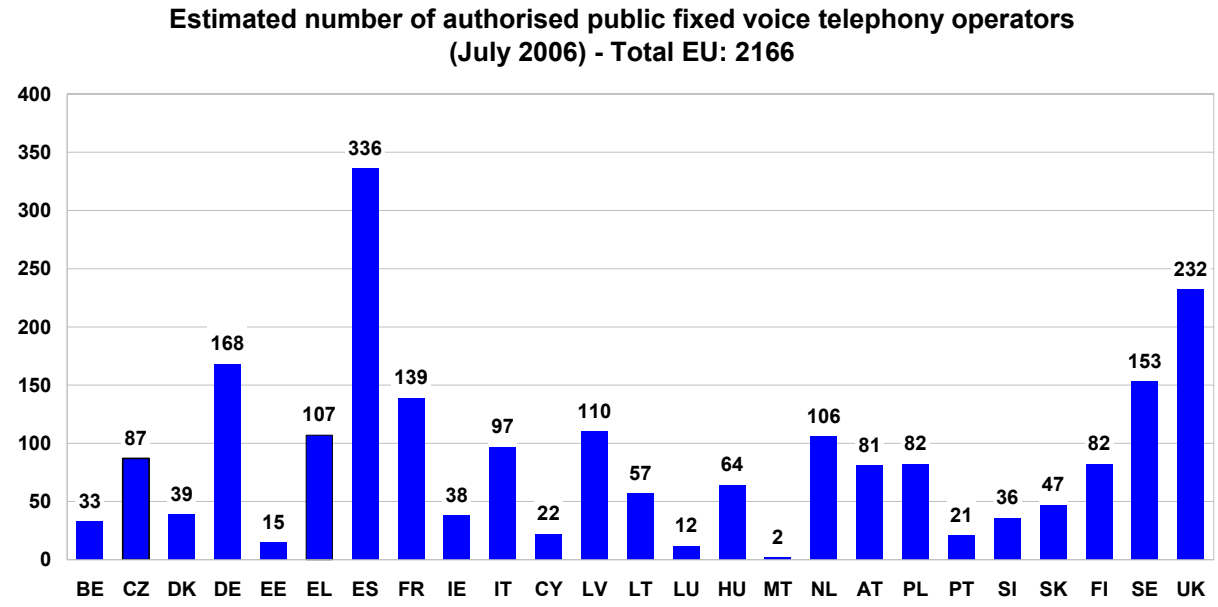


Czech Republic: Data are not comparable with other countries and with previous report (the authorization regime has been fundamentally changed in May 2005).
Denmark: Data are not available due to the fact that there is neither a licensing requirement nor a central register of operators.
Greece, Austria: Data are not comparable with previous reports because of a change in the national authorization regime.
Spain: 340 out of 423 network cable operators are local cable operators.
Finland: 39 network operators are local incumbents out of which 32 belong to the Finnet Group, 2 to the Elisa Group, 2 others to TeliaSonera and 3 operate outside of these groups.
France: Of the 307 operators declared, 199 wireless local loop operators are in a test phase.
Netherlands: Data refer to 31 December 2005.
Sweden: NRA's estimated values.
United Kingdom: The figure corresponds to the number of companies recorded in the voluntary register for communications providers. Figure refers to October 2006.

1.1.2. Public fixed voice telephony operators

Public fixed voice telephony is defined as a service available to the public for the direct transport on a commercial basis of real-time speech via the public switched network, such that any user can use equipment connected to a network termination point at a fixed location to communicate with another user of equipment connected to another termination point. Voice telephony could be provided by operators on an own self-operated network or on a leased network (including LLU). In the first case, the operator provides voice telephony over a network fully controlled, operated and (wholly or partially) owned by it; in the second case the operator operates, controls, manages the transmission capacity leased from another operator, and provides voice telephony through career selection or career pre-selection The definition of service provider may differ from the one used in the national law of individual countries (in some countries non-self operated network operators engage exclusively in reselling activities). Operators offering simple call-back and calling card services as well as operators dealing only with marketing, billing, etc., are excluded.

Figure 3



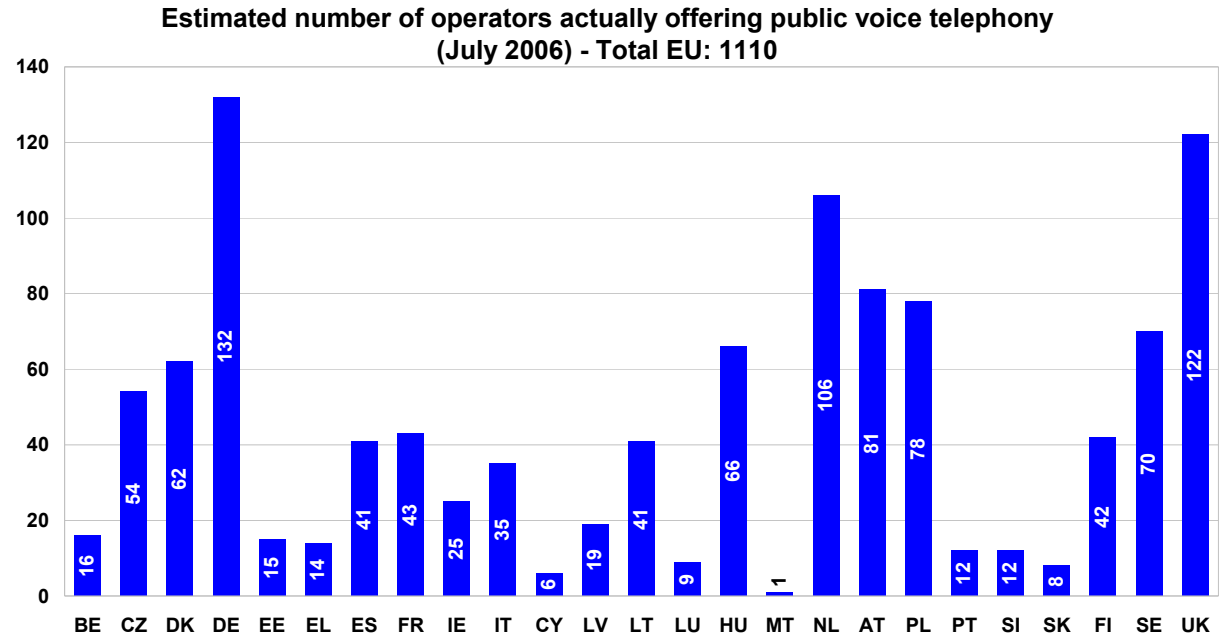
Czech Republic, Germany, Greece: Data are not comparable with previous reports because of a change in the national authorization regime.
Denmark: Due to the fact that there is neither a licensing requirement nor a central register of operators, the above figure refers to the number of operators actually offering public voice telephony.
Spain: About 80% are local cable operators.
Finland: 39 network operators are local incumbents out of which 32 belong to the Finnet Group, 2 to the Elisa Group, 2 others to TeliaSonera and 3 operate outside of these groups.
Netherlands: The figure refers to 2005.
Austria: Data are not comparable with previous reports because of a change in the national authorization regime. Figure includes also operators actually offering carrier selection (CbC)services. Data as of 31 December 2005.
Portugal: The figure includes 3 incumbent subsidiaries.
United Kingdom: The figure corresponds to the number of companies recorded in the voluntary register for communications providers. Figure refers to October 2006.

The number of operators authorised to offer telephone service only indicates the potential for competition in the market rather than the actual level of competition. For this reason, where possible, the following chart provides an estimate of the number of operators that are active in the market. CATV operators providing public voice services and operators using direct access are included.

Figures do not distinguish between local and national operators. Furthermore, some operators only offer international calls, while others also offer national and local calls. Figures represent the maximum number of active operators in each country irrespective of the type of services they are actually providing.

Figures for some countries are not comparable with previous reports due to different data provided by NRAs.

Figure 4

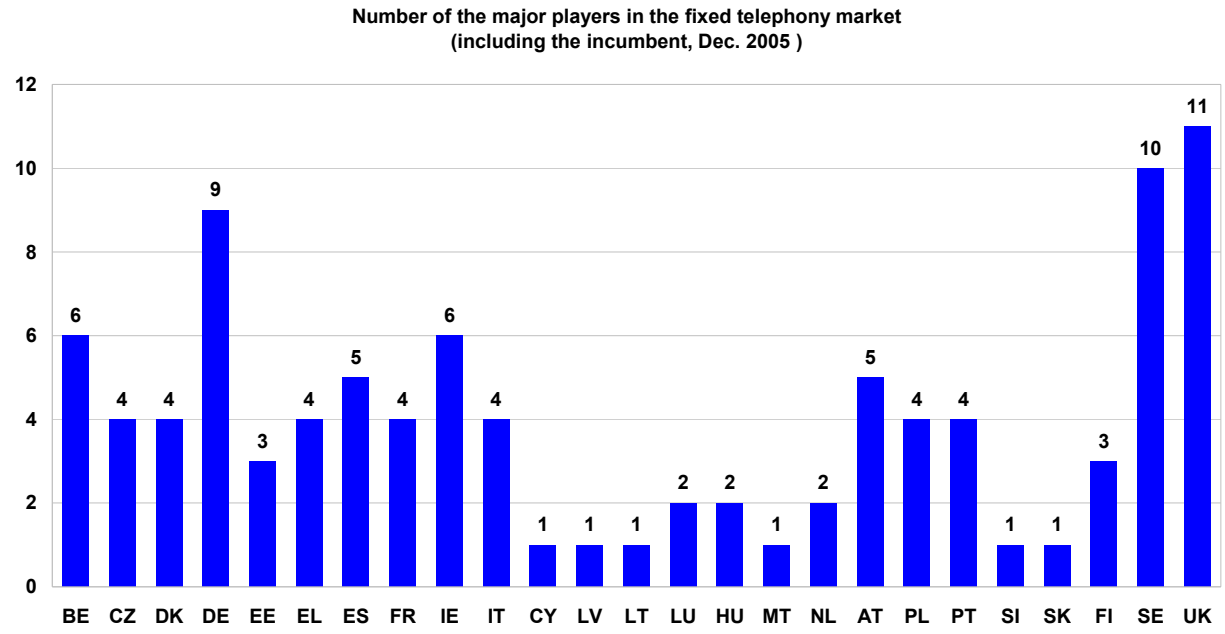


Spain: Data are not comparable with 11th Implementation Report .
Netherlands: Data refer to 31 December 2005.
Austria: Data are not comparable with 11th Implementation Report and refer to 31December 2005.
Portugal: The figure includes 3 incumbent subsidiaries.
United Kingdom: The figure corresponds to the number of companies recorded in the voluntary register for communications providers. Figure refers to October 2006.

Many new entrants concentrate their business on specific segments of the market or limit their activity to local areas, thus having a limited impact on the national market as a whole. To get an idea of the number of main players that are effectively competing with the incumbent at national level, the following chart shows, for each country, the number of operators that had a combined market share, based on revenues, of 90% on the total voice telephony market (all types of calls[2]). In December 2005 only seven countries had five or more major competing operators (including the incumbent) with such a combined market share. These figures give an idea of the number of major players operating in each national market, although in many cases competition is largely asymmetric, with incumbents continuing to hold a strong position. This situation can be observed in the new Member States, where the fixed incumbent still dominates the fixed voice market.

[2] Local calls to internet, local phone calls, long-distance and international calls as well as calls to mobile

Figure 5



Operators that along with the incumbent operator have a combined market share of 90% of the voice telephony market (in term of retail revenues)

Germany, Ireland: Figures are NRA's estimates.
Denmark, Netherlands, Slovenia: Data are based on minutes of traffic.
Finland: The figure includes the major operator groups only.

1.2. Incumbents' market share in the fixed voice telephony market

This section shows the incumbents' market share in the fixed voice telephony markets on the basis of both retail revenues and outgoing minutes of traffic. Where possible, figures for local, long-distance, international calls, calls to mobile and calls to internet are shown. Not all Member States collect separate figures for all types of data, and split between the various markets is not always available.

Figures in this section have been provided by NRAs and refer to December 2005, except for United Kingdom (March 2006). Where available, later values have been provided in the notes.

Market share based on retail revenues exclusively refers to revenues from call markets and does not include any access revenue.

Apart from Denmark, Spain, Cyprus and United Kingdom, traffic/revenues generated from calling cards are excluded from the market definition. The market definition for Greece and Austria includes calling cards for international calls based on volume of traffic (both countries) and for the international calls based on revenues (only Austria).

Traffic/revenues from public payphones are not excluded in Czech Rep., Denmark, Estonia, Spain, Greece (for international calls on volume of traffic) Latvia, Luxembourg, Austria, Portugal, Sweden (for international calls). It is excluded in all the remaining countries. No information is available for The Netherlands, Slovenia, Slovakia and Finland.

Traffic/revenues from calling shops are not excluded in Czech Rep., Greece, France, United Kingdom. It is excluded in the remaining countries, except for Germany, Sweden, Italy, The Netherlands, Slovenia, Slovakia and Finland where no information is available.

Peer-to-peer VoIP traffic/revenues is excluded in all countries. No information is available for Germany, Sweden, Italy, The Netherlands, Slovenia, Slovakia and Finland. Managed VoIP (VoIP calls over broadband) traffic/revenues is included in Belgium, Denmark, Estonia, Latvia, Lithuania, Austria and Portugal. It is excluded in the remaining countries, except Germany, Sweden, The Netherlands, Slovenia, Slovakia, Finland and United Kingdom where no information is available.

1.2.1. EU average incumbents' market share

The following charts show the trend for the EU weighted average of the incumbents' market share in the major segments of the voice telephony market since 2003.

Given that data were not available for all countries and for all types of calls, the EU average should be considered as indicative. In particular, the overall fixed telephony market share in term of revenues in 2004 and 2005 is an average of countries that represent 93% and 95% of the EU population respectively, while data for 2003 represent only 89.6% of the EU population. Market share data based on volume of traffic for 2004 and 2005 represent 97% and 100% of EU population respectively, while the data for 2003 are based only on a number of countries representing 78% of the EU population.

Figure 6

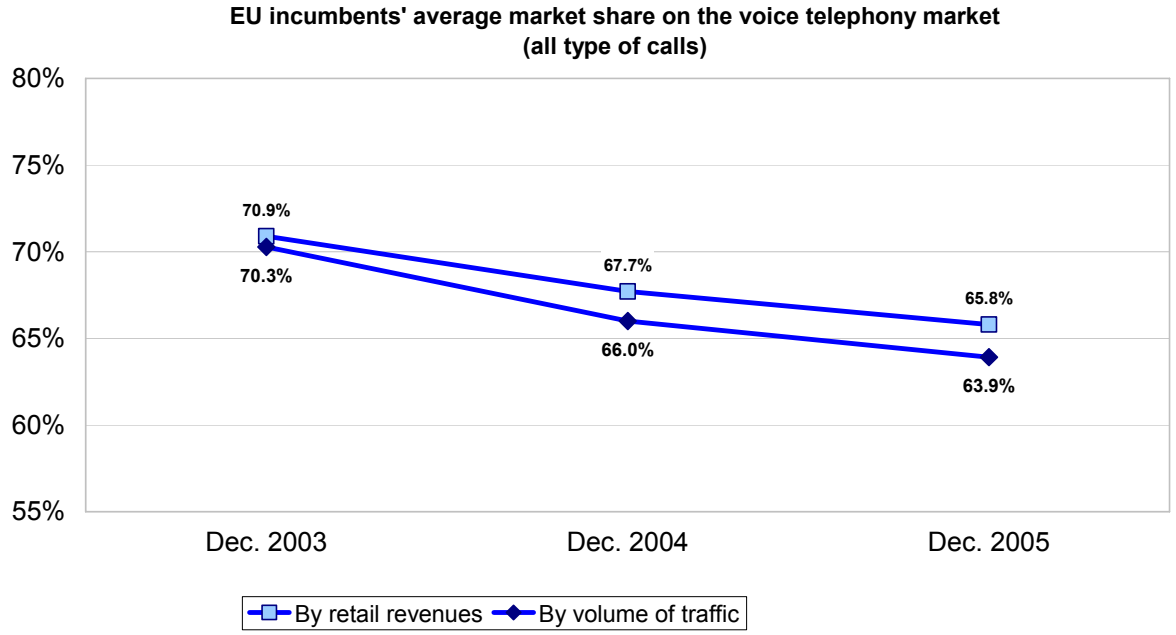
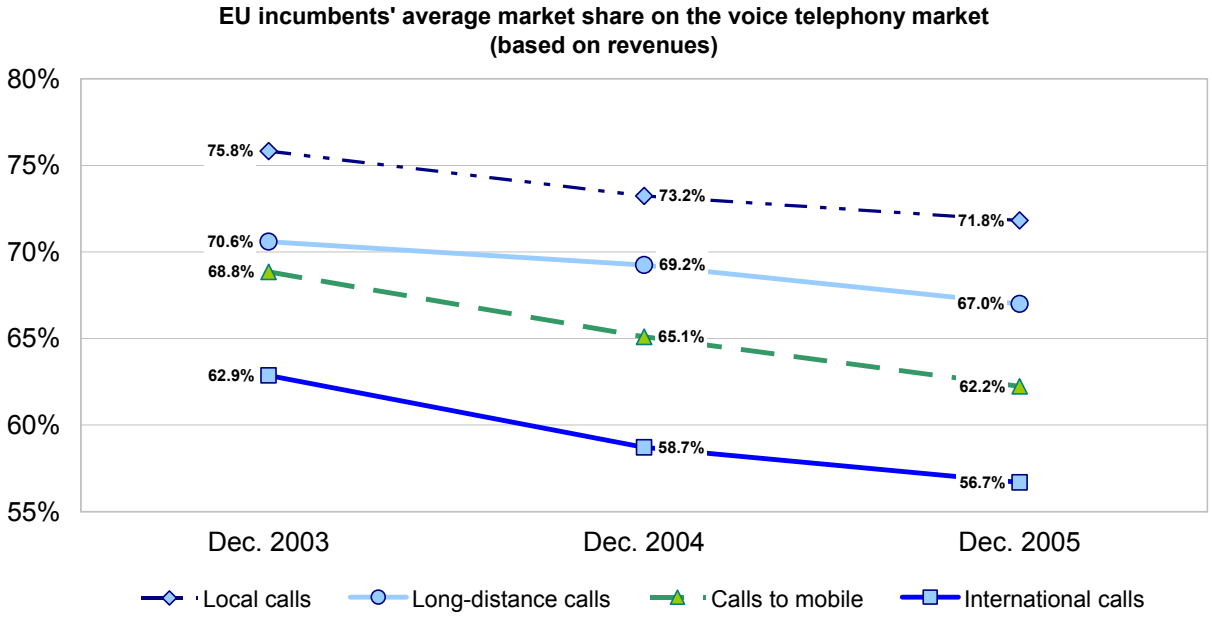


Figure 7

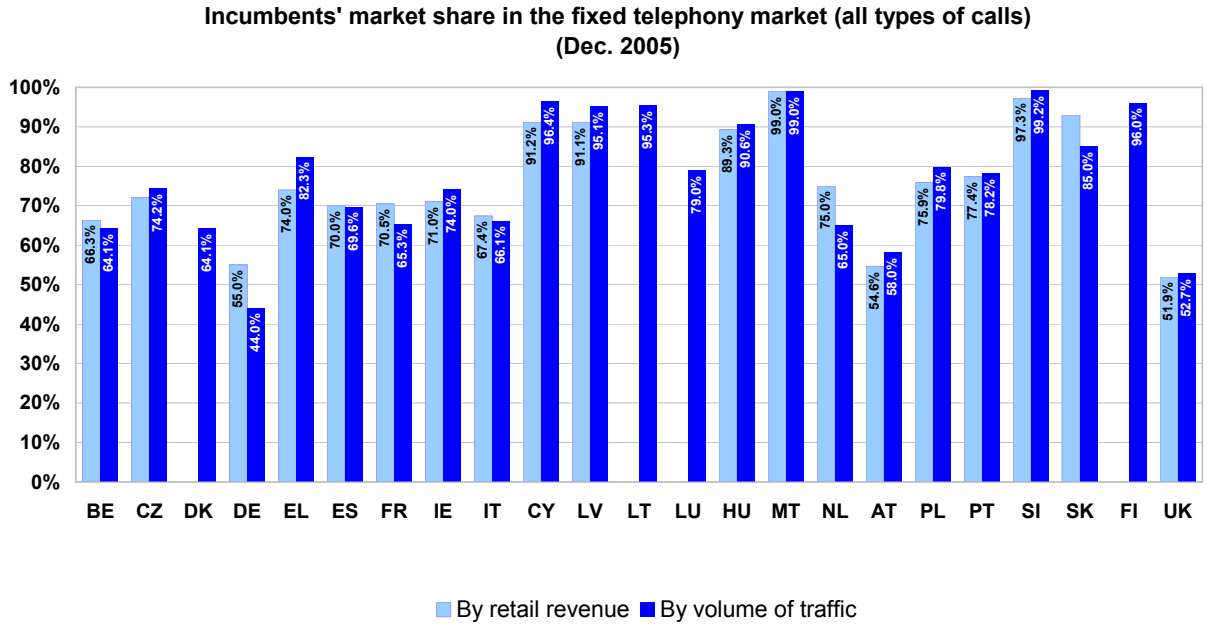


The figure for the local calls market is an average of countries that represent more than 91% of the EU population for all the period considered; data for long distance calls represent between 95% and 96% of the EU population for the period considered; data for calls to mobile represent around 97% for the period 2004-2005 and 95% in 2003; data for international calls represent between 97% and 98% of the EU population for the period considered.

1.2.2. Incumbent's overall market share in each Member State

The following chart shows the incumbents' market share in the overall fixed market by retail revenues and by minutes of outgoing traffic. All types of calls are included: local calls (local phone calls and local calls to internet), long distance, international calls and calls to mobile networks. Market share based on retail revenues does not include any access revenue.

Figure 8

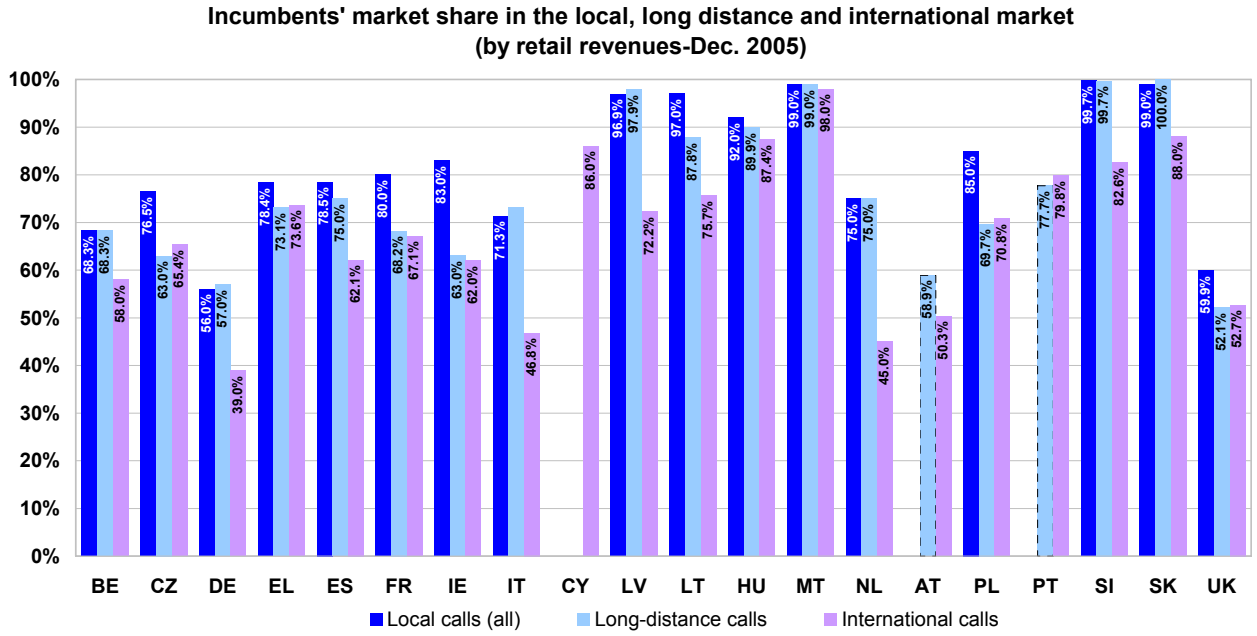


Denmark, Spain, Greece (international calls based on volume of traffic), Cyprus, Austria (international calls), United Kingdom: Market definitions include traffic/revenues generated from calling cards.
Belgium, Ireland, Italy: Data are not comparable with previous reports due to a change in the national data collection.
Estonia, Sweden: Data are confidential.
Denmark: Incumbent's market share by minutes of traffic in the first half-year 2006 is 64.13%.
Germany: Figures are NRA's estimates.
Hungary: Figures are NRA's estimates and refer to 5 fixed local incumbent operators.
The Netherlands: Figures are very rough NRA's estimates (extrapolation from 2004 data).
Portugal: Retail revenues do not include dial-up internet revenues.
United Kingdom: Data as of 31 March 2006.

1.2.3. Incumbent's market share in the different segments of the national market

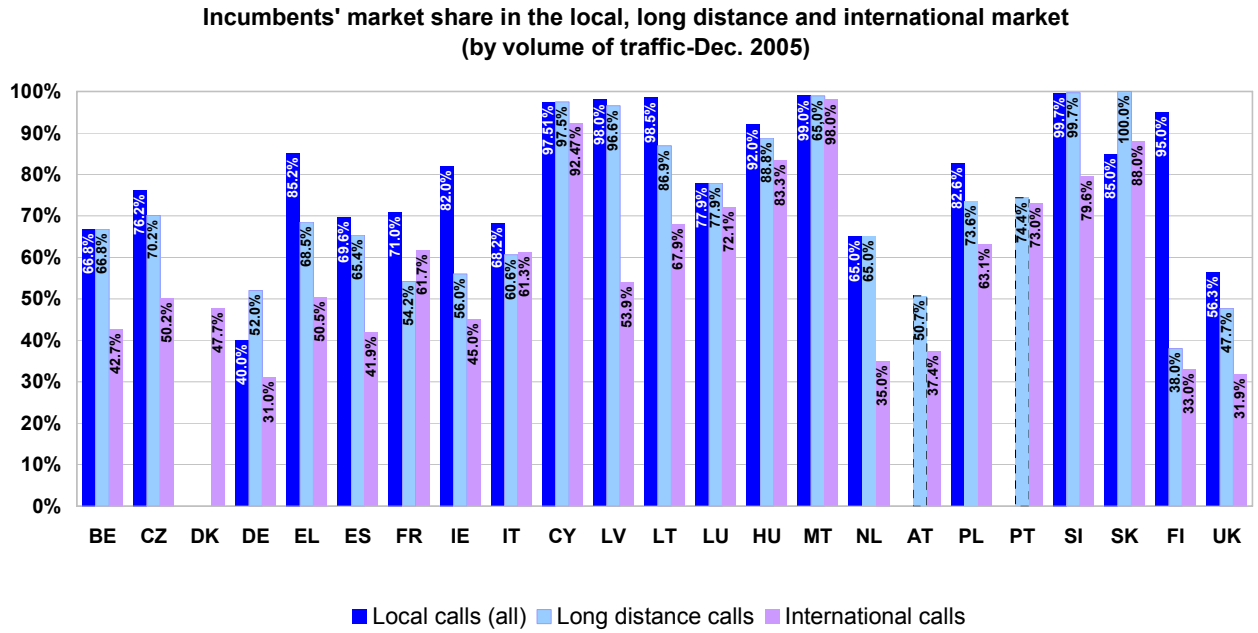
The following two charts show the incumbents' market share in the local, long-distance and international calls market by retail revenues and by minutes of outgoing traffic. The local calls market includes both local phone calls and local calls to internet.

Figure 9



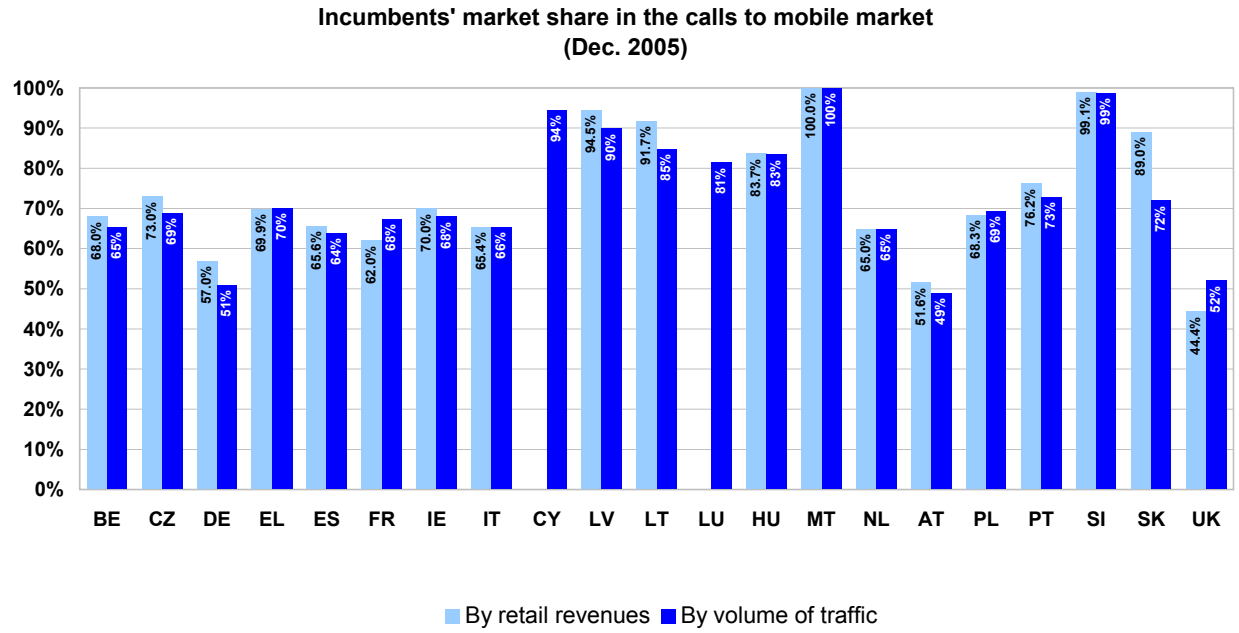
Data for local call include local phone calls and calls to the internet.
Belgium, Malta, Luxembourg, The Netherlands, Slovenia: There is no distinction between local and long-distance calls: figures refer to national calls to fixed numbers.
Belgium, Ireland, Italy: Data are not comparable with previous reports due to a change in the national data collection.
Denmark, Estonia, Cyprus (national calls), Luxembourg, Sweden, Finland: Data are confidential or not available.
Spain, Cyprus, Austria (international calls), United Kingdom: Market definitions include traffic/revenues generated from calling cards.
Germany: Figures are NRA's estimates.
France: There is no distinction between local and long-distance calls (calls are only national). The split between different calls is based on NRA's estimates.
Hungary: Figures are NRA's estimates and refer to 5 fixed local incumbent operators.
The Netherlands: Figures are very rough NRA's estimates (extrapolation from 2004 data).
Austria: Data for long distance calls are not strictly comparable with other countries because it includes also local phone calls. Data from previous reports on local and long distance calls are not comparable due to the change in the national data collection.
Portugal: Data for long distance calls are not strictly comparable with other countries because it includes also all local calls.
United Kingdom: Data as of 31 March 2006. Data for local calls to internet include some voice traffic.

Figure 10



Belgium, Cyprus, Malta, Luxembourg, The Netherlands, Slovenia: There is no distinction between local and long-distance calls: figures refer to national calls to fixed numbers.
Estonia, Sweden: Data are confidential.
Denmark: Data for local and long-distance calls are not available.
Germany: Figures are NRA's estimates.
France: There is no distinction between local and long-distance calls (calls are only national). The split between different calls are based on NRA's estimates.
Belgium, Ireland, Italy: Data are not comparable with previous reports due to a change in the national data collection.
Hungary: Figures are NRA's estimates and refer to 5 fixed local incumbent operators.
The Netherlands: Figures are very rough NRA's estimates (extrapolation from 2004 data).
Austria: Data for long distance calls are not strictly comparable with other countries because it includes also local phone calls. Data from previous reports on local and long distance calls are not comparable due to a change in the national data collection.
Portugal: Data for long distance are not strictly comparable with other countries because it includes also local phone calls. International calls market share as of September 2006 is 76.8%.
Finland: Figures are NRA's estimates.
United Kingdom: Data as of 31 March 2006. Data for local calls to internet include some voice traffic.

Figure 11

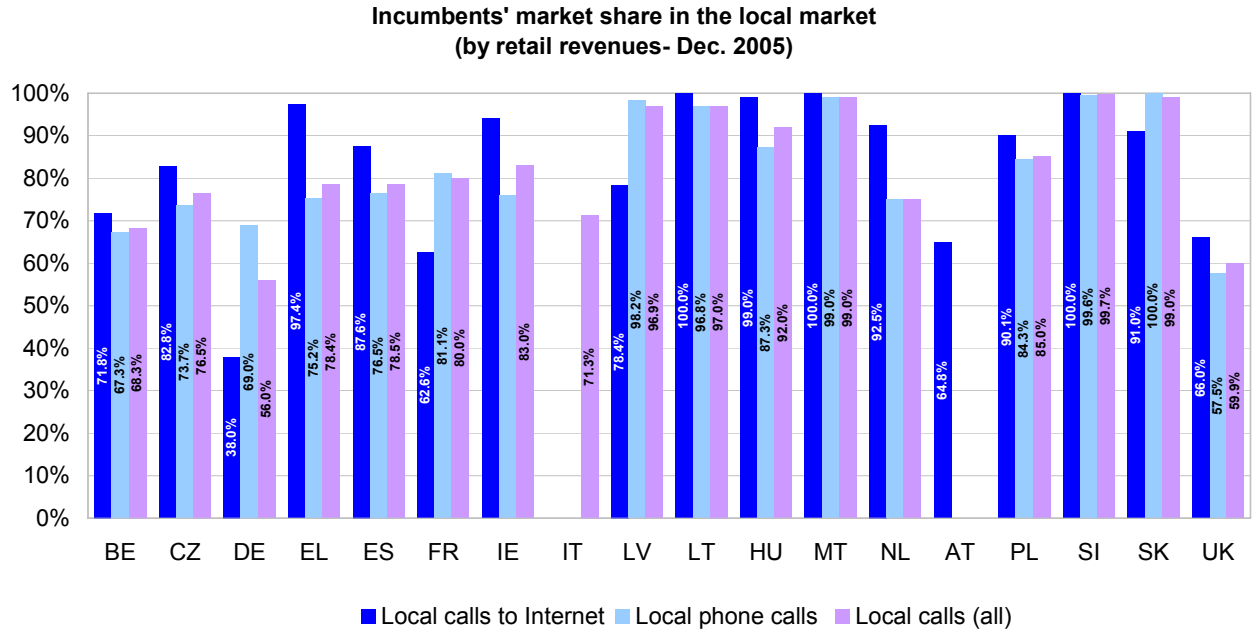


Belgium, Ireland, Italy: Data are not comparable with previous reports due to a change in the national data collection.
Denmark, Estonia, Sweden: Data are confidential or not available.
Germany: Figures are NRA's estimates.
Hungary: Figures refer to 5 fixed local incumbent operators. Figures are NRA estimates.
The Netherlands: Figures are very rough NRA's estimates (extrapolation from 2004 data).
Finland: The market for fixed-to-mobile is based on carrier pre-selection.
United Kingdom: Data as of 31 March 2006.

1.2.4. Incumbents' market share in the local calls market

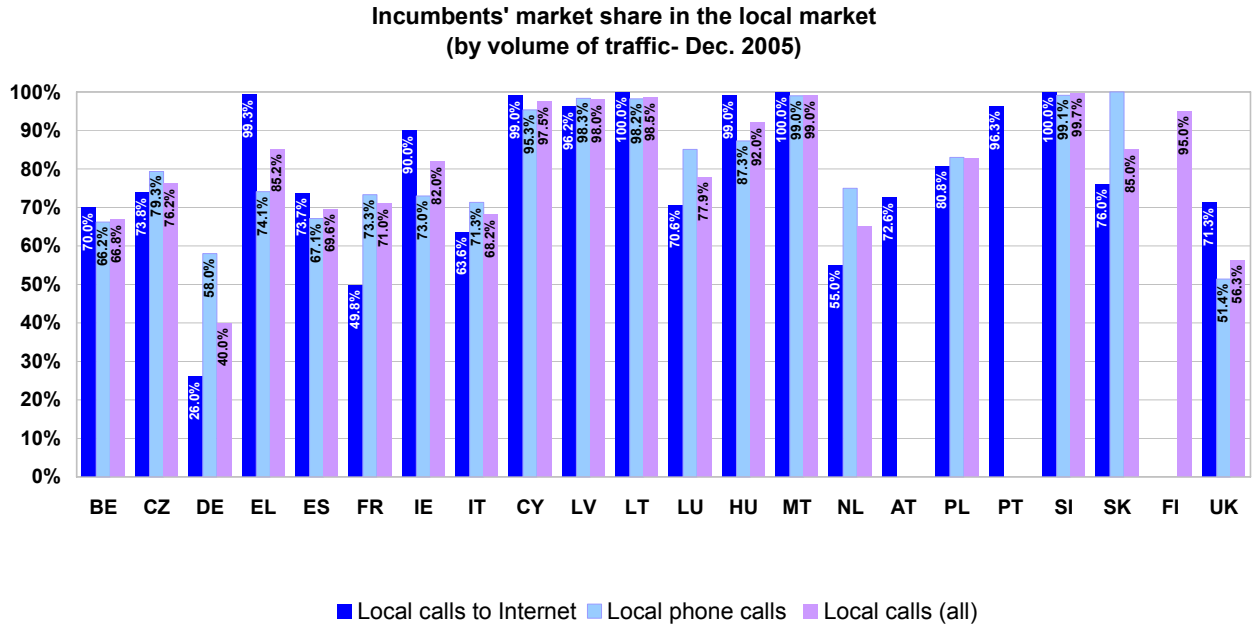
The following charts show the incumbents' market share in the local calls market by retail revenues and by minutes of outgoing traffic. Where possible, separate figures for local phone calls and local calls to internet are provided.

Figure 12



Local calls to internet include calls to both geographic and non-geographic numbers.
Except to Ireland and Lithuania, local calls to internet exclude flat tariffs.
Belgium, Malta, Luxembourg, The Netherlands, Slovenia: There is no distinction between local and long-distance calls: figures refer to national calls to fixed numbers.
Spain, United Kingdom: Market definitions include traffic/revenues generated from calling cards.
Denmark, Estonia, Cyprus, Luxemburg, Portugal, Finland, Sweden: Data are confidential or not available.
Belgium, Ireland, Italy: Data are not comparable with previous reports due to a change in the national data collection.
Germany: Figures are NRA's estimates.
France: The split between different types of calls are based on NRA's estimates. Data on local calls to the Internet refer to "pay as you go" calls billed to the subscriber by the operator. They do not include "internet access package" fees.
Italy: No separate figures are available for local calls to internet and local phone calls.
Hungary: Figures are NRA's estimates and refer to 5 fixed local incumbent operators.
The Netherlands: Figures are very rough NRA's estimates (extrapolation from 2004 data).
Austria: No figure available for local phone calls.
United Kingdom: Data as of 31 March 2006. Data for local calls to internet include some voice traffic.

Figure 13



Local calls to internet include call to both geographic and non-geographic numbers.
Except to Ireland and Lithuania, local calls to internet exclude flat tariffs.
Belgium, Cyprus, Malta, Luxembourg, The Netherlands, Slovenia: There is no distinction between local and long-distance calls: figures refer to national calls to fixed numbers.
Denmark, Estonia, Sweden: Data are confidential or not available.
Belgium Ireland, Italy: Data are not comparable with previous reports due to a change in the national data collection.
Germany: Figures are NRA's estimates.
France: The split between different calls is based on NRA's estimates.
Hungary: Figures are NRA's estimates and refer to 5 fixed local incumbent operators.
The Netherlands: Figures are very rough NRA's estimates (extrapolation from 2004 data).
Austria: No separate figures available for local phone calls.
Portugal: Data for local phone calls are not available. Local calls to internet market share as of September 2006 is 92.4%.
Finland: Data are NRA's estimates.
United Kingdom: Data as of 31 March 2006. Data for local calls to internet include some voice traffic.

2. CONSUMERS' CHOICE OF FIXED OPERATORS

This section analyses the fixed voice telephony market from the point of view of consumers. It gives information on the percentage of subscribers using an alternative provider other than the incumbent (for phone services and direct access) and the facilities used by alternative operators for the provision of voice telephony.

The data presented below have been provided by the national regulatory authorities and, unless otherwise indicated, report the position as of July 2006. Figures for countries not included in the charts are not available and are not always comparable with those published in previous reports due to changes in the methodologies and/or in the classifications used by the Member States. Furthermore, separate data for type of calls are not available in a number of Member States. Information on consumers' use of alternative providers is unavailable in a number of new Member States. For these reasons the figures presented in this section should be considered as indicative .

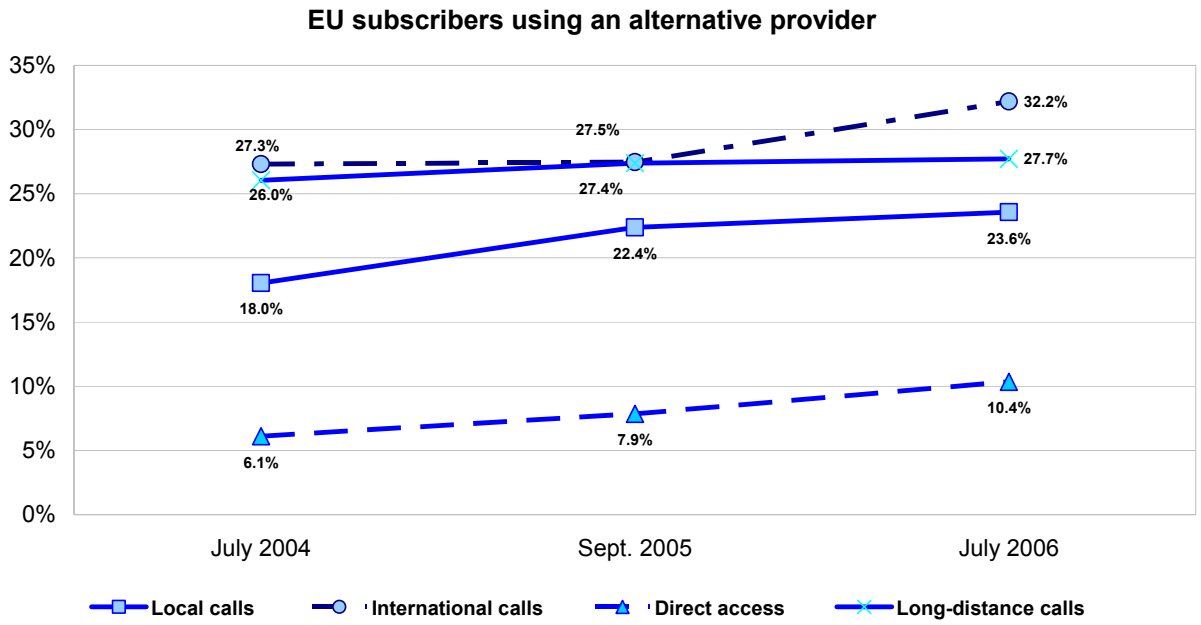
2.1. Percentage of subscribers actually using an alternative provider other than the incumbent

Incumbents' customers have the possibility of using an alternative provider, either by dialling a call-by-call prefix (carrier selection, CS) or by choosing to route all calls by default to the network of an alternative operator (carrier pre-selection, CPS). The use of an alternative operator through carrier selection/carrier pre-selection does not exclude the possibility of also using the incumbent's services. Direct access is also available to users through alternative operators' proprietary wireline/wireless access or through unbundled local loops leased from the incumbent.The following chart shows the percentage of EU subscribers (residential and business) using an alternative provider for local, long distance and international calls and for direct access.[3]

[3] The methodology for the calculation of the percentage of subscribers (residential + business) actually using a provider other than the incumbent operator for local calls is the following:
[X = sum of all alternative operators' subscribers (residential + business) with CPS contract + sum of all alternative operators' subscribers (residential + business) with direct access for voice telephony (ULL and proprietary infrastructure)]/[total number of residential + business subscribers of the incumbent and new entrants, with a standard/party/group telephone lines access. Direct telephone line access provided by an alternative operator can either be through proprietary infrastructure or full ULL (active lines)]. The same calculation applied for long distance and international calls, with the addition to [50% of all alternative operators' subscribers (residential and business) with CS contract] to the nominator (top number). It should be noted that in many Member States calls are only national and the methodology for long distance is the same as for local calls.
The percentage of subscribers actually using a provider other than the incumbent for direct access is calculated as the total number of subscribers with direct access, fully ULL connection or with a cable access owned by an alternative operator.

As of July 2006, more than 32% of EU subscribers used an alternative provider to route international calls, 28% for long distance calls and 24% for local calls. At the same time, direct access from alternative providers was used by 10.4% of EU subscribers. Since last year, the percentage of subscribers using an alternative provider has significantly grown for international calls and direct access. The trend of the EU average should be considered as indicative, since not all data are available for all Member States

Figure 14

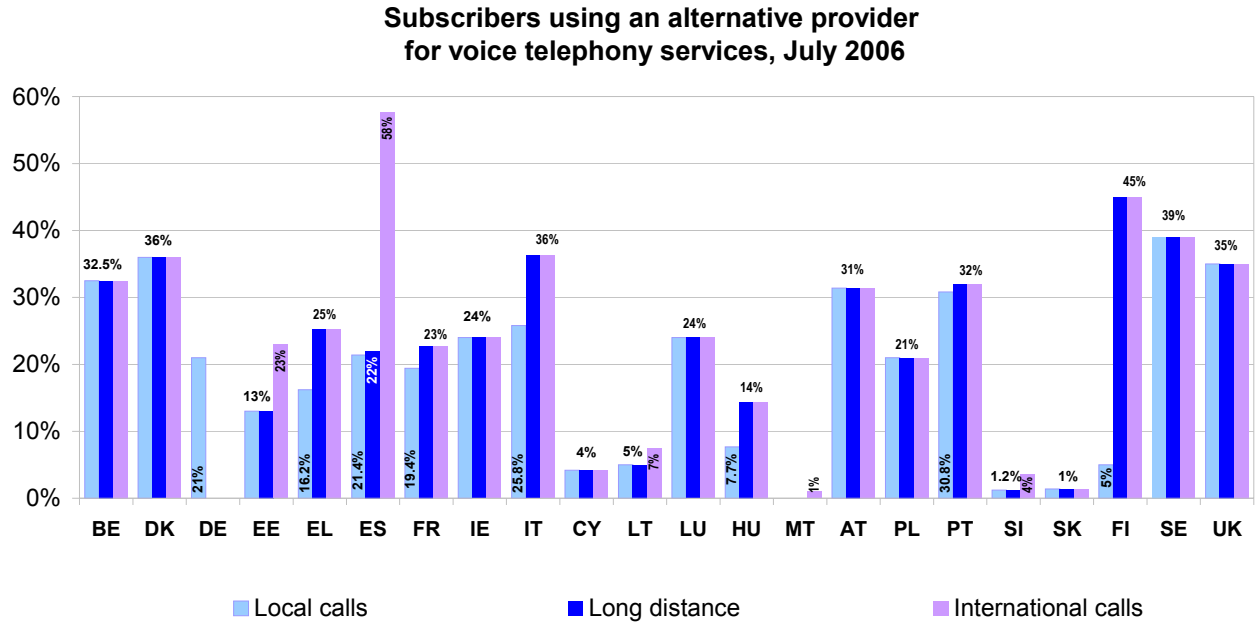


Data are not comparable with previous implementation reports due to different figures reported by NRAs.
The trend is indicative since not all data are available for all countries. Data for local calls refer to 78% of EU population in 2004, 92% in 2005 and 94% in 2006. Similarly, data on long-distance and international calls in 2004 refer, respectively, to 75% and 78% of EU population while in 2005 and 2006 both type of calls refers to 74% and 76%. Data on direct access refer to 79% of EU population in 2004, 89% in 2005 and 91% in 2006.

The following charts illustrate the percentage of subscribers using an alternative provider for voice telephony services through carrier selection and/or carrier pre-selection and/or direct access. Where available, separate figures for local and long-distance/international calls are given.

Figures for some countries are not comparable with 11th Implementation Report due to a change in the national data collection or to different data provided by NRAs.

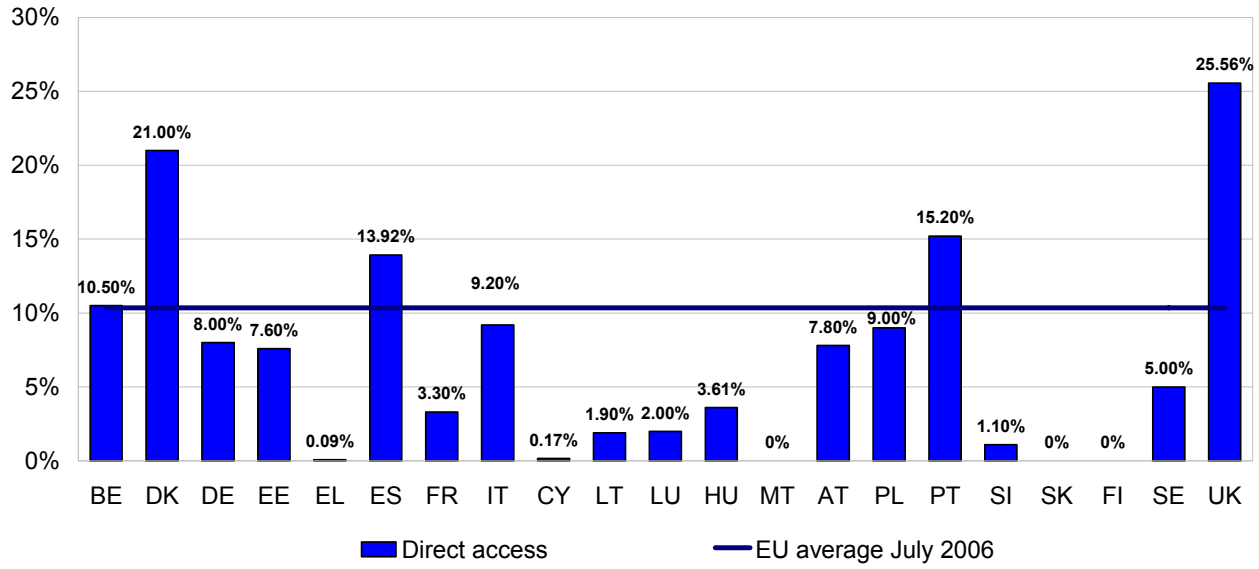
Figure 15



Belgium: Data are not comparable with previous report due to a change in the national data collection.
Czech Republic, Latvia, Netherlands: No data available.
Denmark, Sweden, Belgium, Ireland, Cyprus, Austria, Poland, Slovakia, Sweden, United Kingdom: Data provided by NRAs do not distinguish between different types of calls.
Estonia, Belgium, Cyprus, Luxemburg, Slovenia, Malta, Ireland: Calls are only national (there is no distinction between local calls and long-distance calls).
Greece: Data refer to 31 December 2005.
Austria: Figure includes only share of carrier pre-selection; data refer to 31 December 2005.
Finland: Estimated value.
United Kingdom: The figures exclude indirect access.

Figure 16

Subscribers using an alternative provider for direct access, July 2006



Direct access is the total number of subscribers with direct access, fully LLU connection or with a cable access owned by an alternative operator.
Czech Republic, Latvia, Netherlands, Ireland: No data available.

Greece: Data are not comparable with 11th Implementation Report.
Malta: No alternative operator.
Austria: Data refer to 31 December 2005.
United Kingdom: The figure excludes wholesale line rental.

2.2. Facilities used by new entrants for the provision of voice telephony

This section provides information on the facilities used by new entrants to offer voice telephony, particularly to residential users.

Data have been provided by the national regulatory authorities and refer to July 2006.

Alternative operators can route users to their network either through a carrier selection system (CS), whereby a user dials a prefix on a call-by-call basis, or by carrier pre-selection (CPS), where the user's calls are routed to the new entrants' network on an automatic basis. New entrants can also provide voice services via direct access to users (through proprietary wire/wireless access or through unbundled local loops leased from the incumbent).

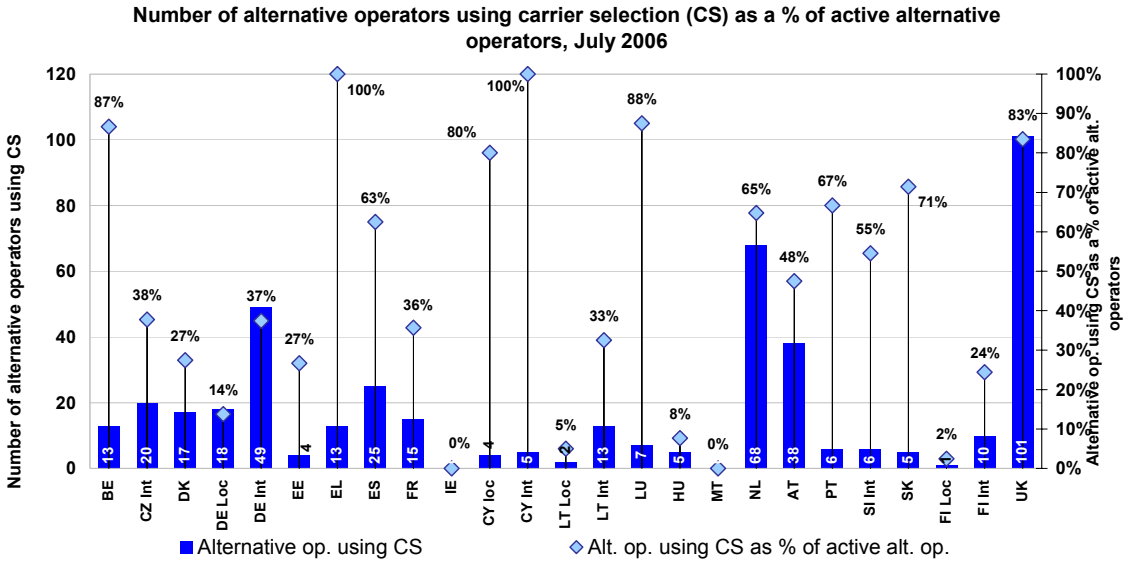
These facilities are not mutually exclusive and very often the same operator uses all three at the same time depending on the type of customers (business or residential), the type of services (local or long-distance/international calls), the geographical area, the availability of LLU, etc. The following figures should therefore be read separately and not aggregated as country totals.

The following two charts show the number of operators using carrier selection and/or carrier pre-selection by Member State for July 2006. Where possible, separate figures for types of calls are given; in the other cases separate data were not available or operators do not differentiate the data by type of calls. In a number of countries operators do not differentiate between local and national calls. Figures for some countries are not comparable with 11th Implementation Report due to a change in the national data collection or to different data provided by NRAs.

The charts also present an estimate of the number of operators using carrier selection and/or carrier pre-selection as a percentage of the number of active alternative operators (excluding the incumbent). The figures do not show to what extent the operators are offering services to residential and/or business users; nation-wide or only in local areas; in some cases it is not possible to discern whether operators offer all types of calls or only long-distance and international calls.

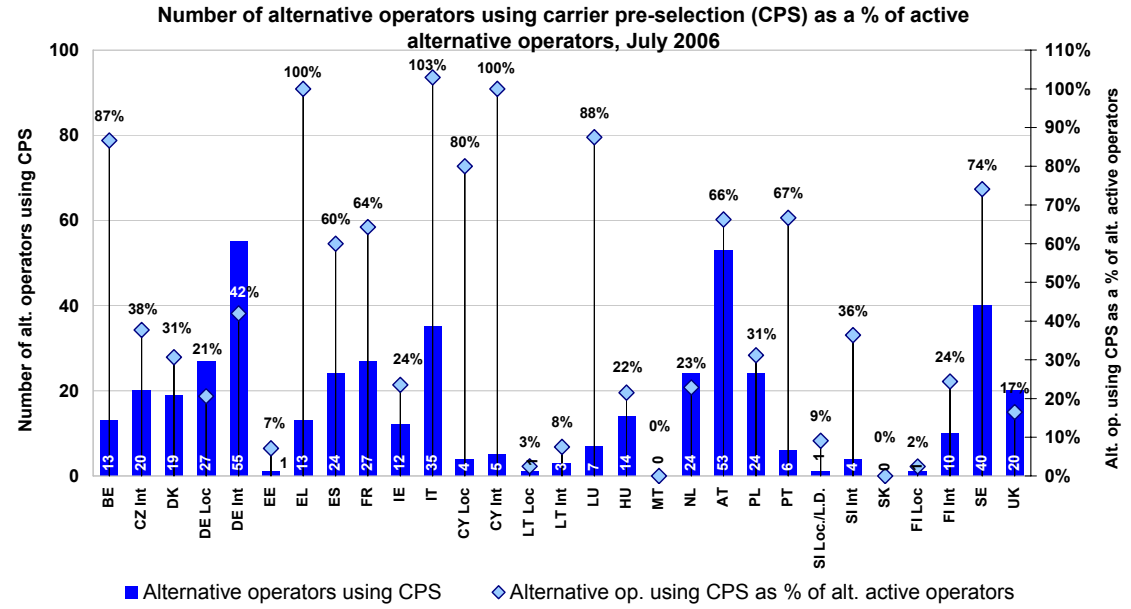
As of 1 July 2006, 46% of EU alternative operators offered the voice telephone service through carrier pre-selection and 39% used carrier pre-selection.

Figure 17



Italy, Latvia, Poland, Sweden: Data not available.
Malta: No alternative operators.
Portugal: Data are not comparable with 11th Implementation Report. There are 9 alternative operators in Portugal, of which 6 are providing CS and CPS to residential customers.
Slovenia: National carrier selection is available since October 2006.

Figure 18



Greece, Austria: Data refer to 31 December 2005.
Latvia: Data not available.
Malta: No alternative operators.
Finland, Portugal: Data are not comparable with 11th Implementation Report.
United Kingdom: The decrease since a year ago has been the consequence of mergers between operators.

3. PUBLIC NETWORK INTERCONNECTION

3.1. Call termination on incumbent's fixed network

This section analyses the interconnection charges for call termination on the incumbent's fixed network. The figures show the charges per minute based on the first three minutes of a call at peak-time, VAT excluded.

The figures may have been approved by the NRA or simply agreed between operators, where the legal framework does not require NRA approval.

The following chart shows the EU weighted average for the interconnection charges since 2004 for local level, single and double transit. The exchange rates for 2006 have been applied to the years 2004-2005 for the non euro-zone countries. Since July 2004, the EU weighted average charge for call termination on the incumbent fixed networks has decreased by 6.5 % for local level, by 8,5% for single transit and by 10% for double transit. Among this generalised downward trend, the major changes since last year have occurred in Malta (-32%) for all levels, in Poland (-25%), Hungary (-26%) and Slovakia (-24%) for single transit, and in Hungary (-26%), Slovakia (-24.3%), and Poland (-24%) for double transit call termination.

Interconnection charges, for most of the new Member States, are still higher than those for EU15.

Figure 19

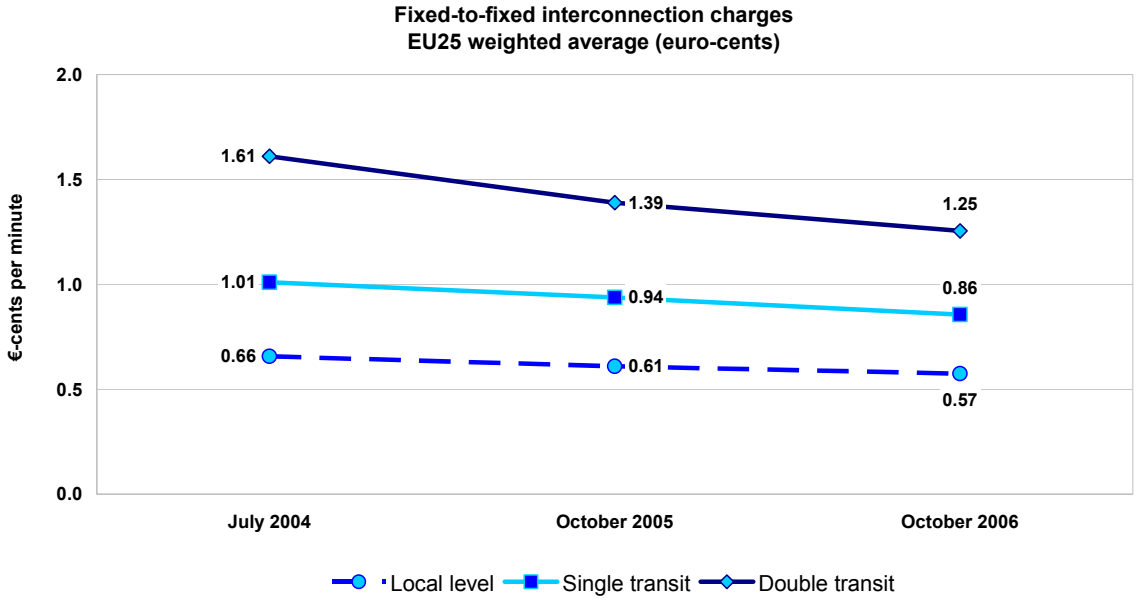
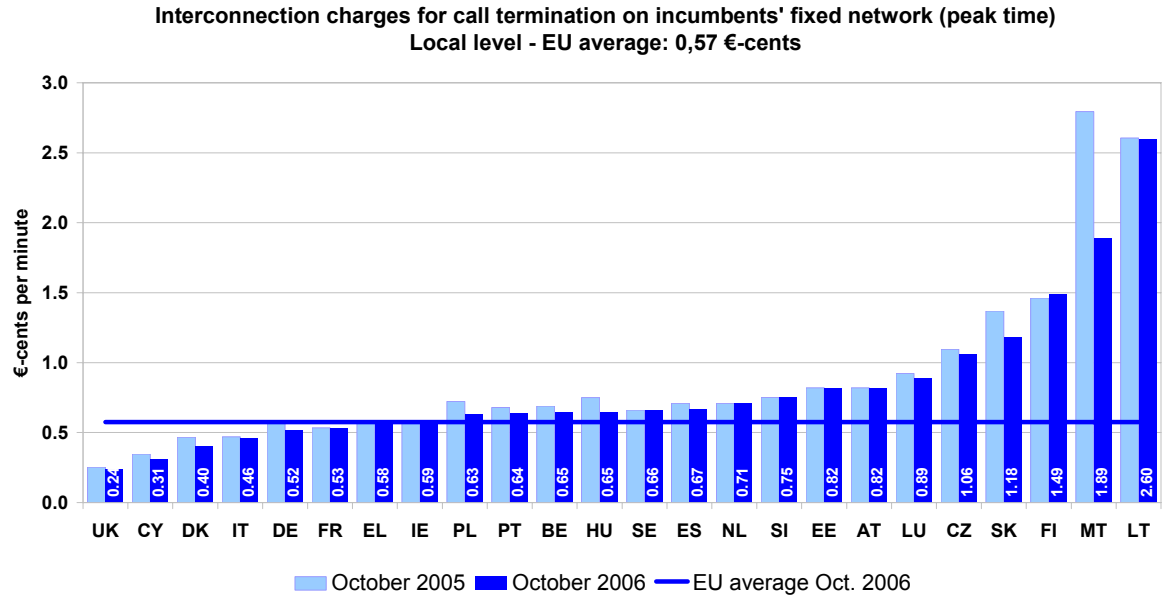
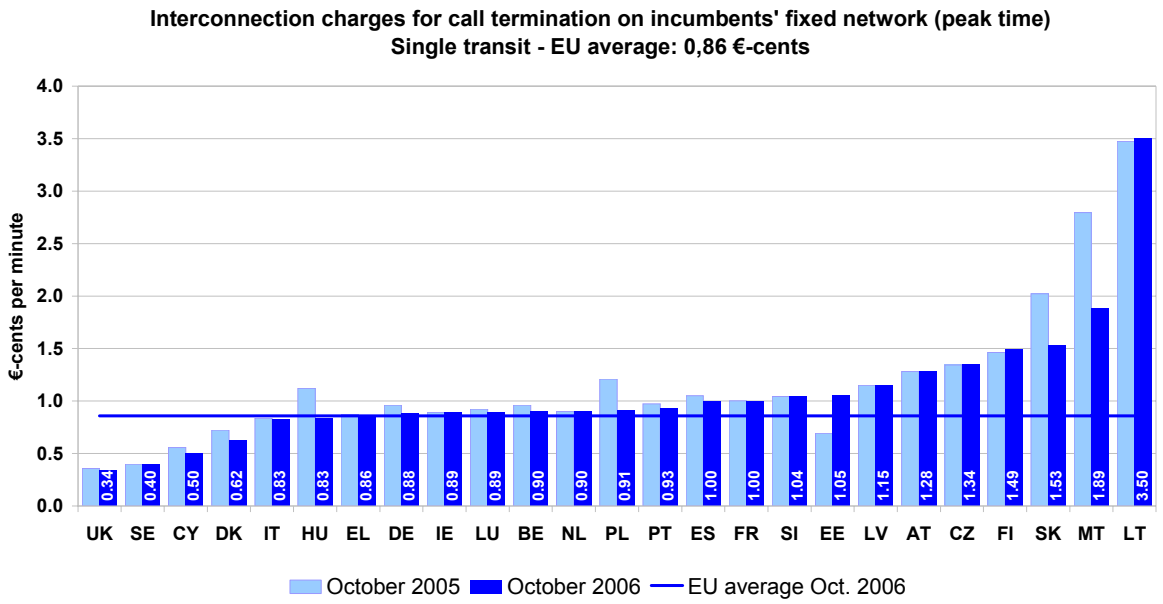


Figure 20



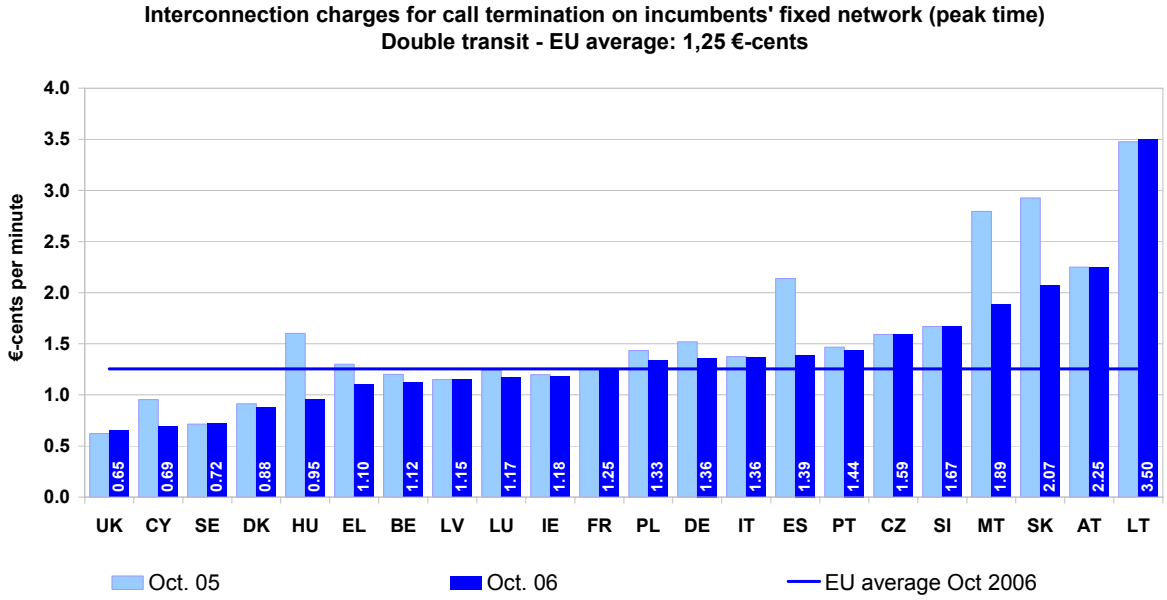
Spain: Half of total interconnection traffic is carried out via capacity based interconnection for which the price is significantly lower
France, Belgium, Spain: Price does not take account of IC linking fee
Latvia: Interconnection at local level not offered.
Hungary: Prices refer to the main incumbent operator Matav
Malta: Only one level of interconnection exists.
Luxemburg: Local level coincides with single transit.
Finland: Value refers to an average among 43 SMP operators. Charges vary between 1,261€cents/min - 1.999€cents/min.

Figure 21



Spain: Half of total interconnection traffic is carried out via capacity based interconnection for which the price is significantly lower
France, Belgium, Spain: Price does not take account of an annual linking fee.
Lithuania: The national IC includes single and double transit.
Hungary: Prices refer to the main incumbent operator Matav.
Malta: Only one level of interconnection exists.
Finland: Value refers to an average among 43 SMP operators. Charges vary between 1,261€cents/min - 1.999€cents/min.
Luxemburg: Local level coincides with single transit.

Figure 22



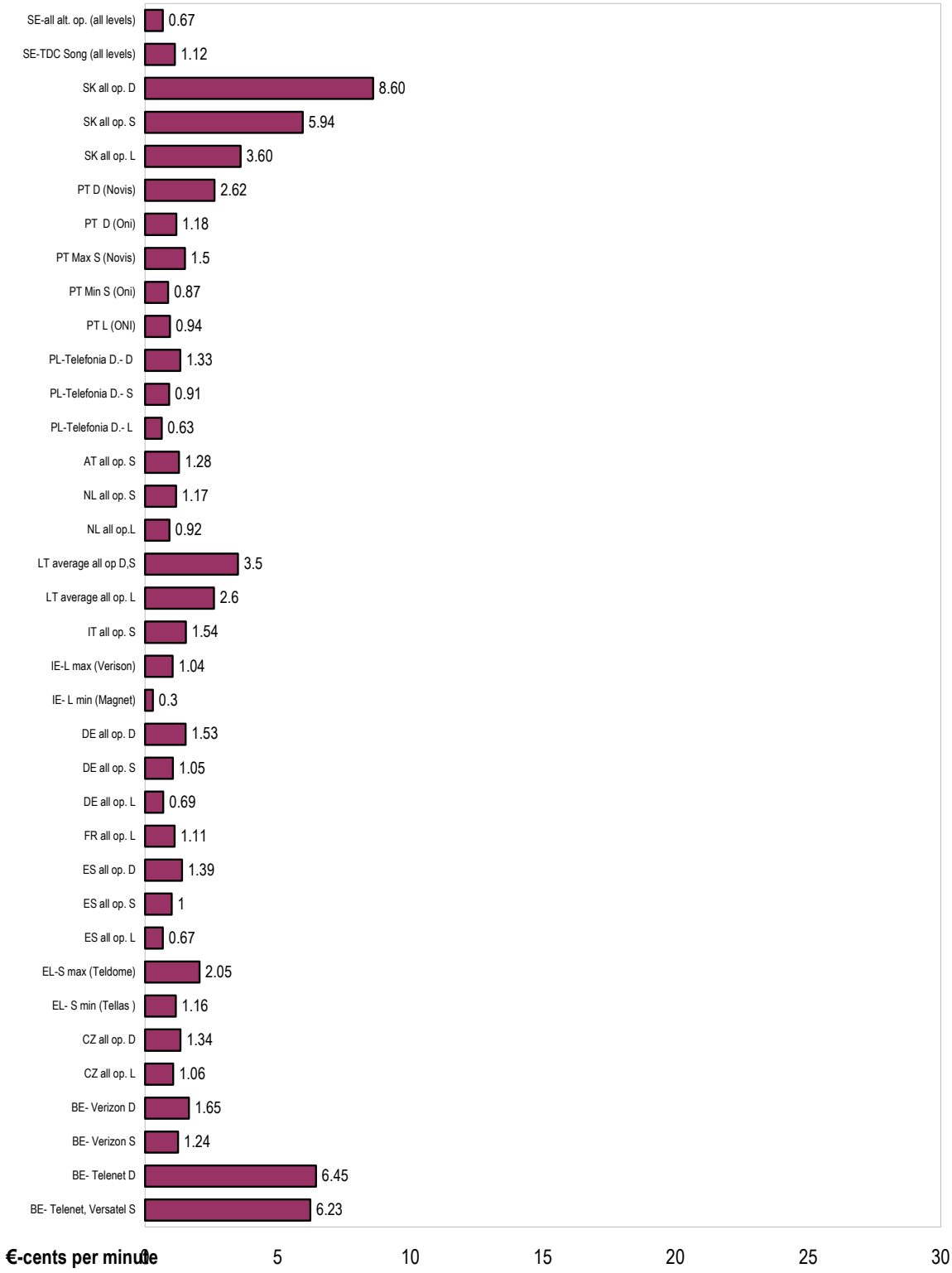
Czech Republic: Price in place till 2 May 2006. Price are currently not regulated.
Estonia, Finland: Data are not available

Spain: Half of total interconnection traffic is carried out via capacity based interconnection for which the price is significantly lower
France, Belgium, Spain: Price does not take account of annual linking fee.
Lithuania, Luxemburg: Double transit does not exist. There is a national IC including single and double transit.
Hungary: Prices refer to the main incumbent operator Matav
The Netherlands: Data are not available, price not regulate

3.2. Call termination on alternative operators' fixed networks

Figure 23

I.C. charges for call termination on main alternative operators fixed networks (peak) in €-cents,October 2006



Legend:
L: Local level; S: Single transit; D: Double transit
Max./Min.= Maximum/Minimum

Alt. Op.= Alternative operators
Cyprus, Luxemburg, Hungary, Slovenia, Finland, United Kingdom: Data are not available.
Estonia, Denmark: Data are confidential.
France: Price does not take account of annual linking fee. Data refer to IC charges for geographic number.
Malta: No alternative fixed operators.
Germany: For 32 alternative network operators a uniform tariff for termination services has been imposed on the basis of a dispute settlement.

3.3. Call termination on mobile networks

This section presents the per-minute interconnection charges for fixed call termination on the networks of mobile operators based on the first three minutes of a call at peak rate. Where available charges for call termination on the networks of 3G operators and service providers (MVNO and resellers) have been included. Charges are for calls originated in the same countries

In the following charts information is shown for 88 mobile operators in the EU (representing almost 100% of the EU mobile market).

Following the analysis of the market for mobile call termination, mobile network operators have been notified as having Significant Market power (SMP) on their mobile network. For this reason the split between SMP and non SMP operators used in the previous report is no longer applicable. It should also be noted that not all SMP mobile operators have been imposed remedies on termination charges.

Apart from Ireland, Slovenia and Finland, termination charges applied for both fixed and mobile calls (no information are available for Germany). Where available, information on mobile-to-mobile termination rate have been indicated in the notes.

Data have been collected by the NRAs, and refer to 1 October 2006.

3.3.1. EU and national average

The following chart shows the trend in the (weighted) average fixed-to-mobile termination charges for all mobile operators in the EU since July 2004.

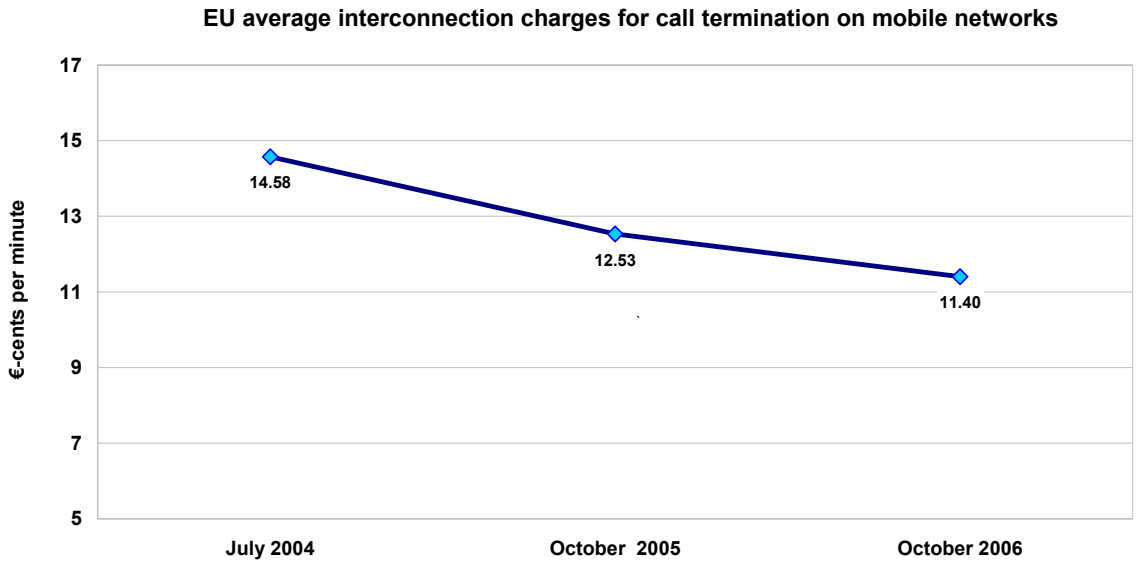
The national averages for all mobile operators in each Member States are weighted average charges based on the number of subscribers and the termination rate of each operator at 1 October 2006.

Where available, data for 3G operators and service providers have been taken into account. The 2006 exchange rates have been applied to the non euro-zone countries for previous years.

The trend shows that termination charges have continued to decrease and at October 2006 the EU average termination charge was 9% lower than one year before (-21.8% respect July 2004). The most significant reductions have occurred in France (-24%). Reduction around 20% have taken place in Denmark, Austria, Portugal and Sweden. In Germany, Greece, Spain, Luxembourg, Hungary, The Netherlands, Slovenia and Sweden there have been reductions from 11% to 17%. The average mobile termination charge has increased in the United Kingdom (+9.2%).

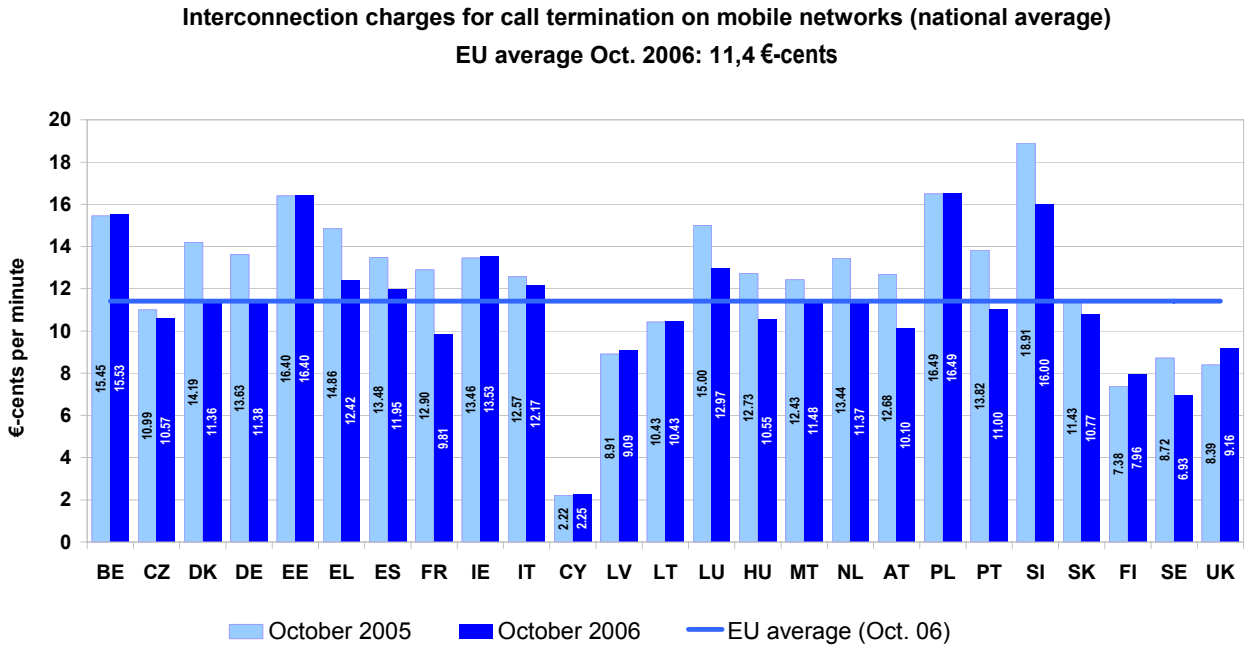
Despite the continuing decline, termination charges remain on average more than 9 times higher than the fixed interconnection charges (double transit). Differences between 10 and 14 times the double fixed interconnection charges are found in Belgium, Denmark, Greece, Ireland, Luxembourg, Hungary, Poland, Slovenia, Sweden, United Kingdom.

Figure 24



Figures are not comparable with previous reports, because of different data reported by NRAs for 2005 and 2004

Figure 25



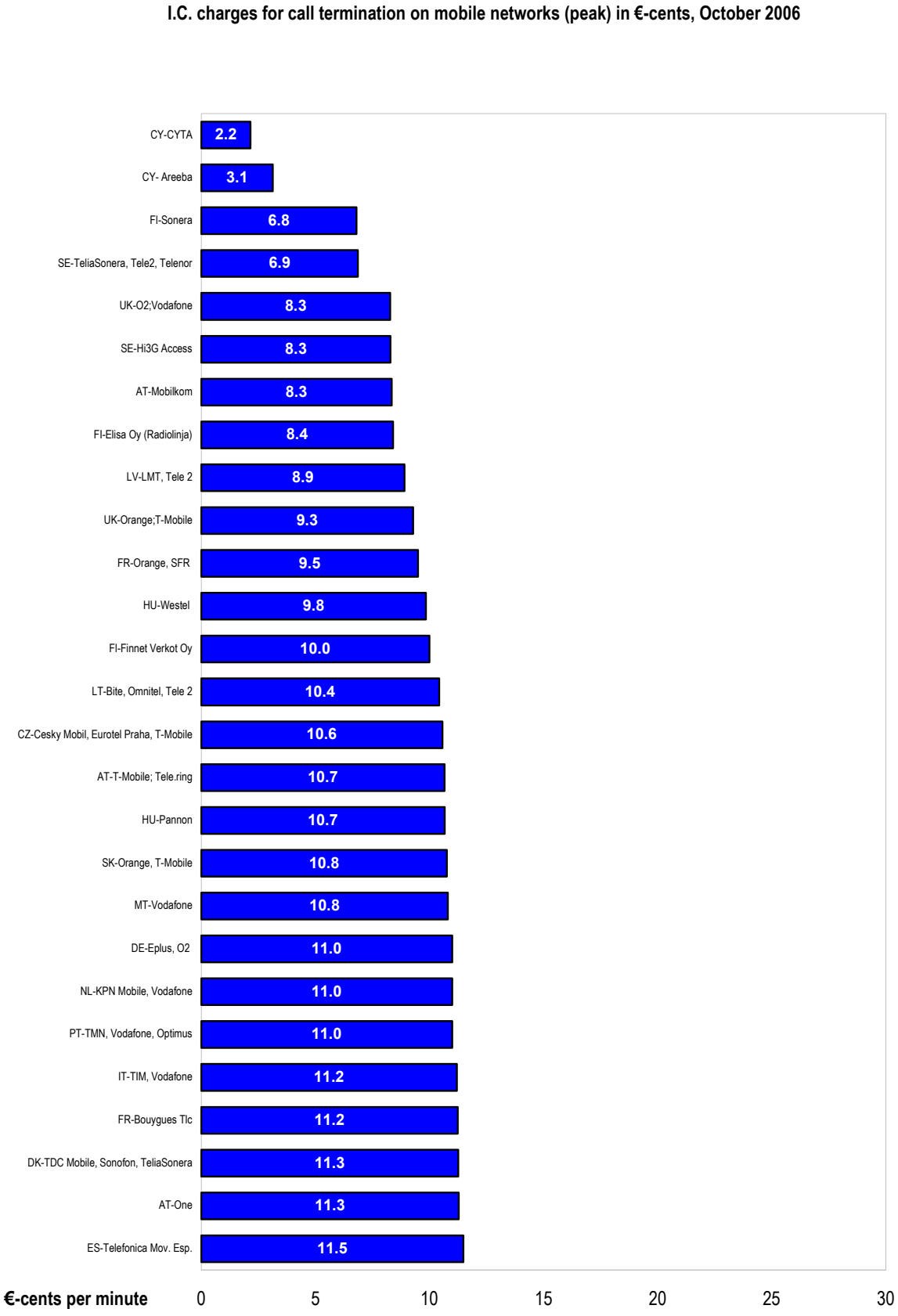
Figures might not be comparable with previous reports, because of different data reported by NRAs for 2005 and 2004.
Where possible, 3G operators and MVNO/resellers have been taken into account. In Ireland, The Netherlands, Finland, the figures for 2005 and 2006 do not refer to the same operators.
Belgium: New interconnection charges are applied from November 2006. The new national average will be 11.78 €-cents.

Germany: New interconnection charges are applied from November 2006. The new national average will be 9.1 €-cents.
Estonia: Charges for two operators may change depending on the volume of calls (below or above 3 million minutes per month). In the chart the second option is presented
France: Mainland operators only. Overseas operators not included.
Poland: New interconnection charges are applied from 15 October 2006. The new national average will be 11.78 €-cents.
Finland: Fixed to mobile charges only apply when the call is made through a prefix code or carrier pre-selection. In other cases, local operators determine the local network charges and mobile operators determine the mobile call charges.

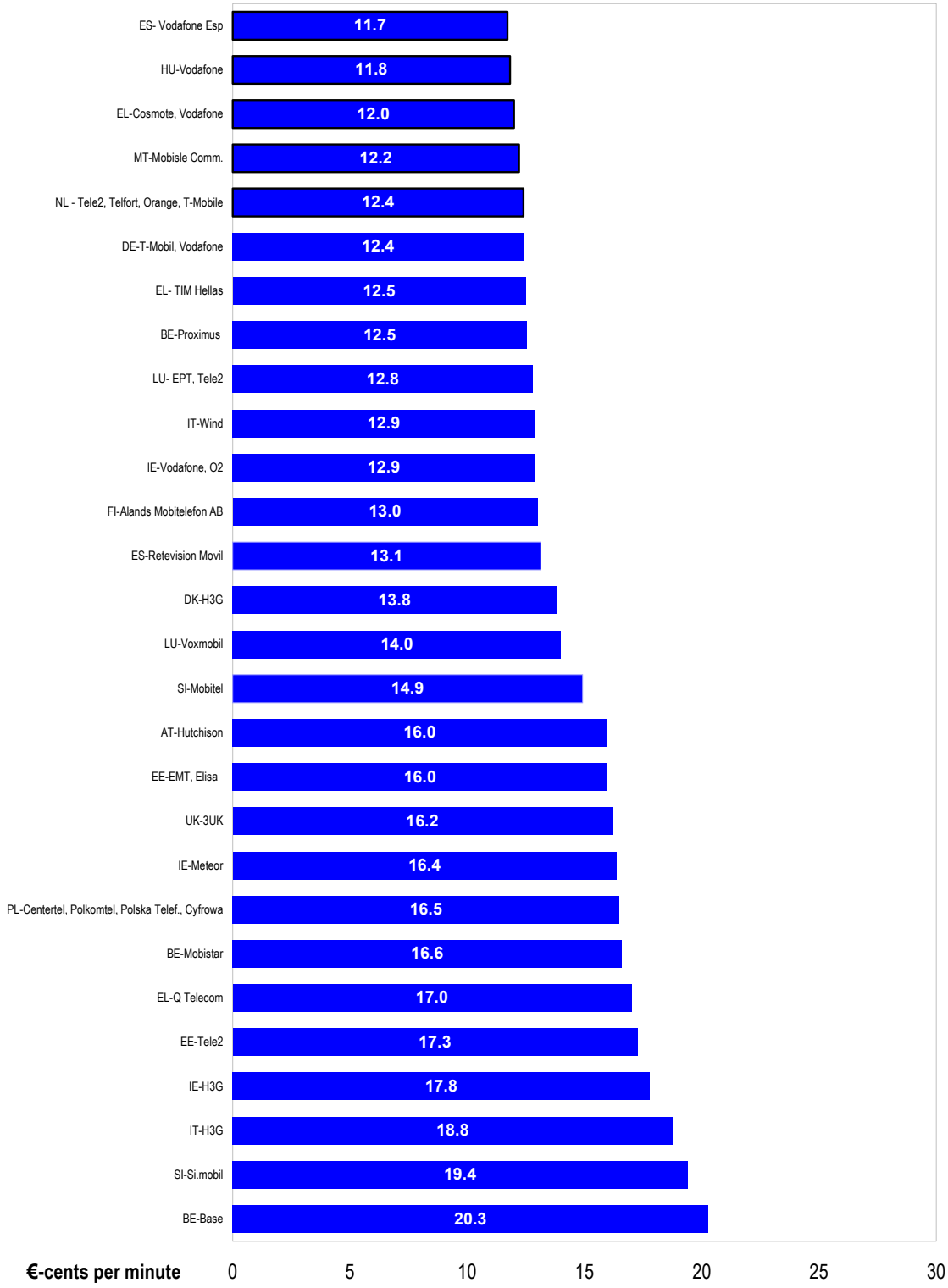
3.3.2. Mobile operators' termination charges

The following charts show the individual fixed-to-mobile interconnection charges for 88 mobile operators in the EU. Apart from Cyprus which represents an exception (2.15 € cents) the lowest charge is found in Finland (6.8 € cents) whereas the highest charge is found in Belgium at 20.27 € cents (almost three times that of the cheapest).

Figure 26


I.C. charges for call termination on mobile networks (peak) in €-cents, October 2006
CY-CYTA 2.2
CY- Areeba 3.1
FI-Sonera 6.8
SE-TeliaSonera, Tele2, Telenor 6.9
UK-O2;Vodafone 8.3
SE-Hi3G Access 8.3
AT-Mobilkom 8.3
FI-Elisa Oy (Radiolinja) 8.4
LV-LMT, Tele 2 8.9
UK-Orange;T-Mobile 9.3
FR-Orange, SFR 9.5
HU-Westel 9.8
FI-Finnet Verkot Oy 10.0
LT-Bite, Omnitel, Tele 2 10.4
CZ-Cesky Mobil, Eurotel Praha, T-Mobile 10.6
AT-T-Mobile; Tele.ring 10.7
HU-Pannon 10.7
SK-Orange, T-Mobile 10.8
MT-Vodafone 10.8
DE-Eplus, O2 11.0
NL-KPN Mobile, Vodafone 11.0
PT-TMN, Vodafone, Optimus 11.0
IT-TIM, Vodafone 11.2
FR-Bouygues Tlc 11.2
DK-TDC Mobile, Sonofon, TeliaSonera 11.3
AT-One 11.3
ES-Telefonica Mov. Esp. 11.5
€-cents per minute
0
5
10
15
20
25
30

I.C. charges for call termination on mobile networks (peak) in €-cents,October 2006



Belgium: From 23 November 2006 mobile termination rate are the following: 9.67 €-cents for Proximus, 13.6 €-cents for Mobistar and 13.37 €-cents for Base.
Czech Republic: The prices are valid since 2 May 2006.
Germany: Data refer to fixed-to-mobile. No information available concerning mobile to-mobile. From 23 November 2006 mobile termination rate are the following: 8.78 €-cents for T-Mobile and Vodafone, 9.94 €-cents for E-plus and O2.
Estonia: Data refer to fixed-to-mobile. Termination charge from mobile network to EMTS is 12.9€cents/min for Elisa (no information available for EMT and Tele2). Charges in the chart for Elisa and EMT refer to call volume over 3 million minutes per month. Charges for smaller volumes are higher: 17.58 €-cents/min for EMT and 10.11 €-cents/min for Elisa.
Spain: Prices in the chart are valid from 16 October 2006 to March 2007.
Ireland: Data refer to fixed-to-mobile. Termination charges from mobile network are the following: 13.4 €-cents for O2; 13.33 €-cents for Vodafone; 16.36 €-cents for Meteor; 17.78 €-cents for H3G.
Poland: Prices valid up to 15 October 2006. Mobile termination rate after 15 October 2006 will be 1.17 €-cents for all operators.
Slovenia: Data refer to fixed-to-mobile. Termination charges from mobile network are the following: 0.1 €-cents for Si.mobil and 0.07 €-cents for Mobiltel.
Finland: Fixed to mobile charges only apply when the call is made through a prefix code or carrier pre-selection.

3.4. Leased lines interconnection charges

This section shows the monthly rental and the one-off charges for short-distance leased lines (local ends, excluding VAT), up to 2 and 5 km, provided by the incumbent operator to other interconnected operators.

The distance refers to the radial distance between the customer local end leased line and the point of interconnection.

It should be noted that in some cases data include the handover costs, while in other cases these costs are excluded.

National Regulatory Authorities have provided these figures through the questionnaire for the 12th Implementation Report. Unless otherwise indicated; figures indicate the position in October 2006.

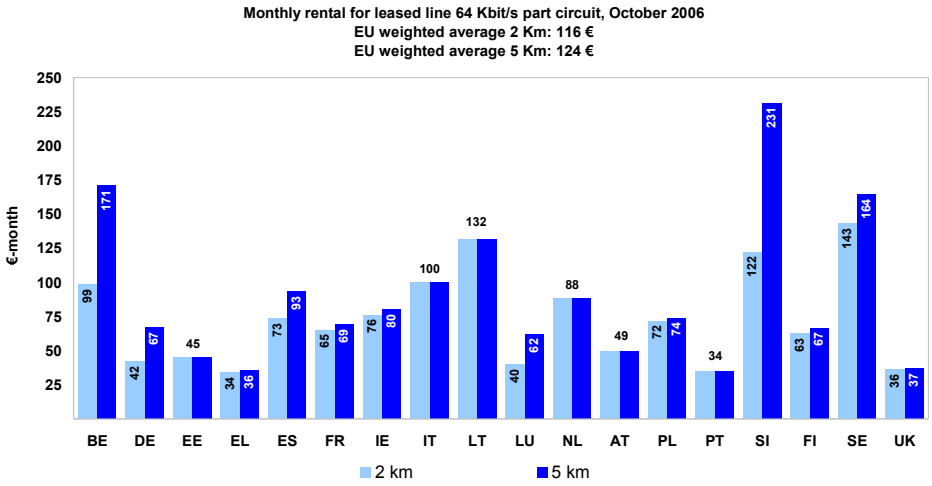
Compared to last year, the prices for monthly rentals (all capacities) have decreased in several countries (France, Spain), whereas the highest price is in Slovenia (231€ for 64kbit/5km distance: 3828 € for 34Mbit/5km) and the cheapest price can be found in Greece, Portugal and UK (between 34 and 37 € for 64 Kbit capacity). One-off charges for leased lines have remained stable in 6 countries (Belgium, Germany, France, Ireland, Austria and Portugal); in Greece, the increase in price compared to last year was spectacular (close to 200% for 64Kbit and more than 100% for 2Mbit lines) whereas in Denmark, the price drop was above 90% for the 2Mbit/sec circuit compared to last year. The cheapest monthly fee is to be found in Cyprus (between 32 and 77 € for 2 Mbit).

The highest one-off fee price is in Latvia for 2 Mbit (3261 €) while the lowest price in this capacity can be found in Lithuania: 291 € compared to 1196 € last year.

Looking at higher speed leased lines (34Mbit/sec), one-off fee is significantly high in Denmark.

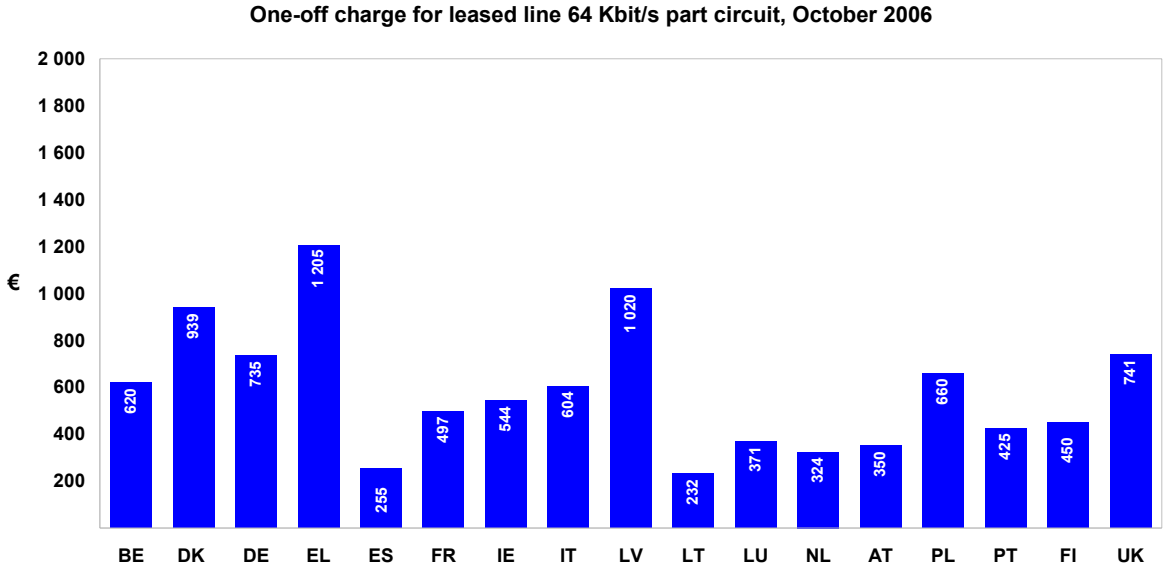
3.4.1. 64 Kbit/sec part circuit

Figure 27



Czech Republic, Latvia, Malta: Service not offered.
Germany: Price authorized as of 1 November 2006. Prices are lower with long-term contracts.
France: Data refer to local leased lines.
Cyprus, Hungary, Slovakia: Data are not available.
Lithuania: End circuit not offered, price refers to wholesale leased lines.
Luxemburg: Minimum price for 5km circuits (62 € to 80 €).
The Netherlands: For 64kbit there is no local service offer. Only a regional service offer is available.
Austria: Hand-over for STM1 (Synchronous Transfer Mode–1) is not included (624.75 €).
Finland: Prices are the average of three local incumbent operators.

Figure 28

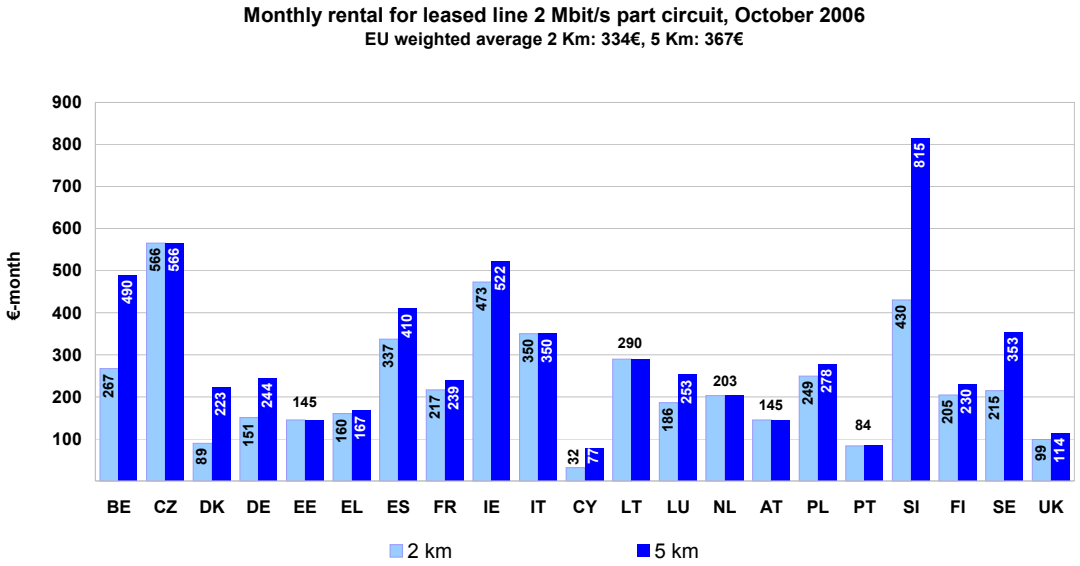


Czech Republic, Malta: Service not offered.

Denmark: Price shown is for a 2km trunk segment. The one-off price for 5km trunk segment is 1274 €.
Germany: Price authorised as of 1 November 2006.
Estonia, Cyprus, Sweden, Slovenia, Slovakia: Data not available.
Lithuania: End circuit not offered, price refers to wholesale leased lines.
Austria: Price for a one-year contract. Otherwise price is 700 €.
Finland: Prices are the average of three local incumbent operators.

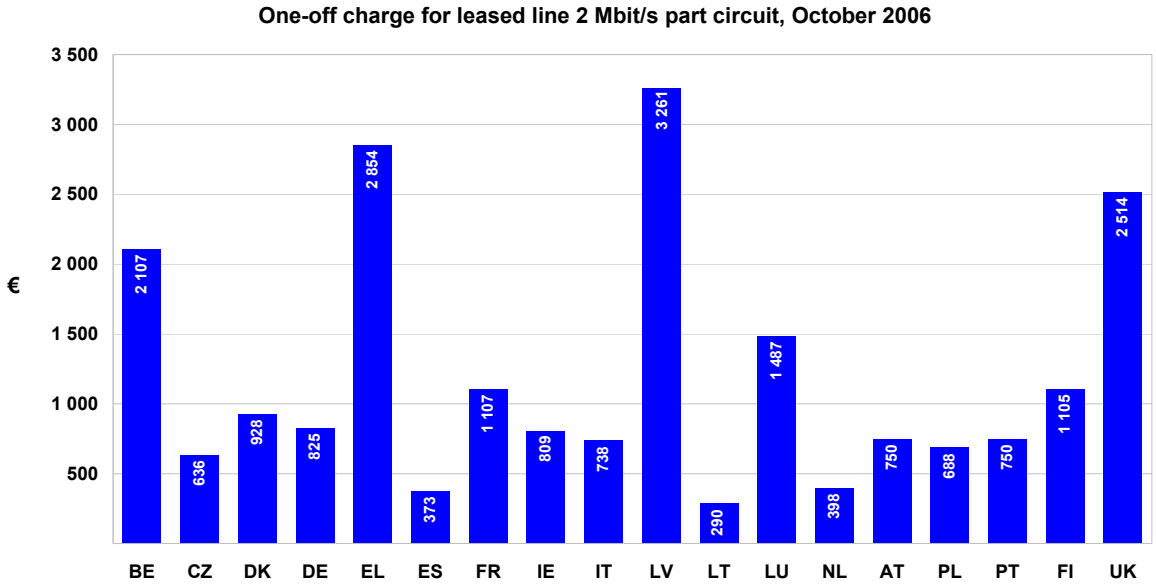
3.4.2. 2 Mbit/s part circuit

Figure 29



Germany: Price authorized as of 1 November 2006.
Latvia, Malta: Service not offered.
Lithuania: End circuit service not offered, price refers to wholesale trunk segment.
Luxemburg: Minimum price for 5km circuits (253 € to 359 €).
Hungary, Slovakia: Data are not available.
The Netherlands: For 2Mbit/s there is no km-dependent charge. The service is offered at a standard charge from the end-user location to the local exchange office.
Austria: Hand-over for STM1 (Synchronous Transfer Mode–1) is not included (624.75 €).
Finland: Prices are the average of three local incumbent operators.

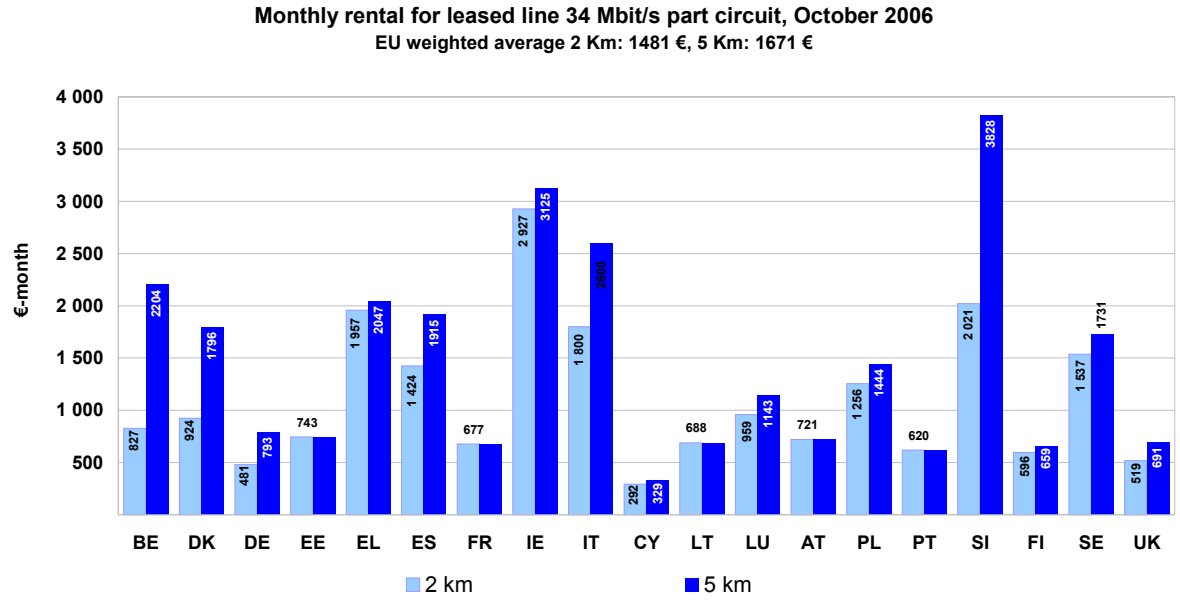
Figure 30



Germany: Price authorized as of 1 November 2006.
Estonia, Cyprus, Hungary, Slovenia, Sweden: Data are not available.
Latvia, Malta: Service not offered.
Lithuania: End circuit service is not offered, price refers to wholesale trunk segment.
Austria: One-off price is 750 € for a one-year contract; otherwise 1500 €.
Finland: Prices are the average of three local incumbent operators.

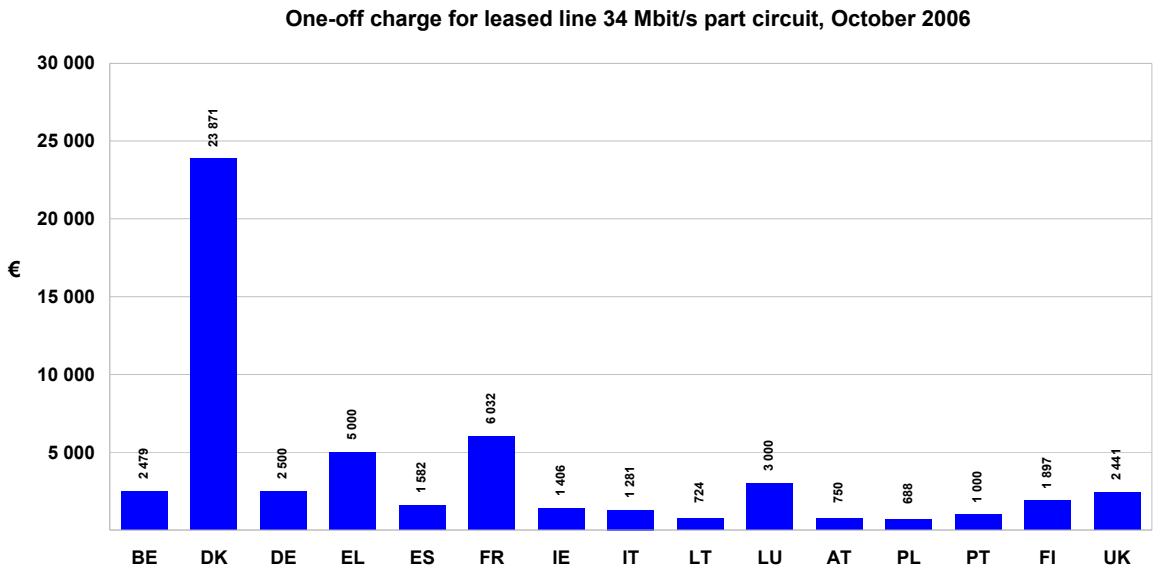
3.4.3. 34 Mbit/s part circuit

Figure 31



Germany: Price authorized as of 1 November 2006.
France: Price is for high populated area. Otherwise is 771,2 €.
Latvia, Czech Republic, Malta: Service not offered.
Lithuania: End circuit service is not offered, price refers to wholesale trunk segment.
Luxemburg: Minimum price for 5km circuits (1143 € to 1271 €).
Hungary, Slovakia: Data not available.
The Netherlands: Price is unknown, not regulated.
Austria: Hand-over for STM1 (Synchronous Transfer Mode–1) is not included (624.75 €).
Finland: Prices are the average of three local incumbent operators.

Figure 32



Germany: Price authorized as of 1 November 2006.
Estonia, Cyprus, Hungary, Sweden, The Netherlands, Slovenia, Slovakia: Data are not available.
Latvia, Czech Republic, Malta: Service not offered.
Lithuania: End circuit service is not offered, price refers to wholesale trunk segment.
Austria: One-off price is 750 € for a one-year contract; otherwise 1500 €.
Finland: Prices are the average of three local incumbent operators.

4. MOBILE MARKET

This section provides information on the number of mobile subscribers and the penetration rate for mobile telephony services. It also shows the number of both mobile network operators and mobile service providers as well as the market share of the main players in each Member State.

4.1. Mobile penetration

This section provides information on the number of mobile subscribers and the penetration rate for mobile telephony services in each Member State. The growth in the penetration rate since 2004 is also shown.

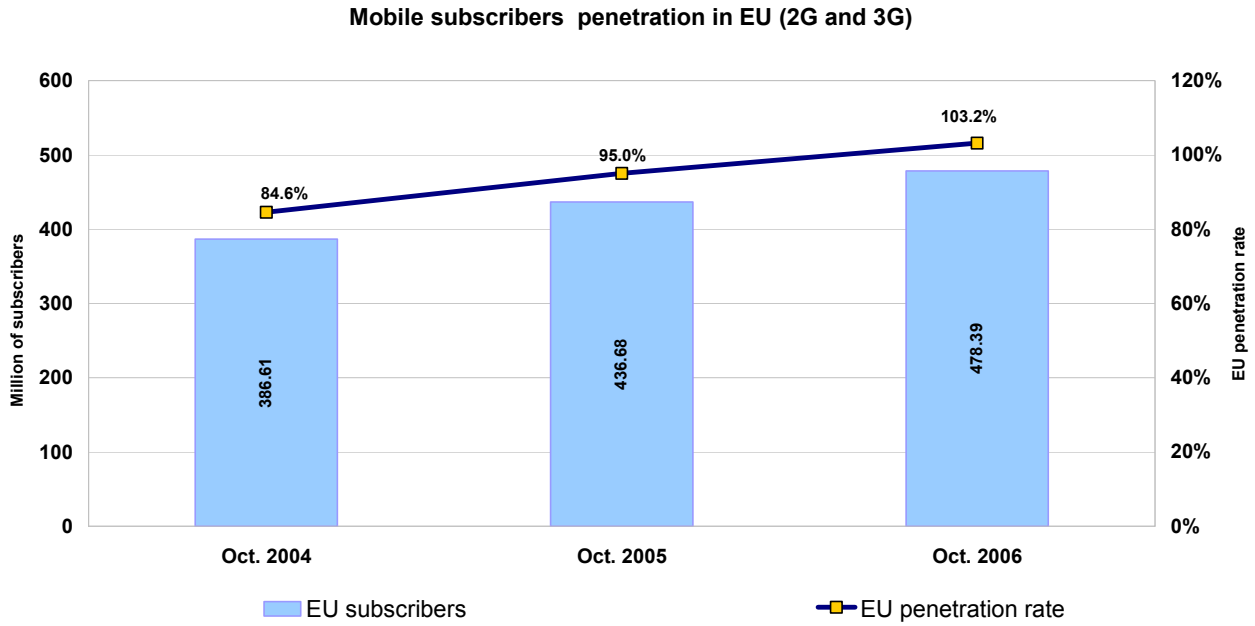
Where available, data have been provided by the National Regulatory Authorities (NRAs). Where data were either not available or confidential, figures are estimates from the "European Mobile Communications" database.

The EU average is a weighted average.

It should be noted that operators and regulators use different methods to count the number of subscribers. Some regulators distinguish between the overall number of mobile subscribers and the number of active subscribers. The table indicates where this information is available. Some operators consider the total number of users that have made or received a call or sent an SMS in the last 9 or 6 months, whereas others only consider the active users of the last 3 months. This has an impact on the penetration rate, especially in small countries

The chart below displays the number of mobile subscribers in the EU between 2004 and 2006. In October 2006 there were around 479 million mobile subscribers, with an increased of more than 42 million since October 2005 (+9.5%). Penetration rate is above 103% of EU population (+8.2 percentage points since last year).

Figure 33

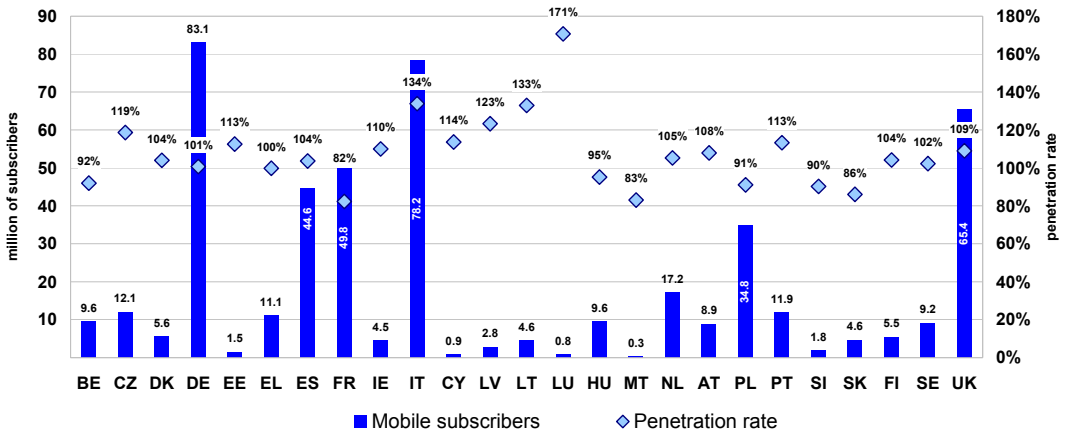


Where available, data include 2G and 3G mobile network operators' subscribers as well as mobile service providers' subscribers. Data are not comparable with previous reports (updated figures for previous years have been provided by some NRAs).

The following chart shows the absolute number of mobile subscribers in each Member States (columns) and the penetration rate (dots), measured as the number of subscribers per 100 inhabitants. Where available figures include 2G and 3G subscribers for both mobile network operators and mobile service providers.

Penetration rate is above 100% in 17 Member States; Italy (134%), United Kingdom (109%) and Lithuania (133%) have the highest values (apart from Luxembourg where the value (171%) is significantly lower if trans-national commuters are added to the national population).

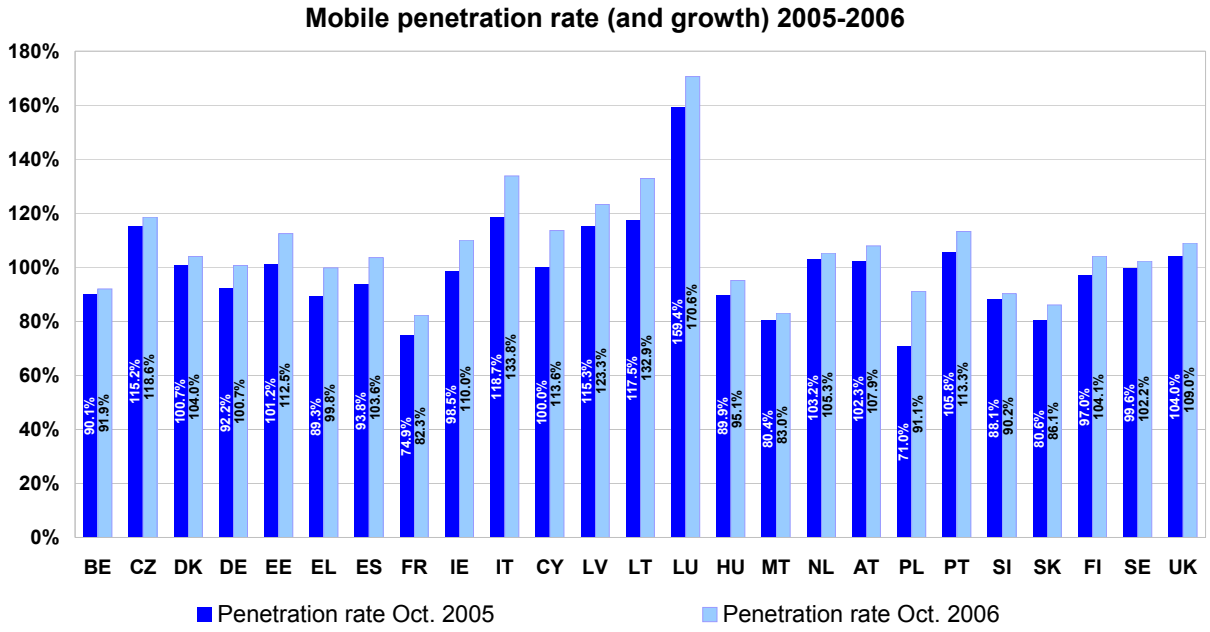
Figure 34



Where available, data include 2G and 3G mobile network operators' subscribers as well as mobile service providers' subscribers. Data are not comparable with previous reports (updated figures for previous years have been provided by some NRAs).
Belgium: Data refer to January 2006.
Germany: Data as of 1 July 2006.
Ireland: Figures for one operator are taken by Mobile Communications Europe and refer to June 2006.
France: Figures refer to national market (mainland France and overseas departments). Penetration rate for mainland France is 79.3%.
Luxembourg: Data refer to 1 July 2006. Penetration rate is significantly lower if trans-national commuters are added to the national population.
Netherland: Figures are NRA's estimates.
Slovakia: Data for some competitors refer to June 2006.
United Kingdom: Service providers are excluded, data refer to 1 January 2006.

The following chart displays for each Member State the growth of the mobile penetration rate between October 2005 and October 2006, unless otherwise indicated. Penetration rate has grown significantly in Poland (+20 percentage points (p.p.)), Italy and Lithuania (around +15 p.p.), Cyprus (+13.7 p.p.), Luxembourg, Estonia and Ireland (+11 p.p.).

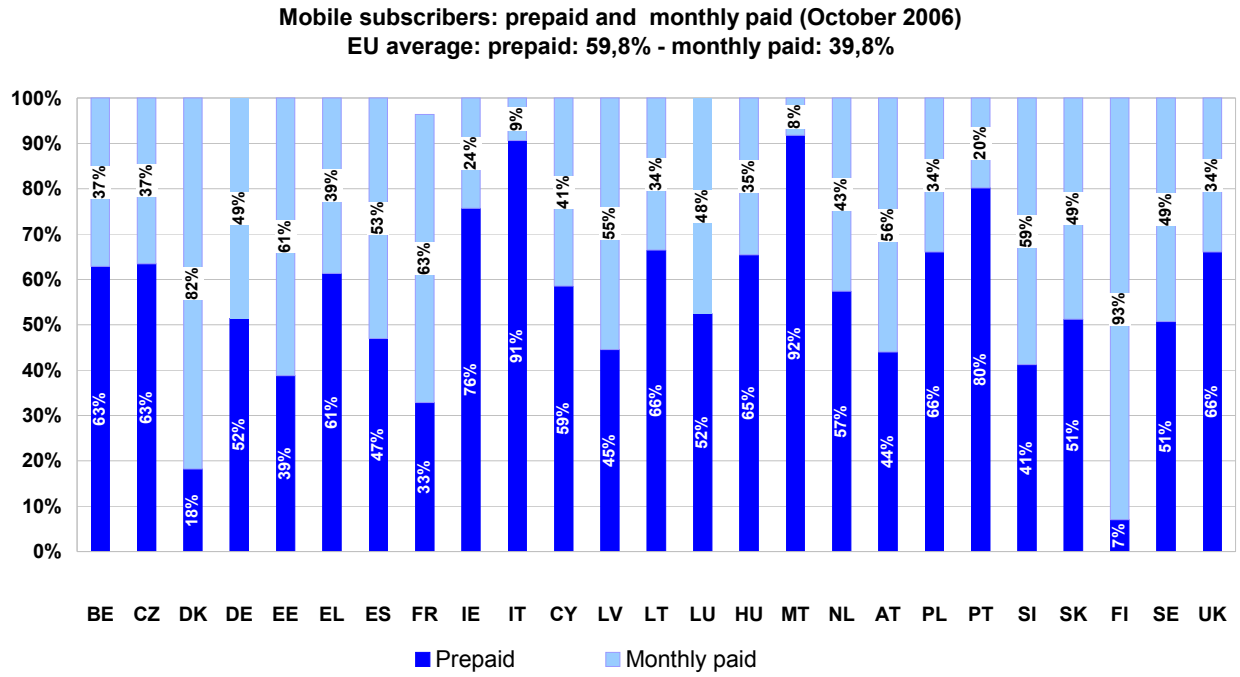
Figure 35



Data are not always comparable with previous reports (data have been updated by NRAs).
Belgium: Data refer to July 2005 and January 2006.
France: Figures refer to national market (mainland France and overseas departments).
Ireland: Figures for one operator are taken by Mobile Communications Europe and refer to June 2006.
Luxembourg: Data refer to 1 July 2006. Penetration rate is significantly lower if trans-national commuters are added to the national population.
Netherland: Figures are NRA's estimates.
Slovakia: Data for some competitors refer to June 2006.
United Kingdom: Service providers are excluded; data for 2006 refer to 1 January.

The following chart shows, for each Member State split between post-paid and pre-paid subscribers. At EU level, almost 60% of subscribers use a pre-paid system. In four countries pre-paid subscribers are more than 70% and in Italy and Malta they are more than 90%.

Figure 36



Luxembourg, Malta, Austria: Data are confidential or not available from NRAs. For these countries, the figures in the chart are estimates from Mobile Communications Europe and refer to June 2006.
Belgium: Data refer to January 2006.
France: Figures refer to mainland France (overseas departments are excluded).
Ireland: Figures for one operator have been taken by Mobile Communications Europe and refer to June 2006.
The Netherlands: Figures are NRA's estimates.

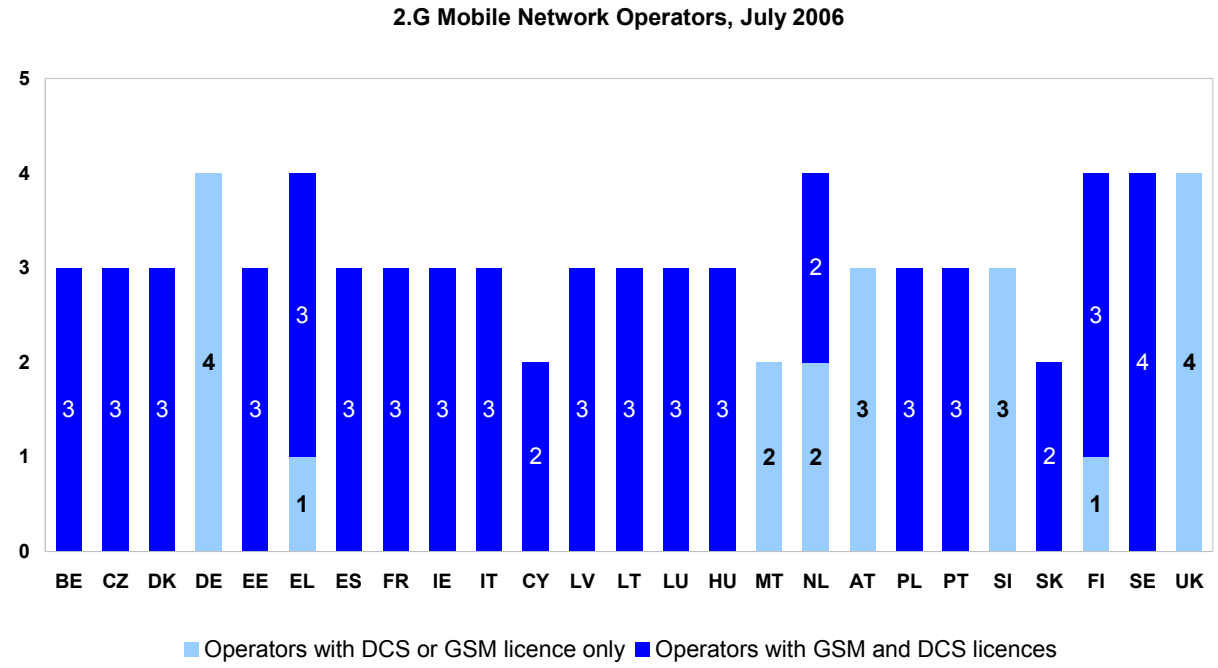
4.2. Players in the mobile market

This section shows the number of mobile licences granted in each Member State for the provision of mobile services (2G/3G mobile network operators and mobile service providers). License for analogue mobile service are not phased out in Sweden (phasing out: 31-12-2007) and in Poland (phasing out: 17-12-2016).

Data have been provided by the national regulatory authorities and refer to the situation in July 2006.

The following chart shows the number of mobile network operators licensed to provide digital mobile services (second-generation). The number of operators indicates the real magnitude of the choice of operators for customers of digital mobile services, since very often operators have licences for both GSM 900 and DCS 1800. Mobile network operators have been identified as having only GSM 900 or only DCS 1800 frequencies, or both (in which case they have usually been granted a GSM 900 licence which has subsequently been extended to the DCS 1800 band).

Figure 37



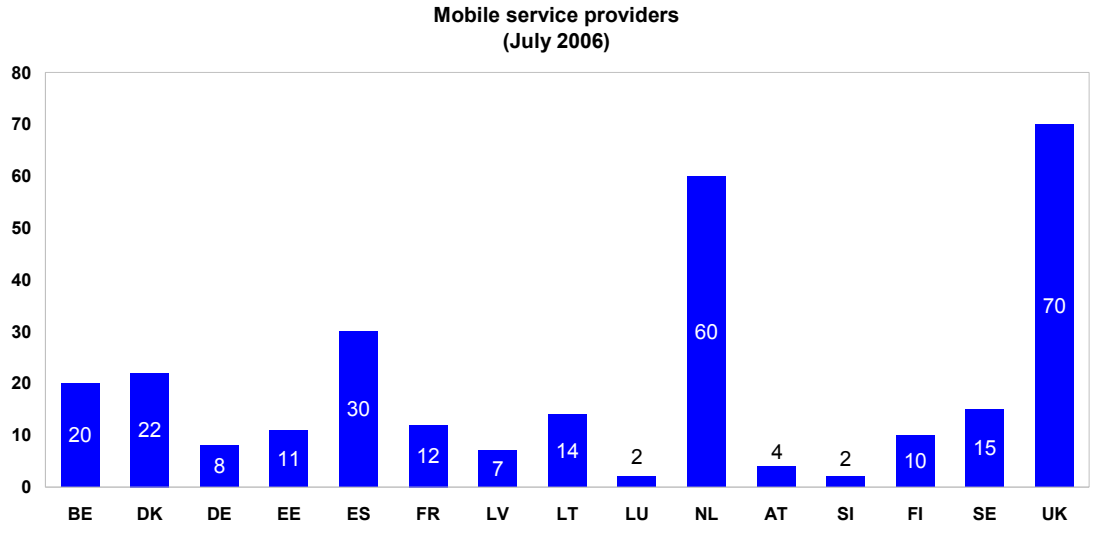
France: Mobile national operators for mainland France only. Overseas departments are excluded.

Information on mobile service providers has been included where available (without distinction between local and national coverage). Mobile service providers are defined as mobile virtual network operators or enhanced service providers or simple resellers.

Whereas the number of 2.G operators (79) has remained virtually unchanged, mobile service providers are increasingly entering the market and as of July 2006 they were 290, 76 more than one year ago.

It can be noted, however, that many of those are currently inactive.

Figure 38

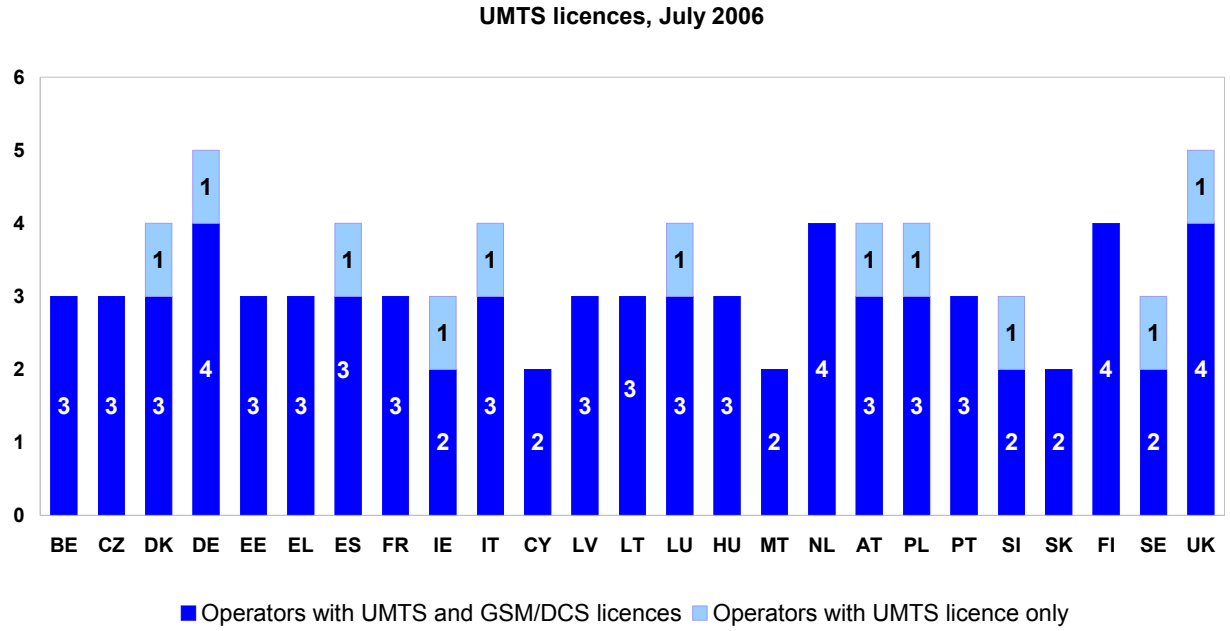


Belgium: Resellers of MVNO's are excluded.

Germany: Data refer only to main service providers.
Estonia: 7 active resellers.
Spain: No active service providers at July 2006.
France: Service providers for mainland France only. Overseas departments are excluded.
Lithuania: 8 out of 14 service providers are active. Four of them provide services through their own brand and four are simple resellers.
The Netherlands: About 50 service providers are providing commercial services.
Slovenia: One service provider is not active.
Portugal: The figure refers to simple resellers (one reseller is not active).
United Kingdom: Data on service providers is an estimate.

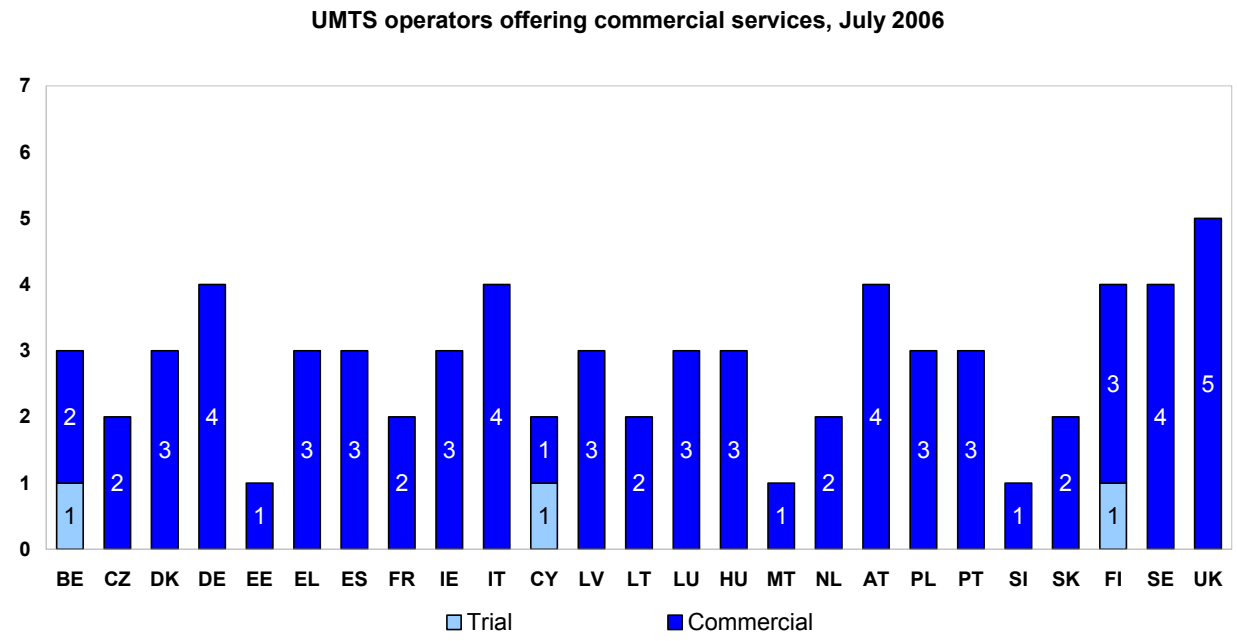
The following two figures indicate the number of UMTS licences granted in each Member State and the status of the launch of 3G services: trial (tests with a closed group of selected users) or commercial (fully commercial services open to any users at standard tariffs).

Figure 39



Slovenia: Figure includes 2 UMTS licences granted in September 2006.
Finland: Figure includes 1 local UMTS licence.

Figure 40



Denmark: Figure includes one operator that launched the service on 27th September 2006.
Finland: Figure includes 1 local UMTS licence.

4.3. Mobile operators' market shares

The following charts present the market shares, based on subscribers, of the leading operator, the main competitor and the other competitors in the mobile market. Operators' market shares have been calculated for the overall mobile market (including DCS 1800/GSM 900 and UMTS subscribers).

Data concerning market shares are based on the data supplied by the NRAs except for Czech Republic, Estonia, Greece, France, Luxembourg, Hungary and Sweden where they are confidential. Data for these countries are estimates from European Mobile Communications and refer to June 2006.

In Cyprus one operator largely dominates the market with a share of more than 90%. In Slovenia the leading operator retains more than 70% of the market and in Slovakia it controls 56%. In 12 Member States the leading operators have between 40% and 50%. The lowest market share of the leading operator is in the United Kingdom, with 26%. EU average has been weighted using mobile subscribers for each country. At EU level, the market share of the leading operator and the main competitors has slightly decreased to the benefit of the small competitors, in particular mobile service providers.

Figure 41

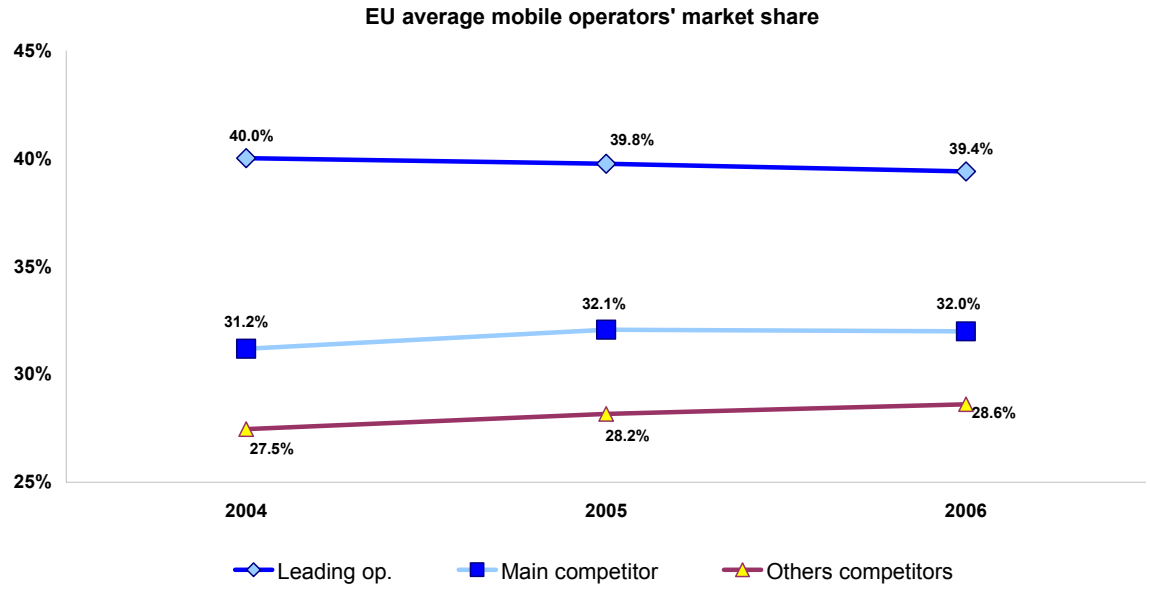
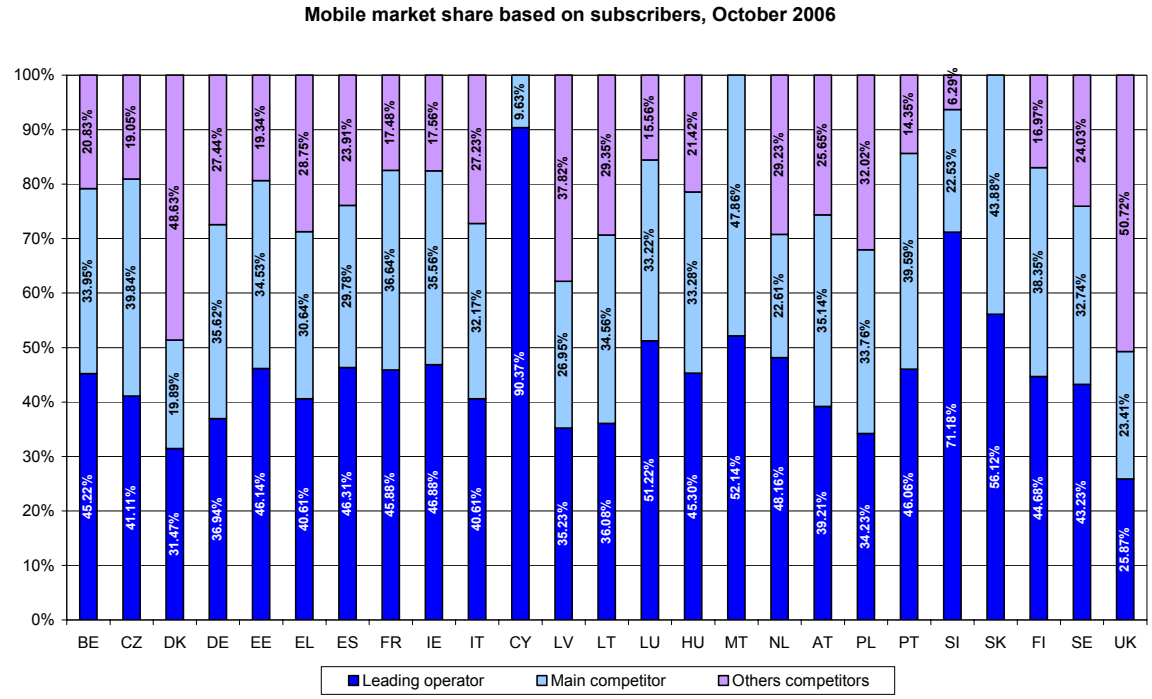


Figure 42



Data for Czech Republic, Estonia, Greece, France, Luxembourg, Hungary, Sweden are confidential. Data for these countries are estimates from European Mobile Communications and refer to June 2006.
Belgium: Data refer to January 2006.
Germany: Data as of 1 July 2006.
Ireland: Figures for one operator (included in "other competitors") are taken by Mobile Communications Europe and refer to June 2006.
Luxembourg: Data refer to 1 July 2006.
Netherland: Figures are NRA's estimates.
Slovakia: Data for some competitors refer to June 2006.
United Kingdom: Service providers are excluded, data refer to 1 January 2006.

4.4. Mobile Tariffs

1. The analysis of national (as opposed to roaming) mobile services is based on the OECD baskets for digital mobile services. Due to significant changes in usage patterns, the OECD baskets have been redefined with effect from August 2002. These baskets contain an SMS element, they include calls to several mobile networks, and they do not cover international calls.

There are 3 different baskets, based on low, medium and high usage levels. All packages analysed in this study are Post-Paid packages. Some of the main properties of the "2002 OECD" baskets are:

Low usage basket with:
25 outgoing calls per month + 30 SMS messages
42% of calls are to fixed line phones, 58% to mobile phones,

Medium usage basket with:
75 outgoing calls per month + 35 SMS messages
36% of calls are to fixed line phones, 64% to mobile phones,

High usage basket with:
150 outgoing calls per month + 42 SMS messages
40% of calls are to fixed line phones, 60% to mobile phones.

Each basket also has a unique definition of time of day distribution and call duration, and includes the monthly rental, and any registration charges distributed over 3 years.

The two most prominent operators in each country are covered, based on available subscriber numbers. All relevant packages from each operator are considered, but the final results presented here only show the cheapest package for each basket.

The asterisk (*) behind the package name means that the package name and its structure have changed between 2005 and 2006. The package chosen at any time is the cheapest package from that provider for the usage profile in question. This may give rise to significant price changes over time.

The balance of fixed and usage in the mobile baskets varies considerably between countries, as the preferred packages in some countries contain a lot of calling time included in the fixed charge.

A full description of the methodology can be found at the end of this report.

2. In order to show a price trend, the "2002 OECD" baskets have been used. Mobile services from 2002 till 2006 are used. The graphs will show the average price development for the EU countries, using a simple average across all member countries per year. The averages cover the cheapest package from the same mobile operators.

From 2004 the EU10 countries are also included.

3. OECD baskets have undergone another revision that resulted in a new set of baskets at the beginning of 2006. Similar to the PSTN baskets the mobile baskets were also updated with

current traffic weights and volumes. The changes are significant enough to prohibit the use of the new baskets with old data.

The results for 2006 with using the new baskets are presented below. The principles of the new baskets are the same as before, with 3 baskets for low, medium and high usage. The main differences between the old "2002 OECD" and the new "2006 OECD" baskets are:

Low usage basket with:
30 outgoing calls per month + 33 SMS messages
22% of calls are to fixed line phones, 70% to mobile phones, 8% to voicemail,

Medium usage basket with:
65 outgoing calls per month + 50 SMS messages
21% of calls are to fixed line phones, 72% to mobile phones, 7% to voicemail,

High usage basket with:
140 outgoing calls per month + 55 SMS messages
20% of calls are to fixed line phones, 73% to mobile phones, 7% to voicemail,

and:

-Inclusion of MMS in the basket,

-Both MMS and SMS are separated for peak and off-peak times, and on-net and off-net destinations,

-Voicemail is included in the baskets,

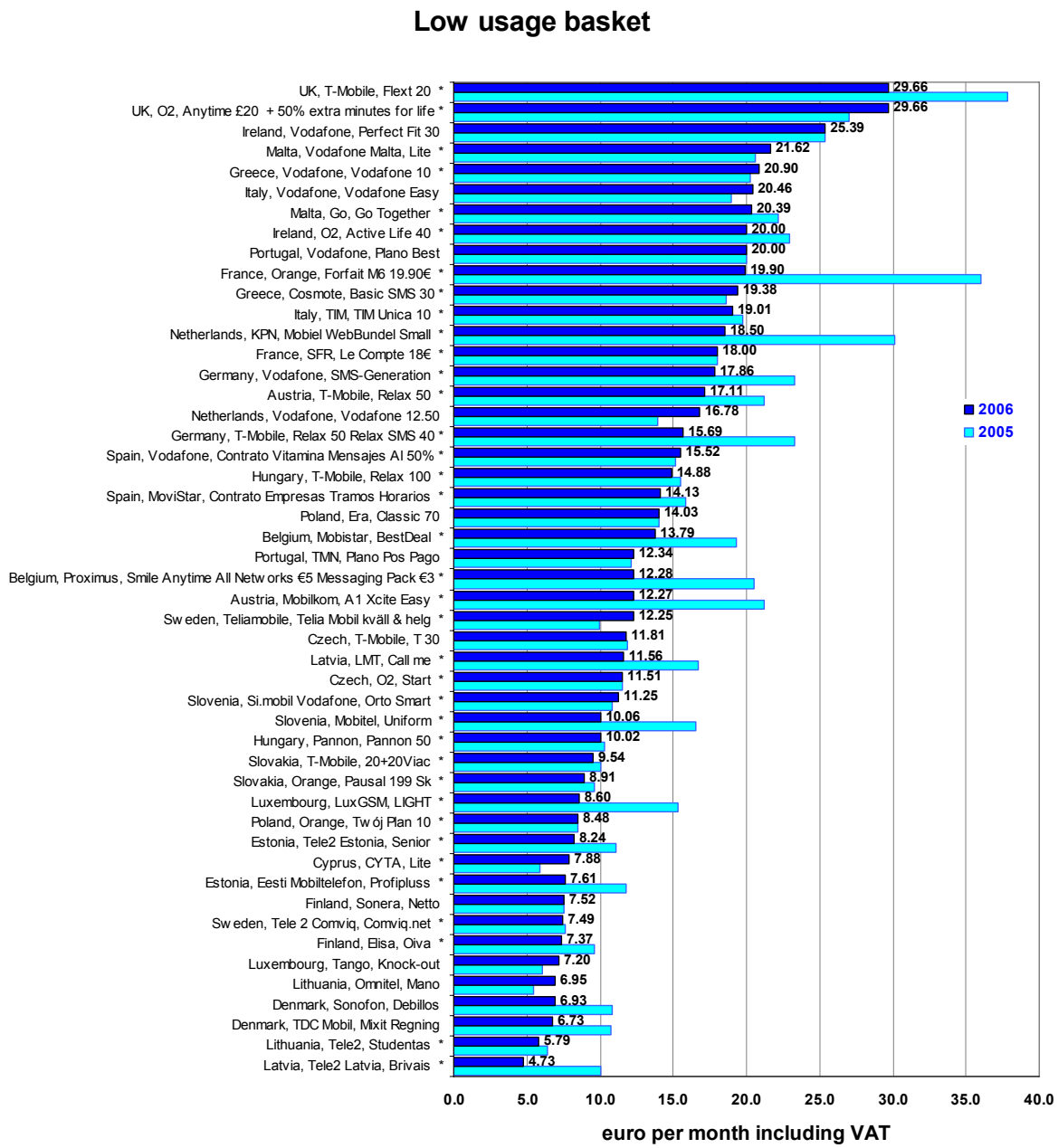
-Off-net calls can be directed to several networks,

-The methodology for calculating the effects of allowances has been improved.

-The names of the tariff packages used in the basket analysis is found in the table below.

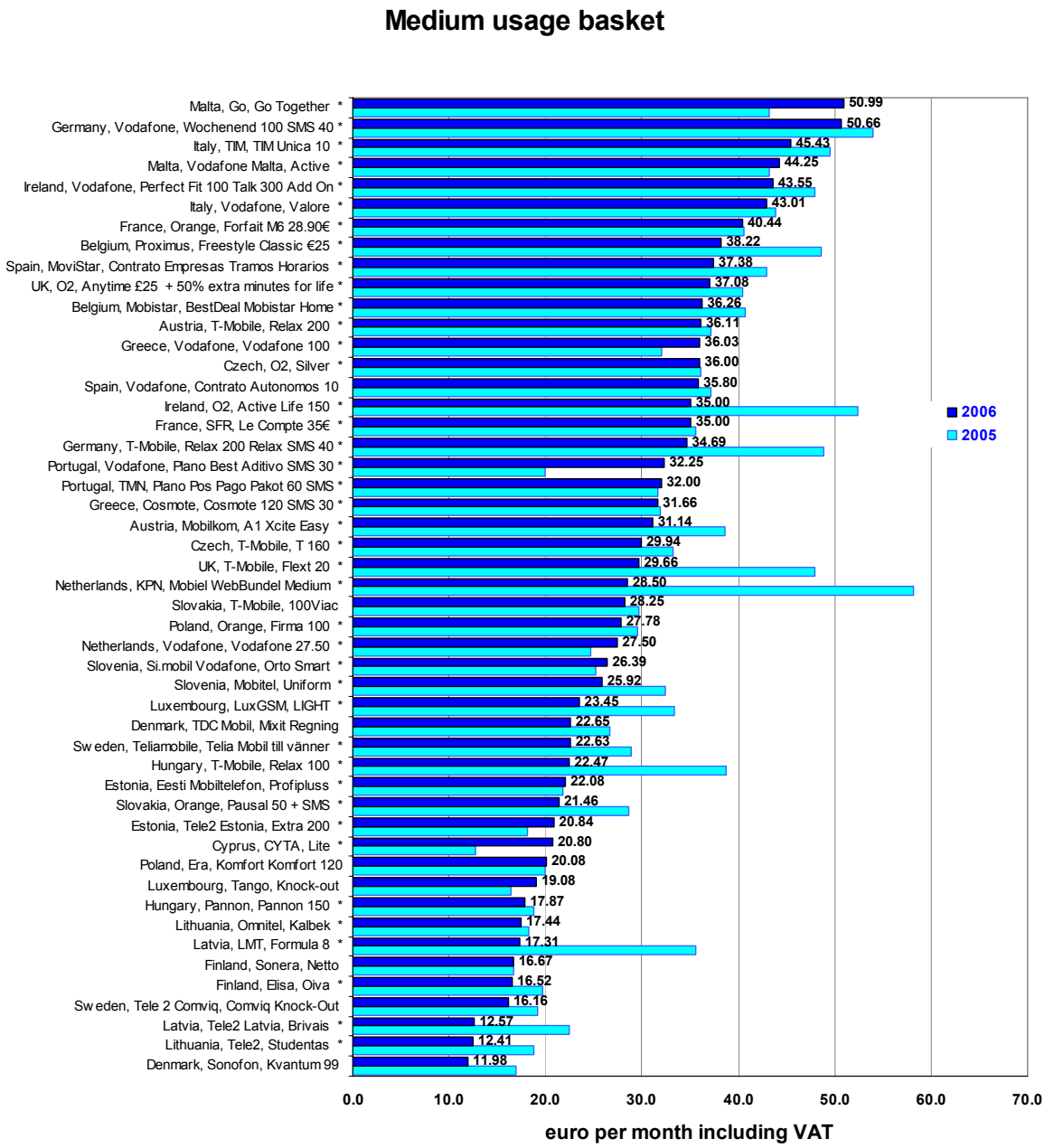
4.4.1. Old OECD basket

Figure 43



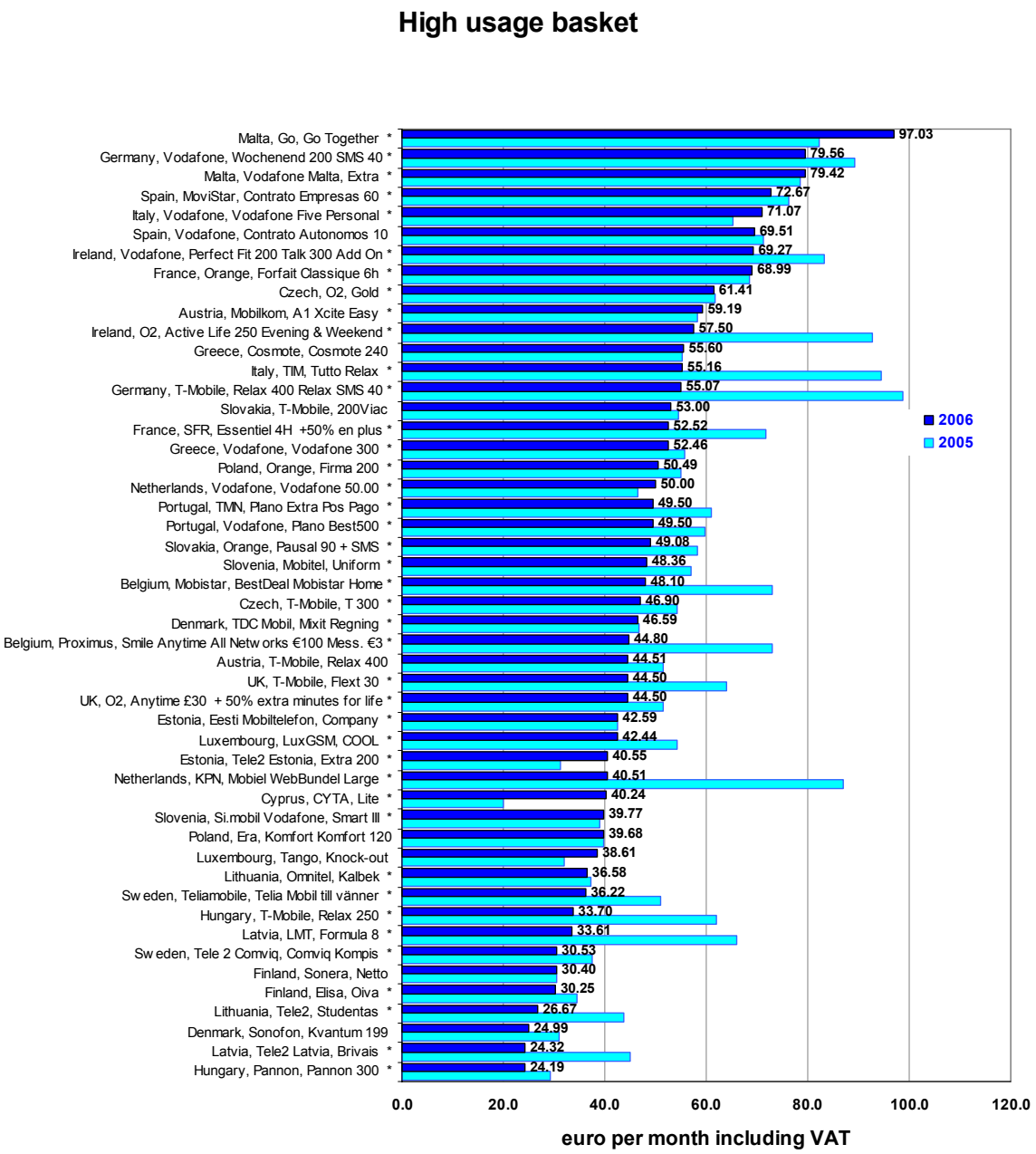
Entries with an asterisk (*) after the name have changed the package name and structure since last year.

Figure 44



Entries with an asterisk (*) after the name have changed the package name and structure since last year.

Figure 45



Entries with an asterisk (*) after the name have changed the package name and structure since last year

4.4.2. Simple average across all mobile operators

Figure 46

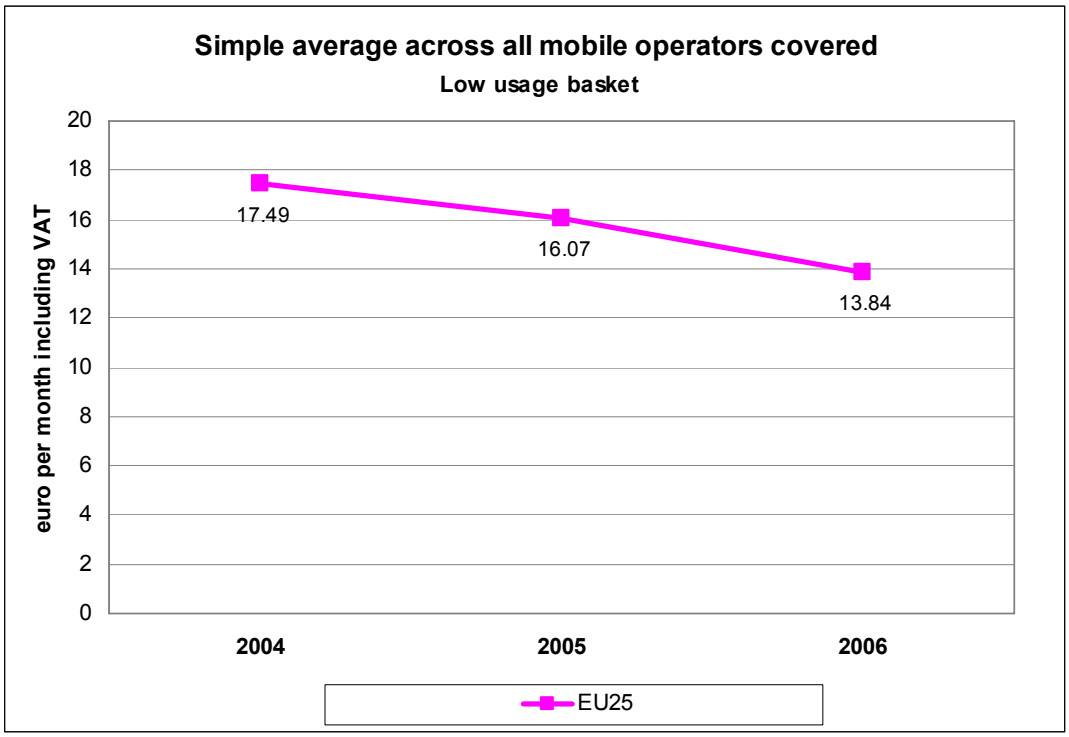


Figure 47

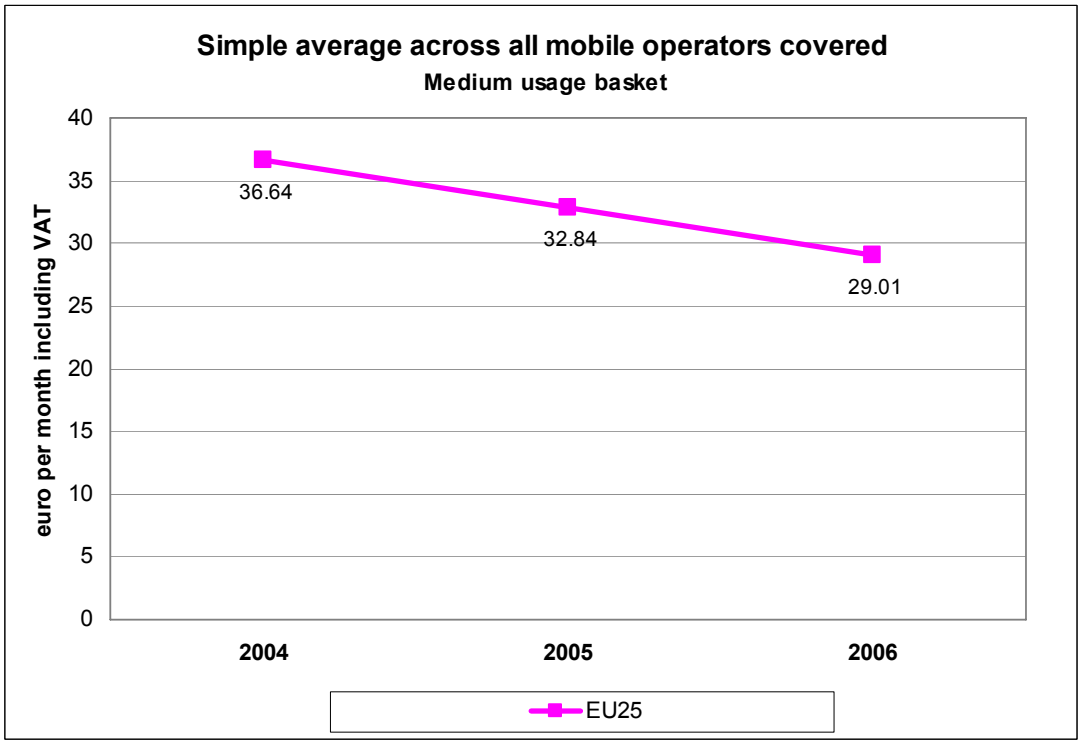
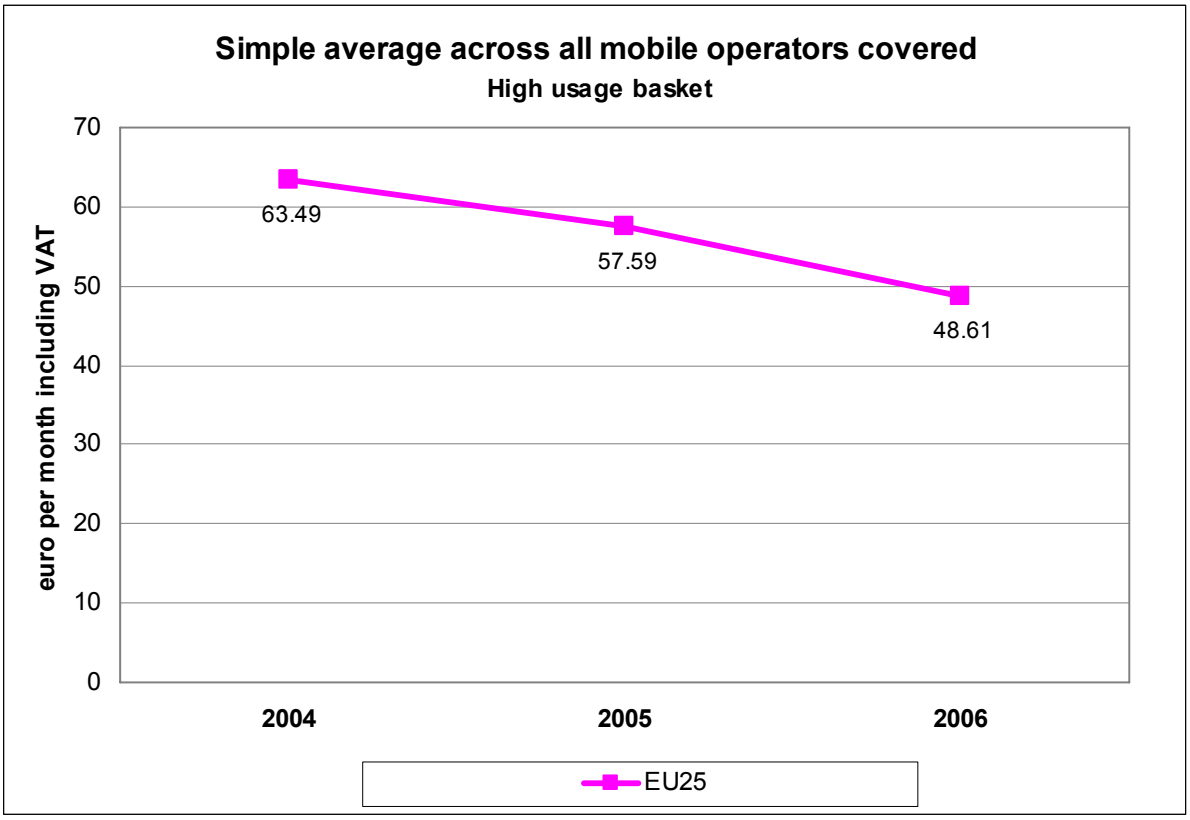


Figure 48


Simple average across all mobile operators covered
High usage basket
euro per month including VAT
70
60
50
40
30
20
10
0
63.49
57.59
48.61
2004
2005
2006
EU25

4.4.3. New 2006 OECD basket

Figure 49

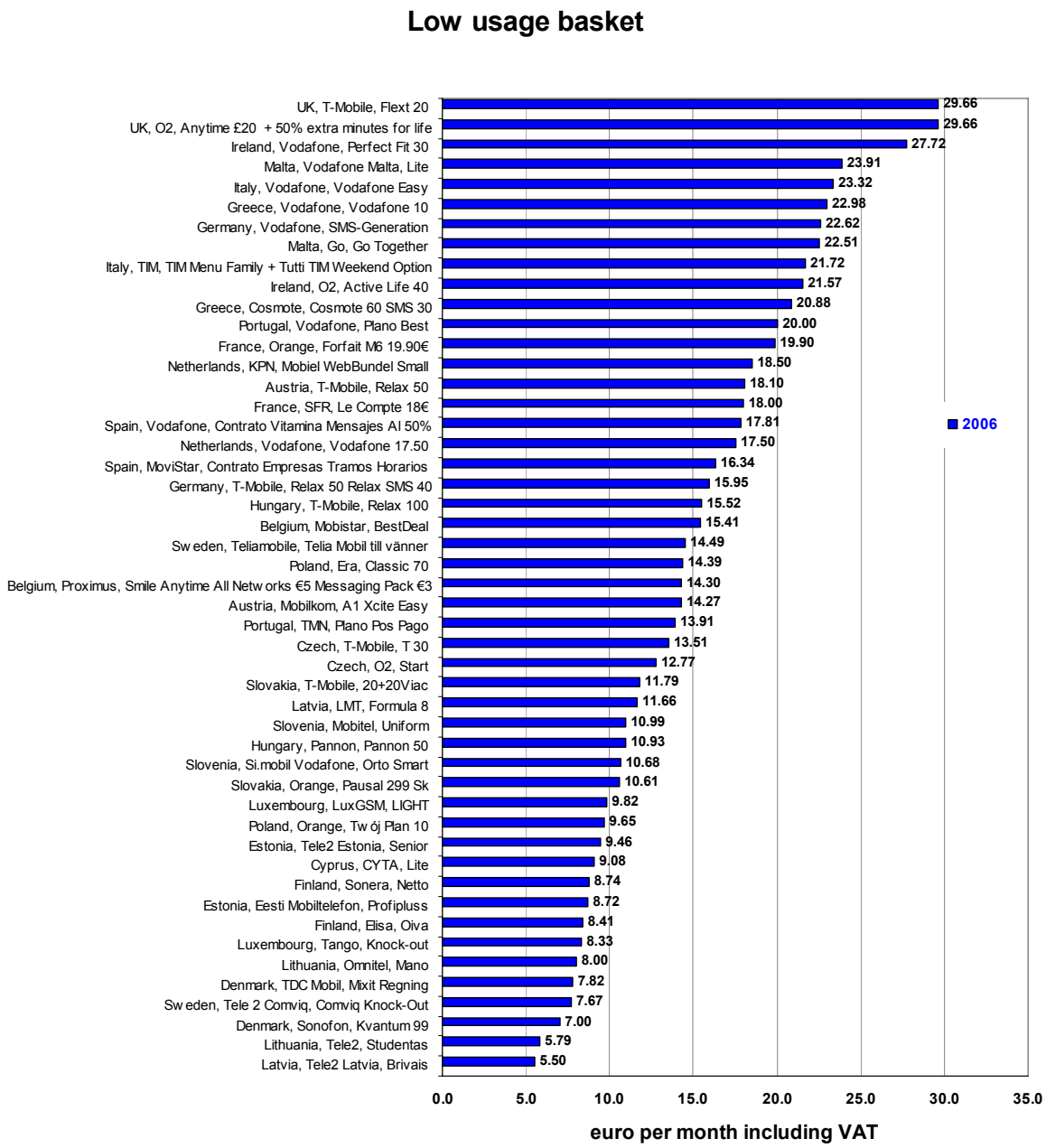


Figure 50

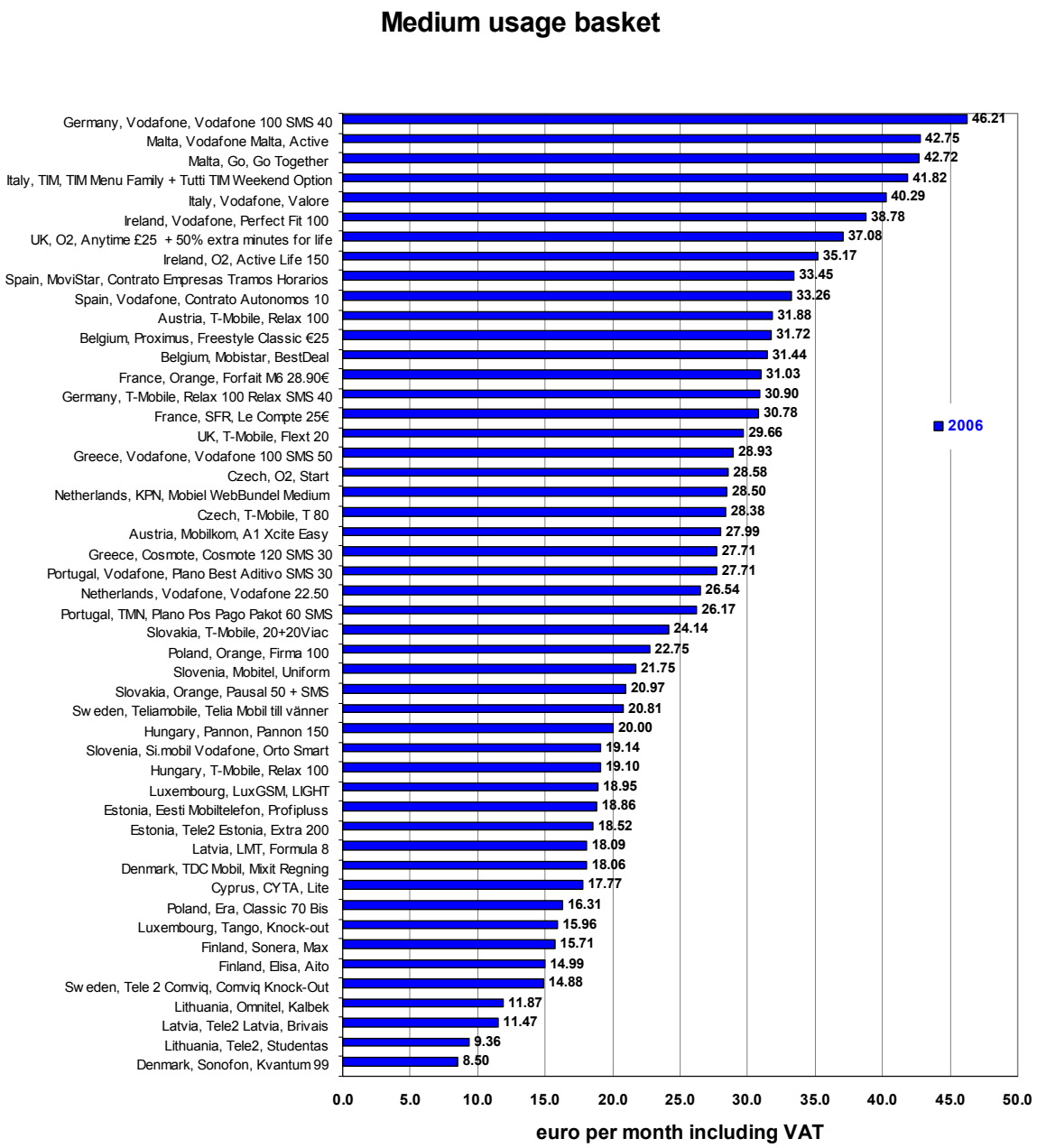
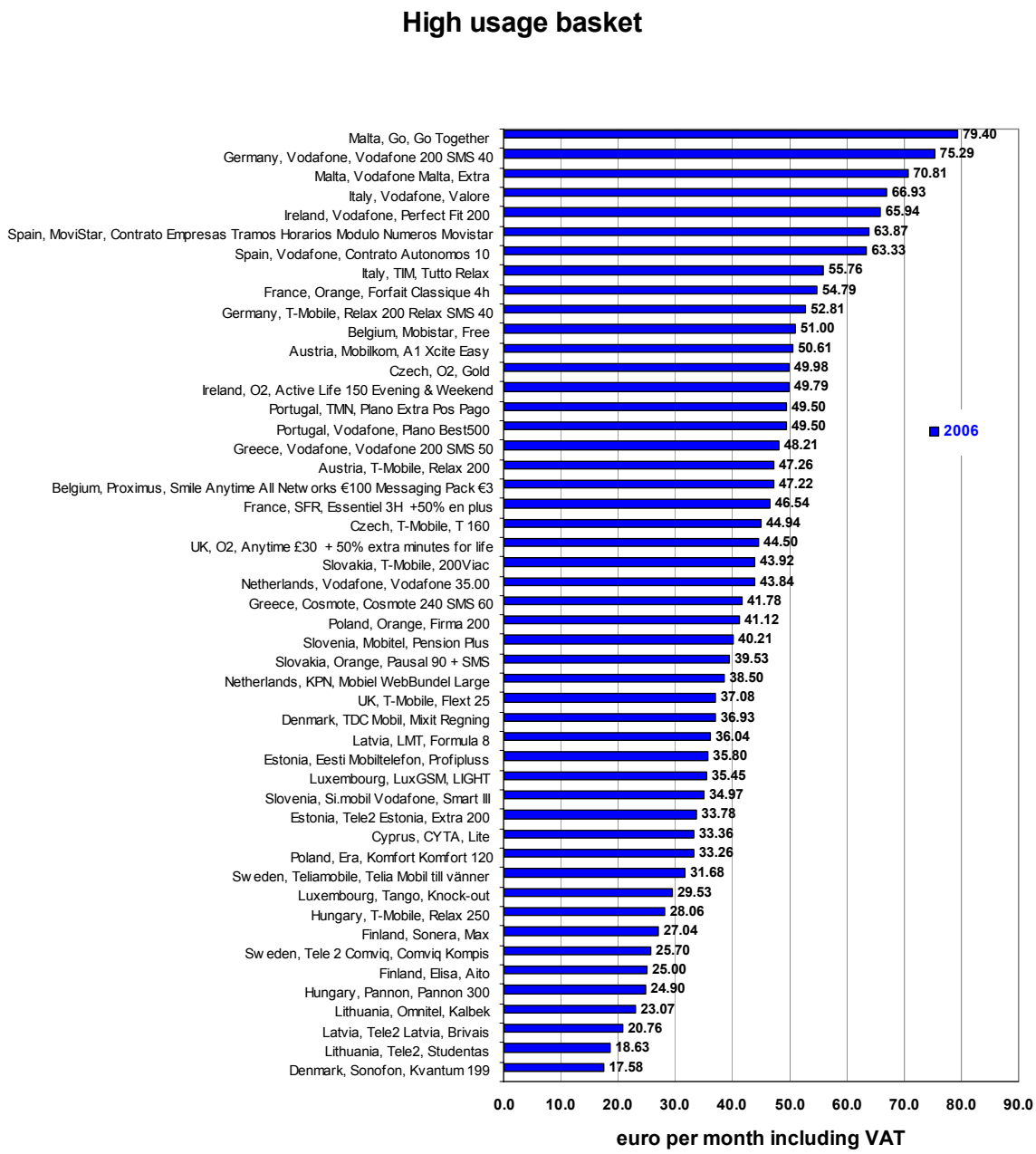

Medium usage basket
Germany, Vodafone, Vodafone 100 SMS 40 46.21
Malta, Vodafone Malta, Active 42.75
Malta, Go, Go Together 42.72
Italy, TIM, TIM Menu Family + Tutti TIM Weekend Option 41.82
Italy, Vodafone, Valore 40.29
Ireland, Vodafone, Perfect Fit 100 38.78
UK, O2, Anytime £25 + 50% extra minutes for life 37.08
Ireland, O2, Active Life 150 35.17
Spain, MoviStar, Contrato Empresas Tramos Horarios 33.45
Spain, Vodafone, Contrato Autonomos 10 33.26
Austria, T-Mobile, Relax 100 31.88
Belgium, Proximus, Freestyle Classic €25 31.72
Belgium, Mobistar, BestDeal 31.44
France, Orange, Forfait M6 28.90€ 31.03
Germany, T-Mobile, Relax 100 Relax SMS 40 30.90
France, SFR, Le Compte 25€ 30.78
UK, T-Mobile, Flext 20 29.66
Greece, Vodafone, Vodafone 100 SMS 50 28.93
Czech, O2, Start 28.58
Netherlands, KPN, Mobiel WebBundel Medium 28.50
Czech, T-Mobile, T 80 28.38
Austria, Mobilkom, A1 Xcite Easy 27.99
Greece, Cosmote, Cosmote 120 SMS 30 27.71
Portugal, Vodafone, Plano Best Aditivo SMS 30 27.71
Netherlands, Vodafone, Vodafone 22.50 26.54
Portugal, TMN, Plano Pos Pago Pakot 60 SMS 26.17
Slovakia, T-Mobile, 20+20Viac 24.14
Poland, Orange, Firma 100 22.75
Slovenia, Mobitel, Uniform 21.75
Slovakia, Orange, Pausal 50 + SMS 20.97
Sweden, Teliamobile, Telia Mobil till vänner 20.81
Hungary, Pannon, Pannon 150 20.00
Slovenia, Si.mobil Vodafone, Orto Smart 19.14
Hungary, T-Mobile, Relax 100 19.10
Luxembourg, LuxGSM, LIGHT 18.95
Estonia, Eesti Mobiltelefon, Profipluss 18.86
Estonia, Tele2 Estonia, Extra 200 18.52
Latvia, LMT, Formula 8 18.09
Denmark, TDC Mobil, Mixit Regning 18.06
Cyprus, CYTA, Lite 17.77
Poland, Era, Classic 70 Bis 16.31
Luxembourg, Tango, Knock-out 15.96
Finland, Sonera, Max 15.71
Finland, Elisa, Aito 14.99
Sweden, Tele 2 Comviq, Comviq Knock-Out 14.88
Lithuania, Omnitel, Kalbek 11.87
Latvia, Tele2 Latvia, Brivais 11.47
Lithuania, Tele2, Studentas 9.36
Denmark, Sonofon, Kvantum 99 8.50
2006
0.0 5.0 10.0 15.0 20.0 25.0 30.0 35.0 40.0 45.0 50.0
euro per month including VAT

Figure 51


High usage basket
Malta, Go, Go Together 79.40
Germany, Vodafone, Vodafone 200 SMS 40 75.29
Malta, Vodafone Malta, Extra 70.81
Italy, Vodafone, Valore 66.93
Ireland, Vodafone, Perfect Fit 200 65.94
Spain, MoviStar, Contrato Empresas Tramos Horarios Modulo Numeros Movistar 63.87
Spain, Vodafone, Contrato Autonomos 10 63.33
Italy, TIM, Tutto Relax 55.76
France, Orange, Forfait Classique 4h 54.79
Germany, T-Mobile, Relax 200 Relax SMS 40 52.81
Belgium, Mobistar, Free 51.00
Austria, Mobilkom, A1 Xcite Easy 50.61
Czech, O2, Gold 49.98
Ireland, O2, Active Life 150 Evening & Weekend 49.79
Portugal, TMN, Plano Extra Pos Pago 49.50
Portugal, Vodafone, Plano Best500 49.50
Greece, Vodafone, Vodafone 200 SMS 50 48.21
Austria, T-Mobile, Relax 200 47.26
Belgium, Proximus, Smile Anytime All Networks €100 Messaging Pack €3 47.22
France, SFR, Essentiel 3H +50% en plus 46.54
Czech, T-Mobile, T 160 44.94
UK, O2, Anytime £30 + 50% extra minutes for life 44.50
Slovakia, T-Mobile, 200Viac 43.92
Netherlands, Vodafone, Vodafone 35.00 43.84
Greece, Cosmote, Cosmote 240 SMS 60 41.78
Poland, Orange, Firma 200 41.12
Slovenia, Mobitel, Pension Plus 40.21
Slovakia, Orange, Pausal 90 + SMS 39.53
Netherlands, KPN, Mobiel WebBundel Large 38.50
UK, T-Mobile, Flext 25 37.08
Denmark, TDC Mobil, Mixit Regning 36.93
Latvia, LMT, Formula 8 36.04
Estonia, Eesti Mobiltelefon, Profipluss 35.80
Luxembourg, LuxGSM, LIGHT 35.45
Slovenia, Si.mobil Vodafone, Smart III 34.97
Estonia, Tele2 Estonia, Extra 200 33.78
Cyprus, CYTA, Lite 33.36
Poland, Era, Komfort Komfort 120 33.26
Sweden, Teliamobile, Telia Mobil till vänner 31.68
Luxembourg, Tango, Knock-out 29.53
Hungary, T-Mobile, Relax 250 28.06
Finland, Sonera, Max 27.04
Sweden, Tele 2 Comviq, Comviq Kompis 25.70
Finland, Elisa, Aito 25.00
Hungary, Pannon, Pannon 300 24.90
Lithuania, Omnitel, Kalbek 23.07
Latvia, Tele2 Latvia, Brivais 20.76
Lithuania, Tele2, Studentas 18.63
Denmark, Sonofon, Kvantum 199 17.58
2006
0.0 10.0 20.0 30.0 40.0 50.0 60.0 70.0 80.0 90.0
euro per month including VAT

5. NUMBER PORTABILITY

5.1. Fixed number portability

Fixed number portability enables fixed subscribers to retain their number when they move from one operator to another.

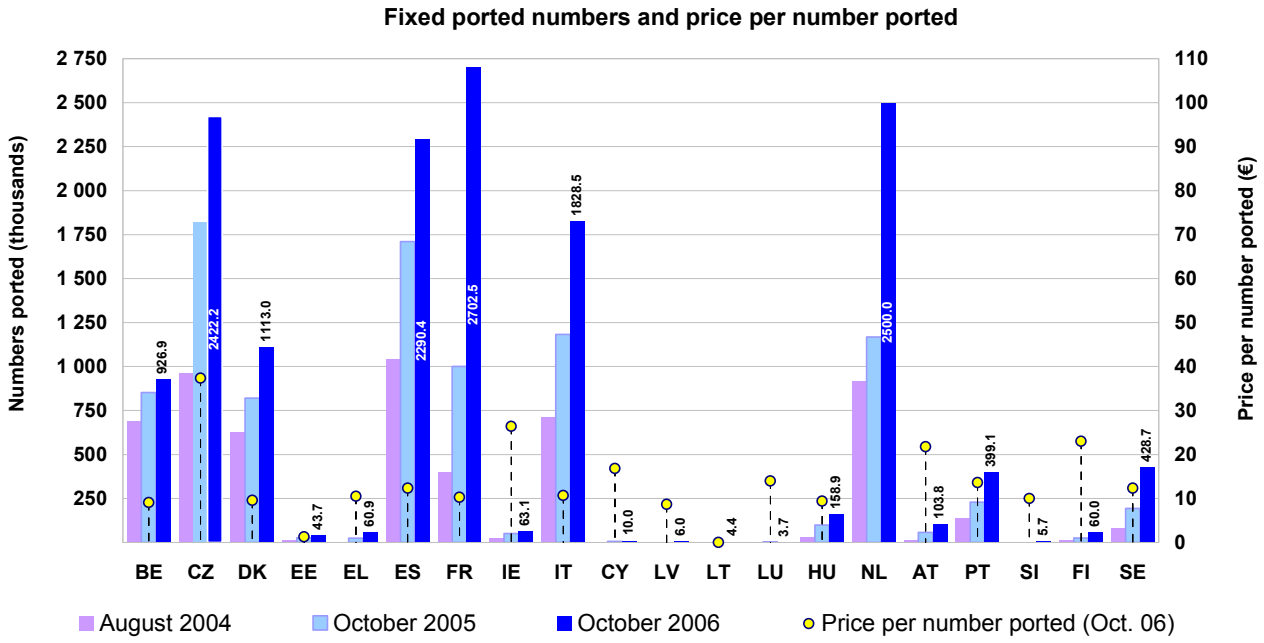
Figures are not always strictly comparable between Member States, due to the fact that repeated portings are included (i.e. the figures indicate the number of transactions) in Belgium, Czech Republic, Denmark, Estonia, Ireland; Cyprus, Latvia, Lithuania, France, Greece, Sweden, while they are excluded (i.e. the figures indicate the numbers currently ported) in Spain, Italy, Luxembourg, Hungary, Austria, Portugal., Poland. (There is no information available for Germany, The Netherlands, Malta, Slovenia, Slovakia and Finland). Furthermore, portability of non-geographical numbers has been taken into account only in some Member States.

Fixed number portability has continued to play an important role in encouraging competition. As of October 2006, more than 15 million subscribers in 23 Member States have ported their number since the introduction of this possibility (7 million from October 2005 and October 2006). Apart form the coutries that have introduced number portability only during 2006, there has been significant growth in the amount of fixed numbers ported in France, The Netherlands and Sweden.

Prices for fixed number portability refer to the amount charged by the incumbent to the recipient operators for porting one telephone geographic number (excluding VAT). This price may vary depending on a number of factors. In some countries the price for a non - geographic number is different. Where available, information on price for non-geographic numer portability is added in the footnote.

According to the data at our disposal for 23 Member States, the EU weighted average price for a fixed number ported is 9.32 €. Prices in the Czech Republic, Ireland, Austria and Finland are significantly higher than the EU average, while in 7 Member States (Belgium, Denmark, Germany, Latvia, Hungary, Netherland and Slovenia) prices are below 10 €. The fixed number portability is free of charge in Lithuania and less than 2 € in Estonia and the United Kingdom. Since October 2005 a significant decrease in the price for number portability has occurred in the Czech Republic (-63%), France (-33%), Hungary (-40%), Netherlands (-34%) and Sweden (-29%). Over the same period the price has increased in Italy by 7%.

Figure 52


Fixed ported numbers and price per number ported
Numbers ported (thousands)
Price per number ported (€)
2 750
2 500
2 250
2 000
1 750
1 500
1 250
1 000
750
500
250
110
100
90
80
70
60
50
40
30
20
10
0
926.9
2422.2
1113.0
43.7
60.9
2290.4
2702.5
63.1
1828.5
10.0
6.0
4.4
3.7
158.9
2500.0
103.8
399.1
5.7
60.0
428.7
BE
CZ
DK
EE
EL
ES
FR
IE
IT
CY
LV
LT
LU
HU
NL
AT
PT
SI
FI
SE
August 2004
October 2005
October 2006
Price per number ported (Oct. 06)

The figures indicate the total fixed number ported up to each year.
Belgium: Figures refer to 1 January 2006. Price refers to simple installation.
Czech Republic**:** Fixed telephony ported numbers are represented. The price refers to one single telephone number porting. Price for comprehensive order is 99.15 €.
Denmark: Figures refer to 30 June 2006.
Germany: Data for geographic numbers not available.
France: The price includes a fix cost of 8.72 € per request; price for more than one number is then lower. Price for non-geographic numbers varies between 90 € and 320 €.
Ireland: Prices are for a single line. Price falls to 3,69 € per line for orders above 100 lines.
Cyprus: Non-geographic numbers are excluded.
Lithuania: Numbers are ported free of charge.
Malta, Slovakia**:** Fixed number portability not in place.
Netherland: Price varies between 2 € and 8 €.
Poland**:** Information not available.
Finland: The price is an average of 39 SMP operators, as prices vary from 10 € to 30 €.
Sweden: The price for ported non-geographic numbers is 14 €**.**
United Kingdom. Data are not available for numbers ported. Price for porting geographic numbers varies between 0.74 € and 39.97 €.

5.2. Mobile number portability

Mobile number portability enables mobile subscribers to retain their number when they move from one operator to another.

The numbers ported are not always strictly comparable between Member States, because repeated portings are included (i.e. the figures indicate the number of transactions) in Belgium, Czech Republic, Denmark, Estonia, Ireland; Cyprus, Latvia, Lithuania, France, Greece, Austria, Finland, Sweden, while they are excluded (i.e. the figures indicate the numbers currently ported) in Spain, Italy, Luxembourg, Hungary, Portugal, Poland (there is no information available for Malta, Germany, Netherlands, Slovenia, Slovakia and United Kingdom).

The mobile ported numbers have increased significantly during the past period (almost +6.3 million) and as of October 2006 31.4 million subscribers in 24 Member States have ported their number since the introduction of this possibility (data not available for United Kingdom).

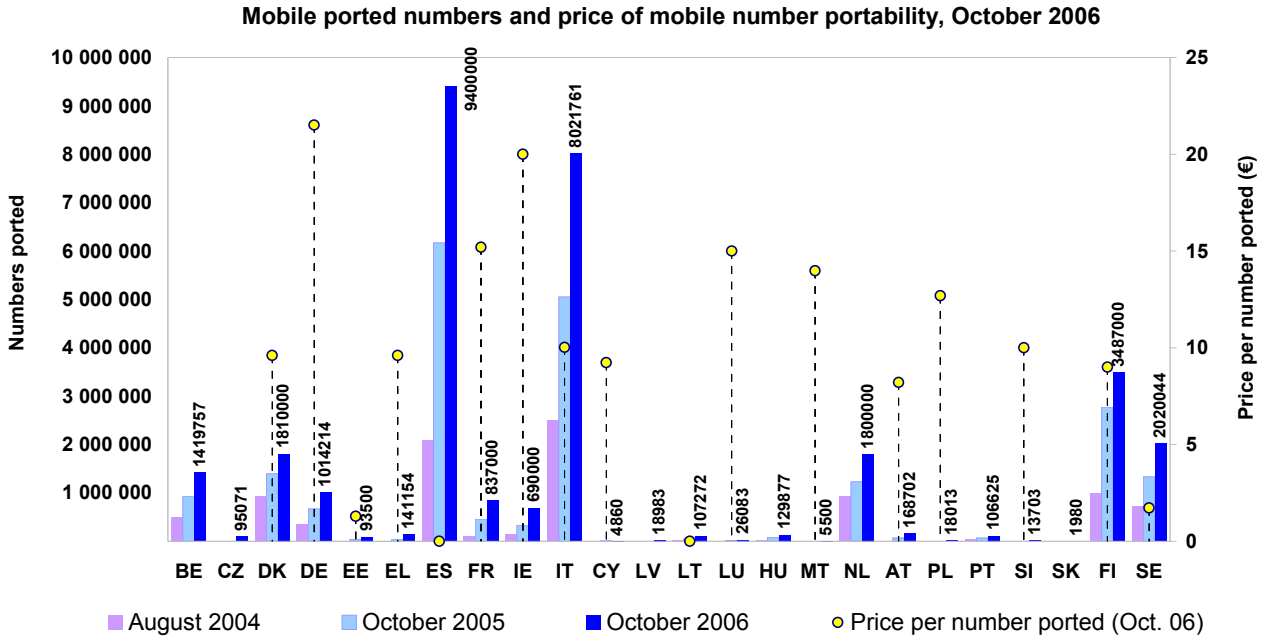
Apart from the countries that have introduced number portability only during 2006, there has been significant growth in the amount of mobile numbers ported in France, Austria, Greece, Ireland and Luxembourg. The highest percentage of mobile number ported over the total mobile subscribers is found in Finland (over 64%) and Denmark (32%). Spain and Sweden have over 20%, while Belgium, Ireland, Italy and Netherlands have ported between 10% and 16% of the existing mobile numbers. Most of the new Member States show a very low level of numbers ported compared to the total of mobile subscribers due to the late introduction of number portability. The percentage of mobile number ported is also quite low in Luxembourg (3.4%) and in Germany, Greece, France, Portugal and Austria (not higher than 1.9%).

Prices for fixed number portability refer to the amount charged by the incumbent to the recipient operators for porting one mobile number (excluding VAT).

According to the data at our disposal for 17 Member States, the EU weighted average price for a mobile number ported is 12.3 €.

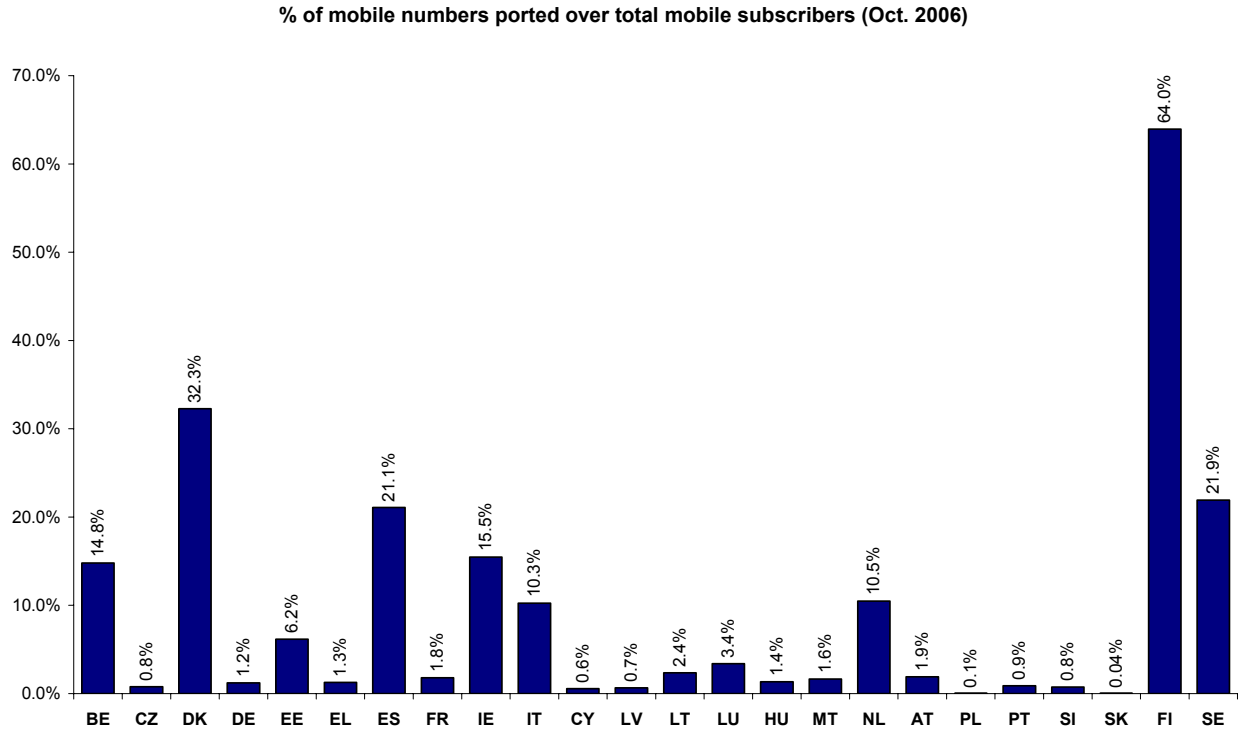
Prices in Germany, Ireland and Sweden are significantly higher than the EU average (more than 20 €), while in Spain and Lithuania it is free of charge and costs less than 2 € in Sweden. Since October 2005 a significant decrease in the price for a number ported has occurred in Sweden and in the Netherlands.

Figure 53



Belgium, Czech Republic, Latvia, Hungary, Netherlands, Portugal, Slovakia: Missing data are not available.
Belgium, Czech Republic**:** Price is currently subject of appeals or part of a dispute.
Spain, Lithuania: Numbers are ported free of charge.
Latvia: Number portability is available for post-paid contract only.
Malta: Price in the chart refers to post-paid contracts. Price for porting of a single mobile prepaid number is 9,32 €.
Austria: Figure for price refers to the maximum value of 8,21 €.
Finland: Price vary from 5 € to 12 €.
United Kingdom: No information available.

Figure 54


% of mobile numbers ported over total mobile subscribers (Oct. 2006)
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
14.8%
0.8%
32.3%
1.2%
6.2%
1.3%
21.1%
1.8%
15.5%
10.3%
0.6%
0.7%
2.4%
3.4%
1.4%
1.6%
10.5%
1.9%
0.1%
0.9%
0.8%
0.04%
64.0%
21.9%
BE
CZ
DK
DE
EE
EL
ES
FR
IE
IT
CY
LV
LT
LU
HU
MT
NL
AT
PL
PT
SI
SK
FI
SE

6. BROADBAND ACCESS AND PRICING

6.1. Broadband access definitions

This section provides data on the number and type of broadband lines supplied by both incumbent operators and new entrants in the EU. It also contains information on access lines provided by means of alternative technologies such as wireless access (WLL), satellite and cable modems.

Information has been provided by the national regulatory authorities through the ONP COM02-18 questionnaire on data for local broadband access. Given the rapid developments in this sector, it has been agreed with NRAs to update the ONP questionnaire on a regular basis in January, July and October. Unless otherwise stated, the data below refer to the market situation at 1 October 2006.

The definitions used in the charts and data below are as follows:

- Fully unbundled lines: Fully unbundled lines supplied to other operators, excluding experimental lines. In the case of full unbundling, a copper pair is rented to a third party for its exclusive use. As fully unbundled lines (ULL) supplied by the incumbent operator to the new entrants could in principle be used for services other than broadband, the total number of ULL for access to internet will be lower than the total number of ULL.

- Shared access lines supplied by the incumbent to new entrants: Shared access lines supplied to other operators, excluding experimental lines. In the case of shared access, the incumbent continues to provide telephony service, while the new entrant delivers high-speed data services over that same local loop.

- Bitstream access: Supplied to new entrants. Bitstream access refers to the situation where the incumbent installs a high-speed access link to the customer premises and then makes this access link available to third parties, to enable them to provide high-speed services to customers. Bitstream depends in part on the PSTN and may include other networks such as the ATM network. Bitstream access is a wholesale product that consists of the provision of transmission capacity in such a way as to allow new entrants to offer their own, value-added services to their clients. The incumbent may also provide transmission services to its competitor, to carry traffic to a 'higher' level in the network hierarchy where new entrants may already have a broadband point of presence.

- Simple resale: In contrast to bitstream access, simple resale occurs where the new entrant receives and sells on to end users - with no possibility of value added features to the DSL part of the service - a product that is commercially similar to the DSL product provided by the incumbent to its own retail customers, irrespective of the ISP service that may be packaged with it. Resale offers are not a substitute for bitstream access because they do not allow new entrants to differentiate their services from those of the incumbent (i.e. where the new entrant simply resells the end-to-end service provided to him by the incumbent on a wholesale basis).

- Incumbent's DSL lines: Provided to end users by the incumbent, its subsidiaries or partners (for example an associated company such as a joint venture providing ISP services),

- WLL: Internet broadband connections by means of wireless local loop (sometimes referred to as fixed wireless access),

- Cable modem: Internet broadband connections by means of cable TV access,

- L.L.: Internet broadband connections by means of dedicated capacity (Leased Lines) provided over metallic copper pairs, including tail ends or partial circuits. "Incumbent's leased lines" includes only retail lines and excludes lines provided to other operators. "New entrants' leased lines" includes all retail lines provided to end users, even if based on wholesale lines supplied by the incumbent.

- Other categories: Internet broadband connections by means of 3G, satellite, fibre optic, powerline communications, other.

- Retail access: Access provided to end users.

- Incumbents are defined as the organisations enjoying special and exclusive rights or *de facto* monopoly for provision of voice telephony services before liberalisation, regardless of the role played in the provision of access by means of technologies alternative to the PSTN.

- "New entrants" refers to alternative telecommunications operators, as well as internet service providers (ISPs).

- Broadband capacity: Capacity equal to, or higher than, 144 Kbit/s.

6.2. Wholesale access

This section shows the availability of wholesale access lines supplied by incumbent operators to new entrants. Separate figures are provided for fully unbundled lines, shared access and bitstream access.

Data from the New Member States are included when available. As can be seen from the table at the end of this section, data are not always available, especially as regards wholesale lines.

The table below shows the number of agreements between operators for ULL, shared access, bitstream and resale as at 1 October 2003, 2004, 2005 and 2006.

Table 1 Number of agreements for full ULL, shared access, bitstream access and resale, 2003-2006.

	N. of agreements on fully unbundled lines				N. of agreements on shared lines				N. of agreements on Bitstream access				N. agreements on resale lines			
	Oct. 03	**Oct. 04**	**Oct. 05**	**Oct. 06**	**Oct. 03**	**Oct. 04**	**Oct. 05**	**Oct. 06**	**Oct. 03**	**Oct. 04**	**Oct. 05**	**Oct. 06**	**Oct. 03**	**Oct. 04**	**Oct. 05**	**Oct. 06**
BE	8	8	8	9	8	8	8	9	10	11	11	13	22	25	27	18
CZ	0	4	4	5	0	2	4	5	0	0	n.a.	23	0	21	19	
DK	13	17	17	21	4	10	6	8	9	10	11	13	0	0	10	10
DE	81	86	99	101	7	9	16	17	0	0	3	5	0	8	n.a.	24
EE	0	7	n.a.	7	0	0			0	0			21	3	1	
EL	7	11	12	13	0	1	1	6	0	8	10	15	0	0		
ES	9	11	13	16	9	11	12	13	37	30	30	30	n.a.	n.a.	n.a.	2
FR	9	13	21		9	13	21		5	5	5		20	20	20	
IE	1	3	3	5	1	3	3	5	2	8	9	11	-	0		

IT	31	27	26	27	2	4	6	9	150	211	234	250	0	0		
CY	0	n.a.		2	0	n.a.		2	0	n.a.			n.a.	n.a.	n.a.	
LV	0	0	2	2	0	1	2	2	0	0	11	11	0	11		
LT	0	0		1	0	0			0	17	16	12	0	0		
LU	2	3	3	5	2	3	4	5	0	0			1	4	5	7
HU	0	2	6	6	0	0	1	5	0	18	17	20	0	0		
MT	0	0			0	0			0	0			0	16	19	11
NL	12	12	10	10	12	12	10	10	1	1	1	5	0	0		
AT	17	20	26		0	20	26		38	38	38	.	0	0		
PL	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
PT	2	2	2	4	n.a.	1	1	1	8	9	8	8	0	0		
SI	0	0		3	0	1	3	3	0	4	10	13	0	0	3	4
SK	0	0			0	0			0	0			0	0		12
FI	n.a.	n.a.	n.a.		n.a.	n.a.	n.a.		n.a.	n.a.	n.a.		n.a.	n.a.	n.a.	
SE	74	116	122	n.a.	74	116	122	n.a.	26	26	26	n.a.	12	n.a.	n.a.	n.a.
UK	57	59	44	55	7	12	22	31	n.a.	28	49	28	602	801	780	591
EU	**325**	**401**	**418**	**291**	**135**	**227**	**268**	**130**	**286**	**424**	**489**	**461**	**678**	**909**	**884**	**679**

Figure 55 shows the distribution of wholesale access lines supplied by the incumbent operators to new entrants. There has been a huge surge of 58.36% in wholesale unbundled local loops (fully unbundled lines and shared access lines), from 8.77 million in October 2005 to more than 13.89 million, in October 2006, representing 7.53% of the PSTN lines in the EU25. This increase comprises approximately 4.13 million fully unbundled lines and 0.98 million shared access lines. The number of shared access lines increased from 3 558 205 to 4 541 045 lines, while fully unbundled lines went up from 5 212 691 to a remarkable 9 348 125. Resale grew by 6 175 487 lines, which represent 123.64% growth since October 2005, while the number of wholesale bitstream access lines slightly declined.

Figure 55

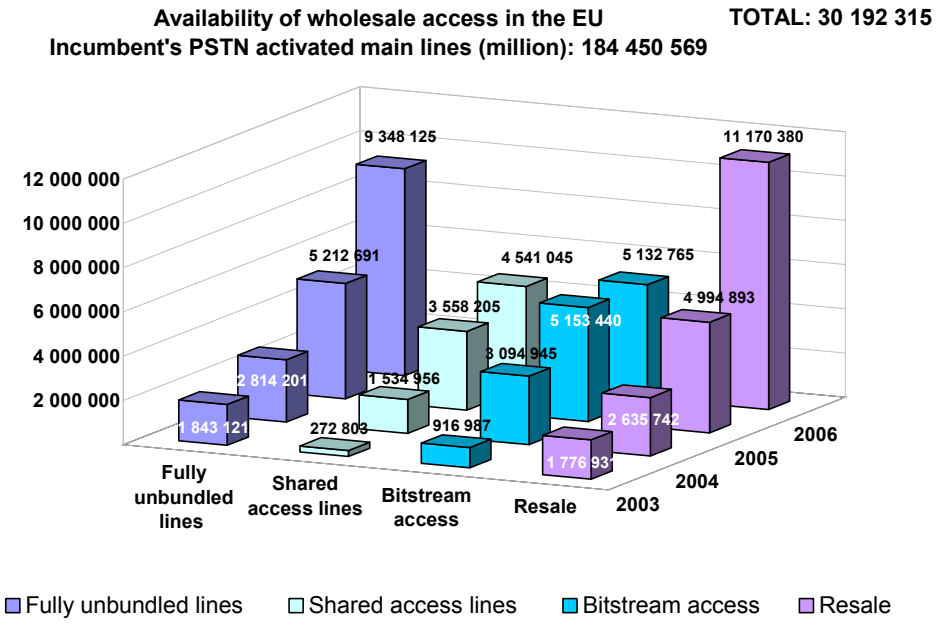
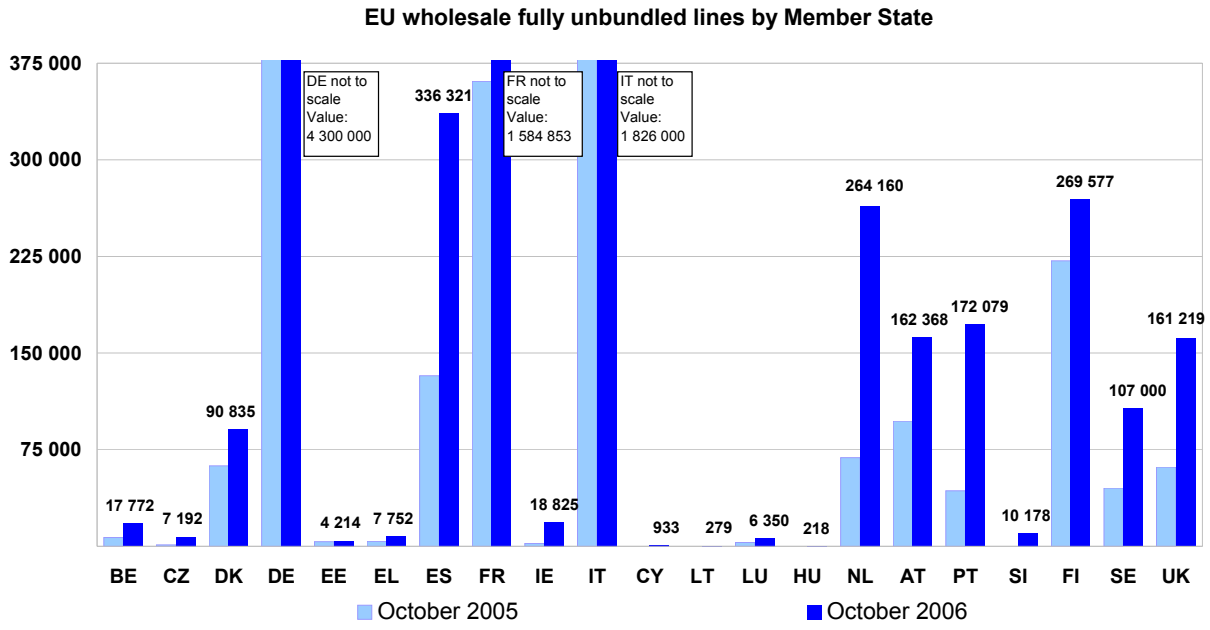
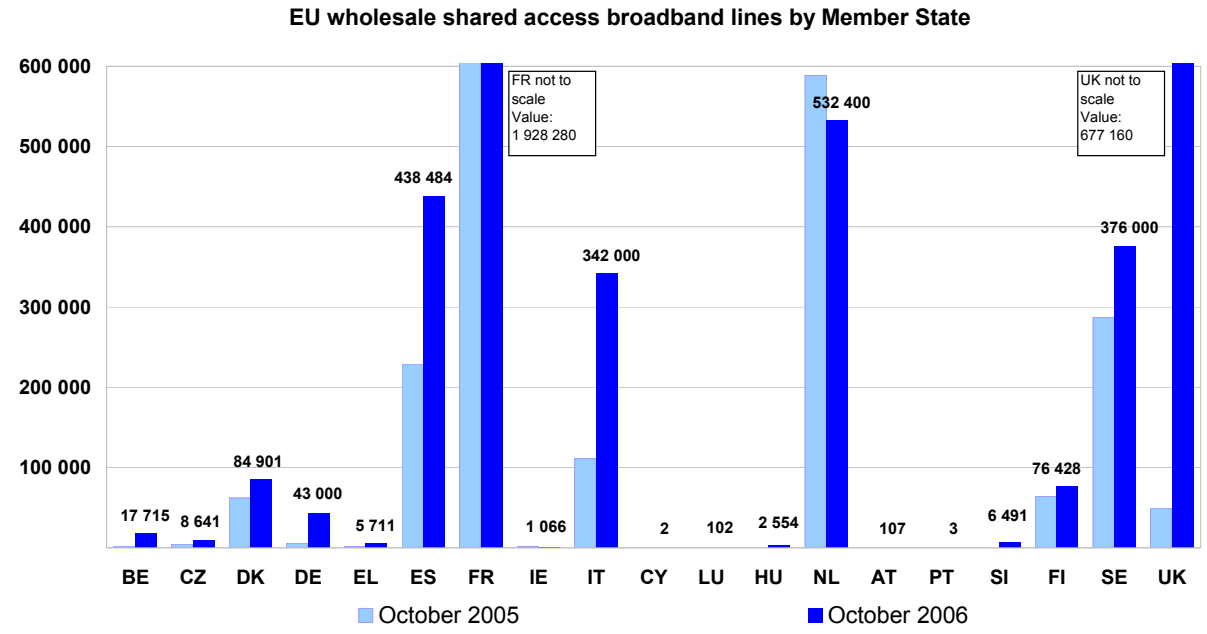


Figure 56



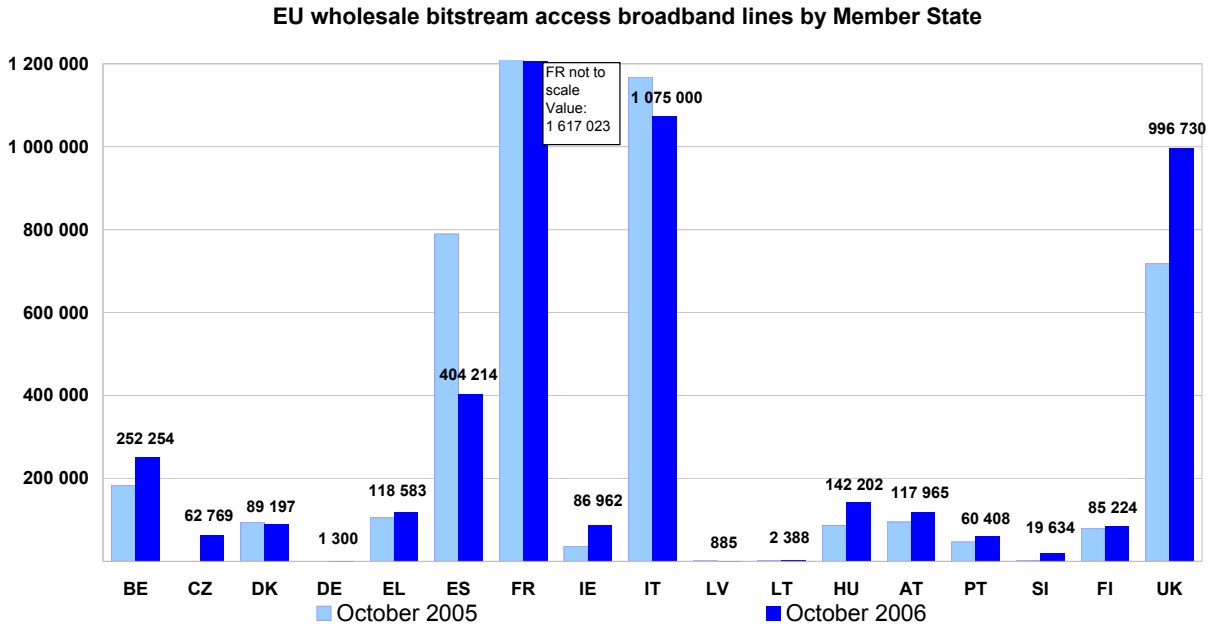
Data for Austria as of July 2006.

Figure 57



Data for Austria as of July 2006.

Figure 58



Data for Austria as of July 2006.
Spain: A sharp decline generally due to a change in the counting methodology.

6.3. Retail broadband access

This section provides information on the deployment of broadband access lines by incumbents (and their subsidiaries or partners) and by new entrants (alternative telecom operators or Internet Service Providers) to end-users.

Internet broadband access can be provided by different means: DSL lines, wireless local loop (WLL), cable TV access (cable modem), dedicated leased lines and other access (like satellite, fibre optic, powerline communications, etc.).

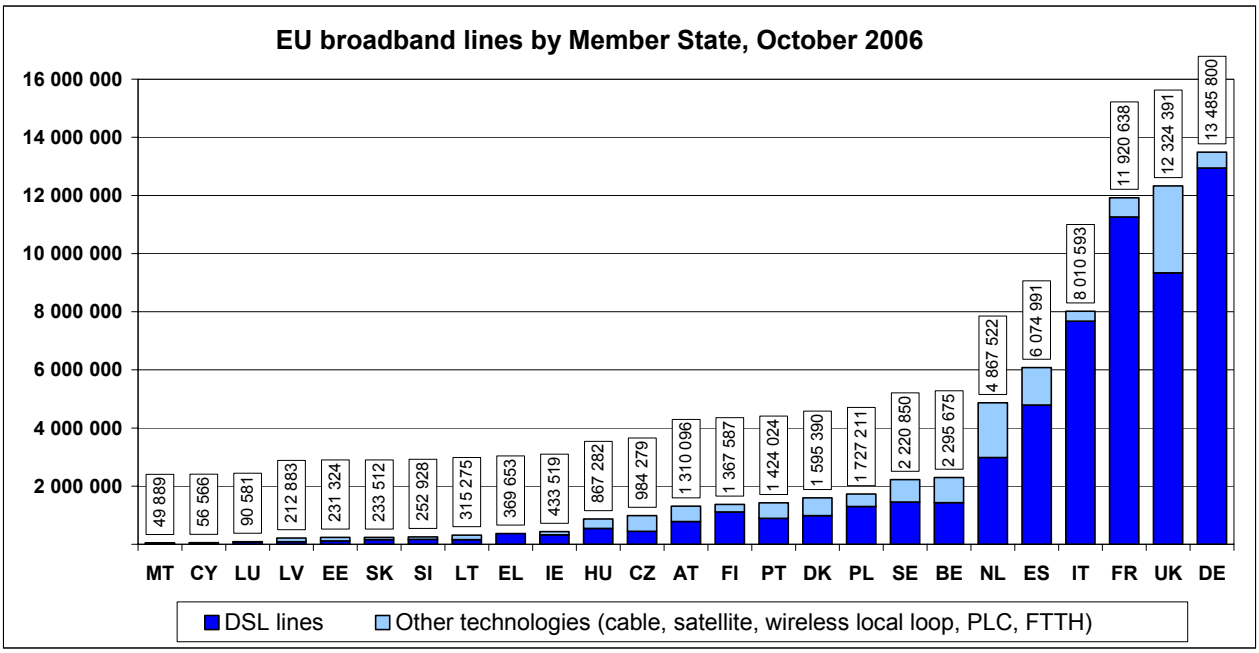
New entrants' DSL lines can be provided to end users by means of fully unbundled or shared access lines, bitstream access or resale. In some Member States, new entrants have started rolling out parallel DSL networks.

In all the charts below on fixed broadband retail lines the data refer to 1 October 2006. In some cases only estimates are available.

The charts below only include fixed broadband lines.

Figure 59 shows the total number of broadband access lines for each Member State, provided by both incumbents and new entrants, and including all types of fixed broadband connections.

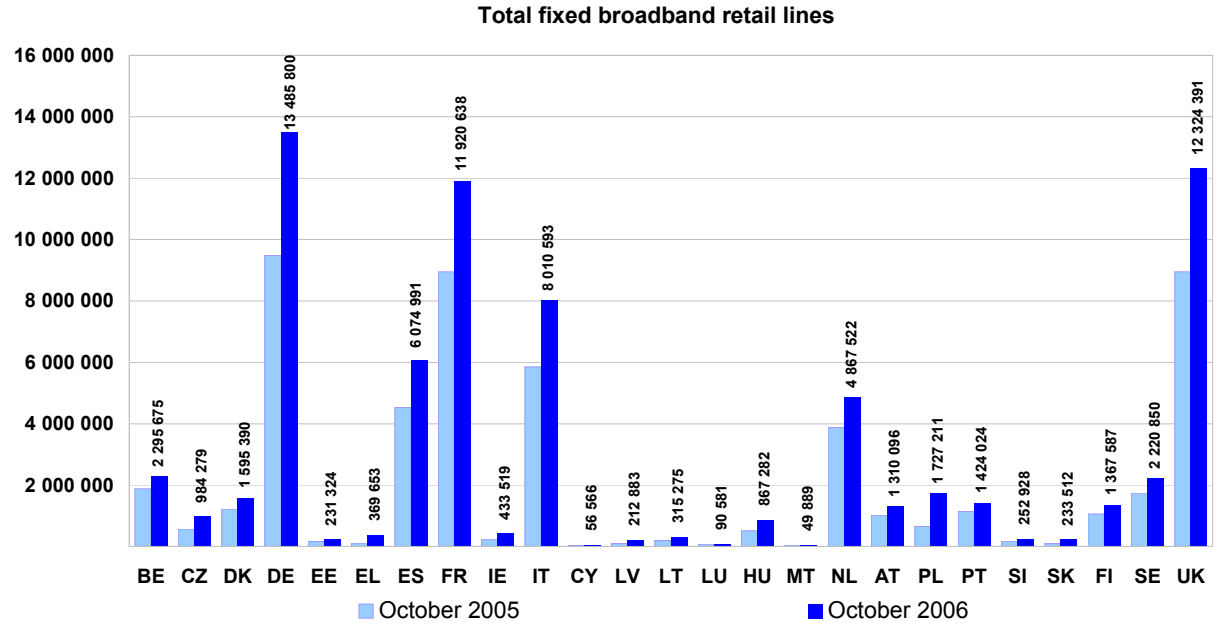
Figure 59



Data for Austria as of July 2006. The estimate of the Austrian NRA for October 2006 is 1 357 405 lines.
According to Danish NRA 25.900 new entrants' cable and 37.747 new entrants' other (LAN) lines, provided by non-profit user associations should be added, even though the associations are themselves end-users.

The following chart presents the number of broadband lines per Member State in October 2005 and October 2006.

Figure 60

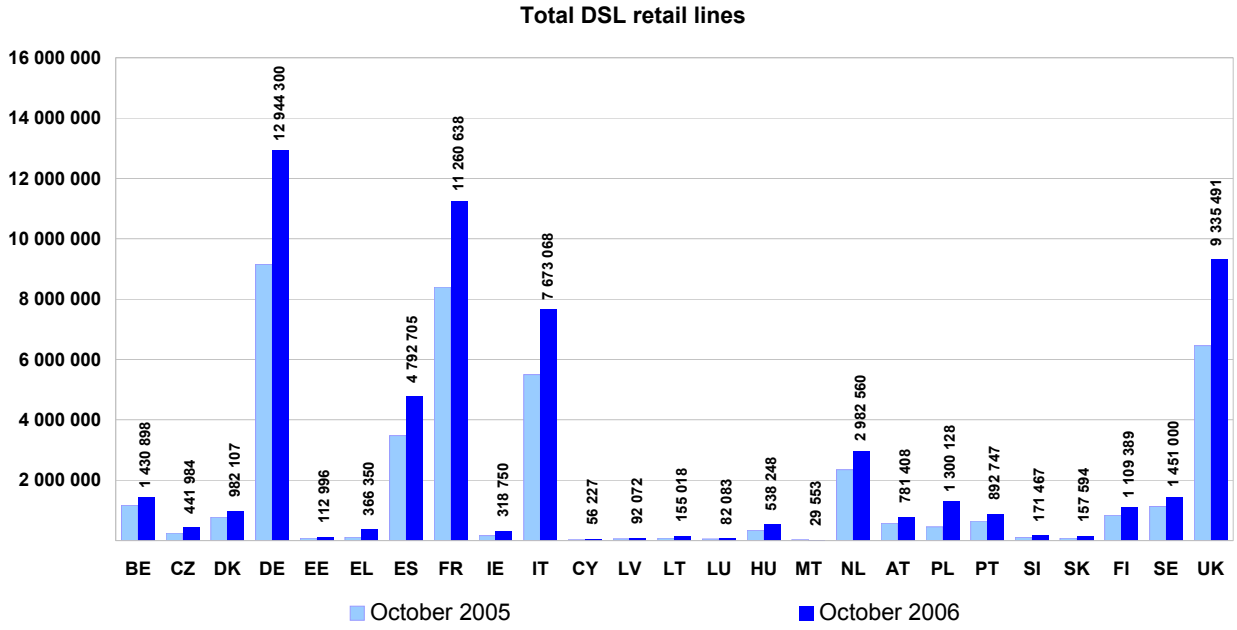


Data for Austria as of July 2006.

According to Danish NRA 25.900 new entrants' cable and 37.747 new entrants' other (LAN) lines, provided by non-profit user associations should be added, even though the associations are themselves end-users.

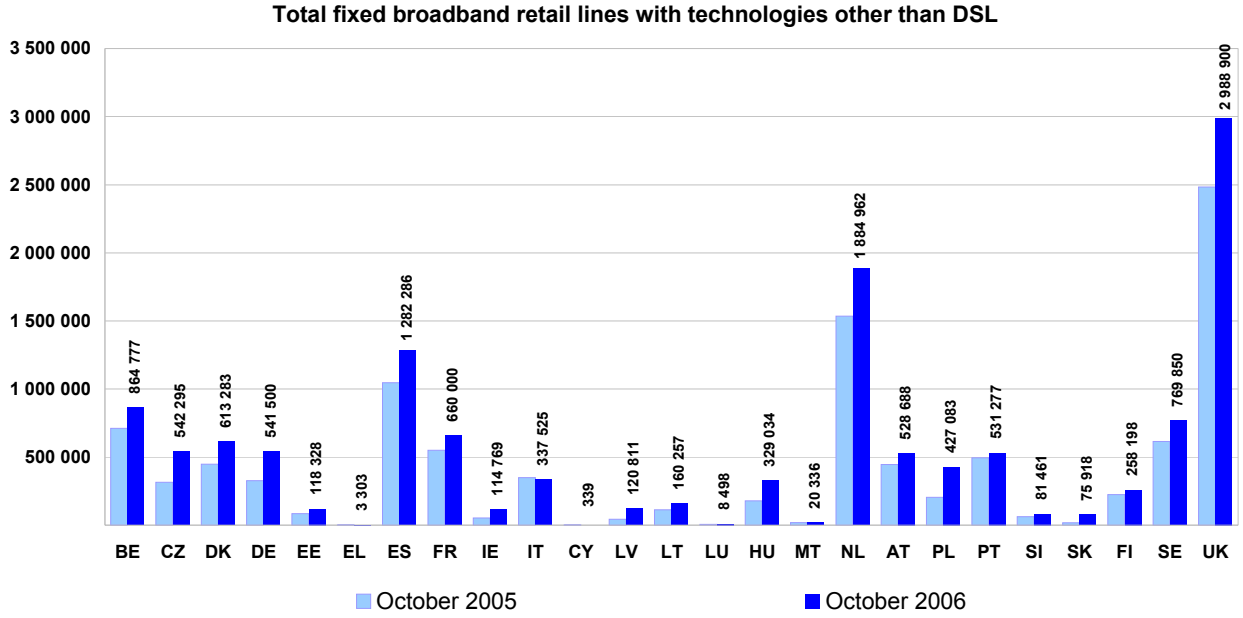
The following two charts show the breakdown of broadband lines according to the two main types of technologies. Figure 61 shows the number of DSL lines. Amongst the technologies other than DSL (Figure 62), cable modem is the most common technology. Other technologies are still marginal, though some (fibre to the home and WLL) are quickly developing.

Figure 61



Data for Austria as of July 2006.

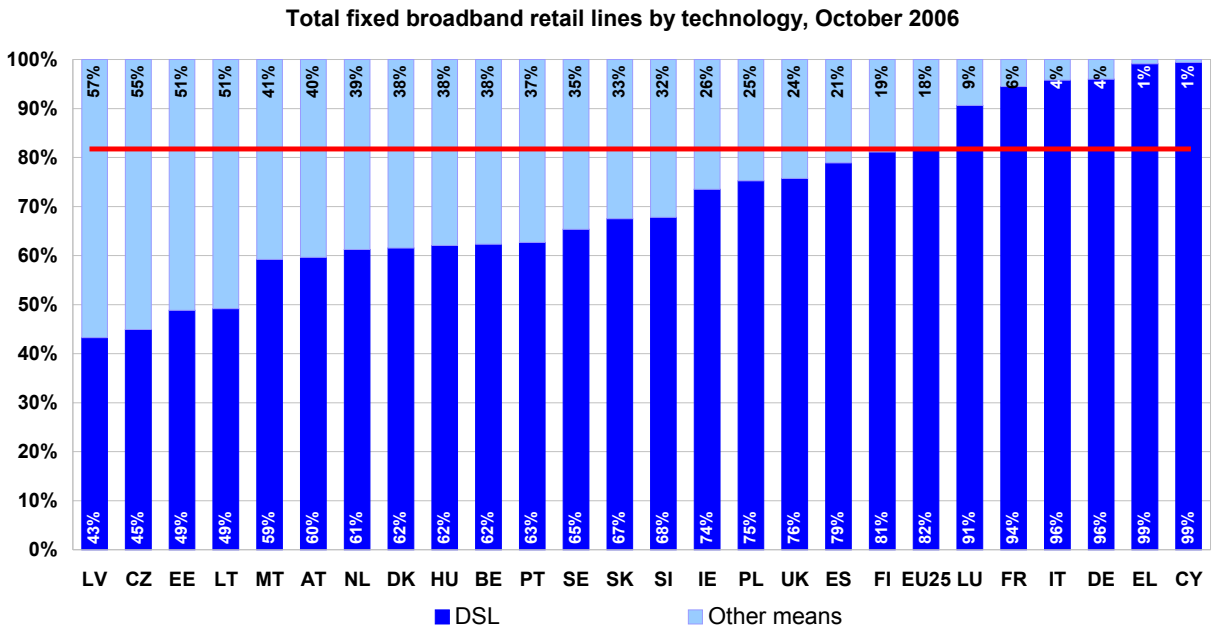
Figure 62



Data for Austria as of July 2006.
According to Danish NRA 25.900 new entrants' cable and 37.747 new entrants' other (LAN) lines, provided by non-profit user associations should be added, even though the associations are themselves end-users.

The following charts provide information on the national broadband markets according to the technology used and the type of operator. Figure 63 shows that DSL is the predominant technology in the EU. On average, 82% of the EU25 broadband lines use DSL technologies and only in four countries DSL lines represent less than 50% of the overall market.

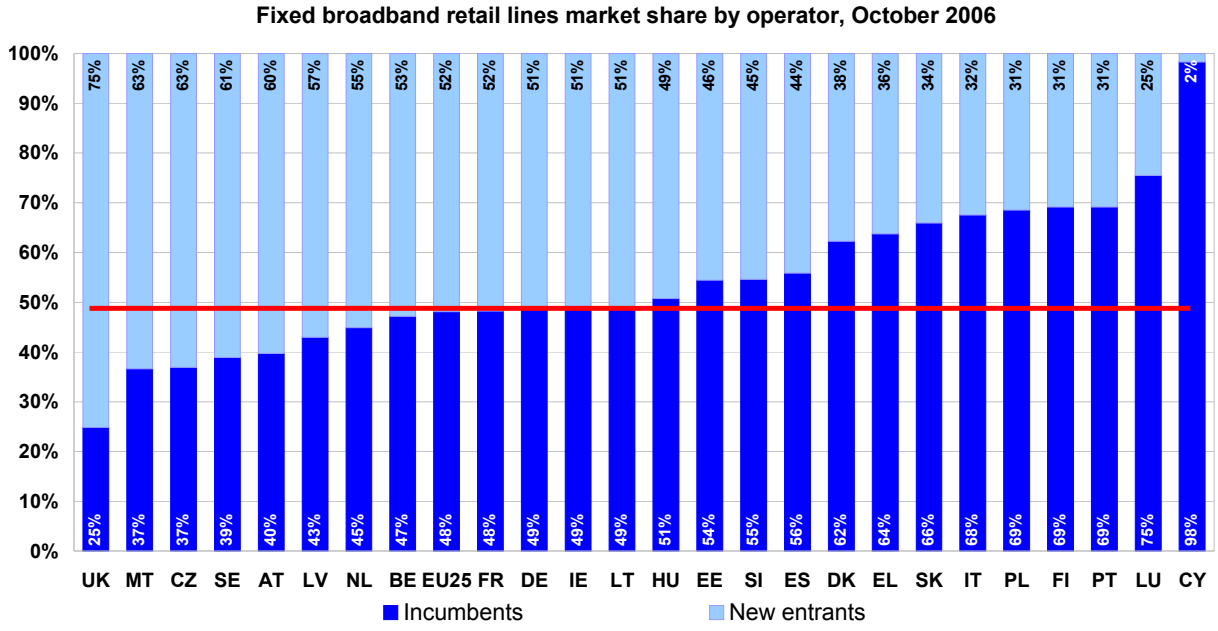
Figure 63



Data for Austria as of July 2006.
Red line represents the EU average.

With regard to the market share of fixed incumbent operators and new entrants, Figure 64 indicates that, on average, incumbent operators control 48% of broadband lines, which is 2 percentage points less than in October 2005.

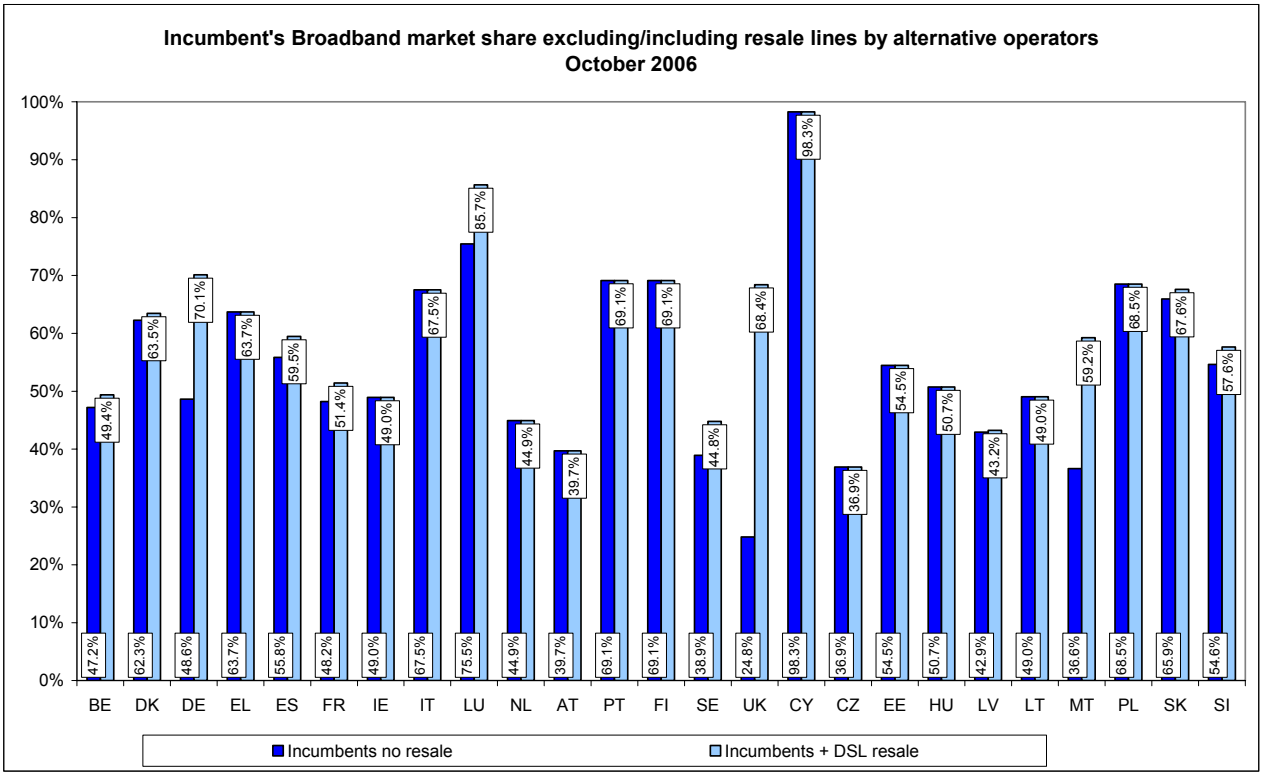
Figure 64



Data for Austria as of July 2006.
Red line represents the EU average.

However, differences in the incumbents' market share depending on whether DSL resale lines are included or not are considerable.

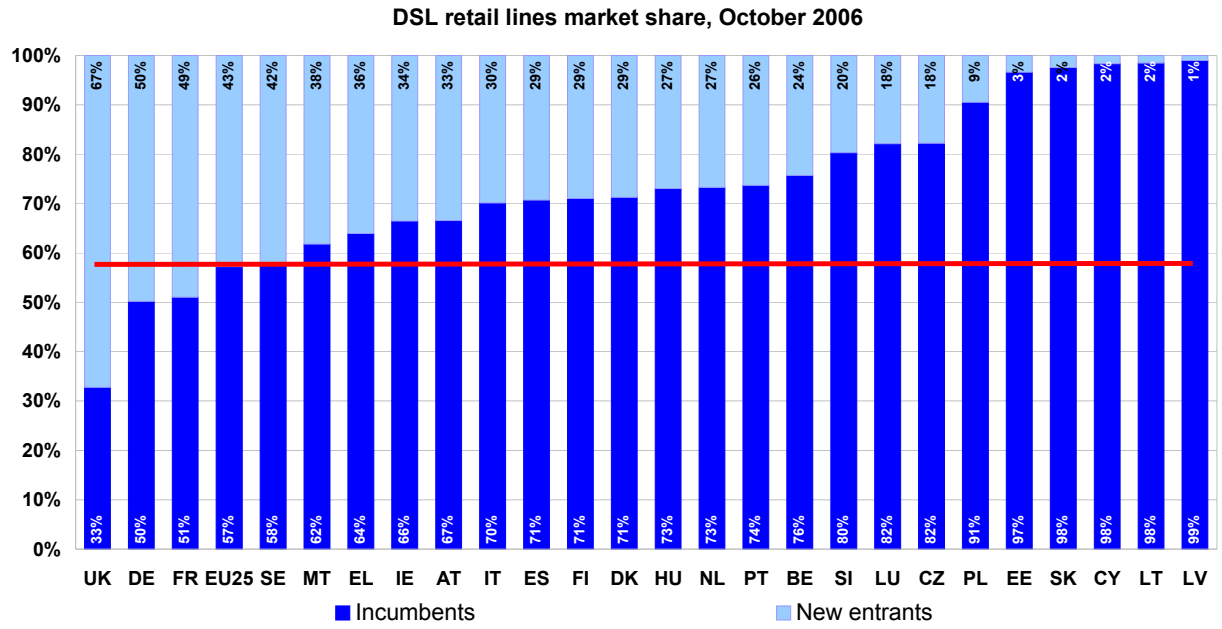
Figure 65



Data for Austria as of July 2006

Figure 66 presents the market share by operator in the DSL retail market. At EU25 level the fixed incumbent operator provides 57% of DSL lines. In 9 Member States the incumbent operator sells more than 80% of all DSL retail lines.

Figure 66

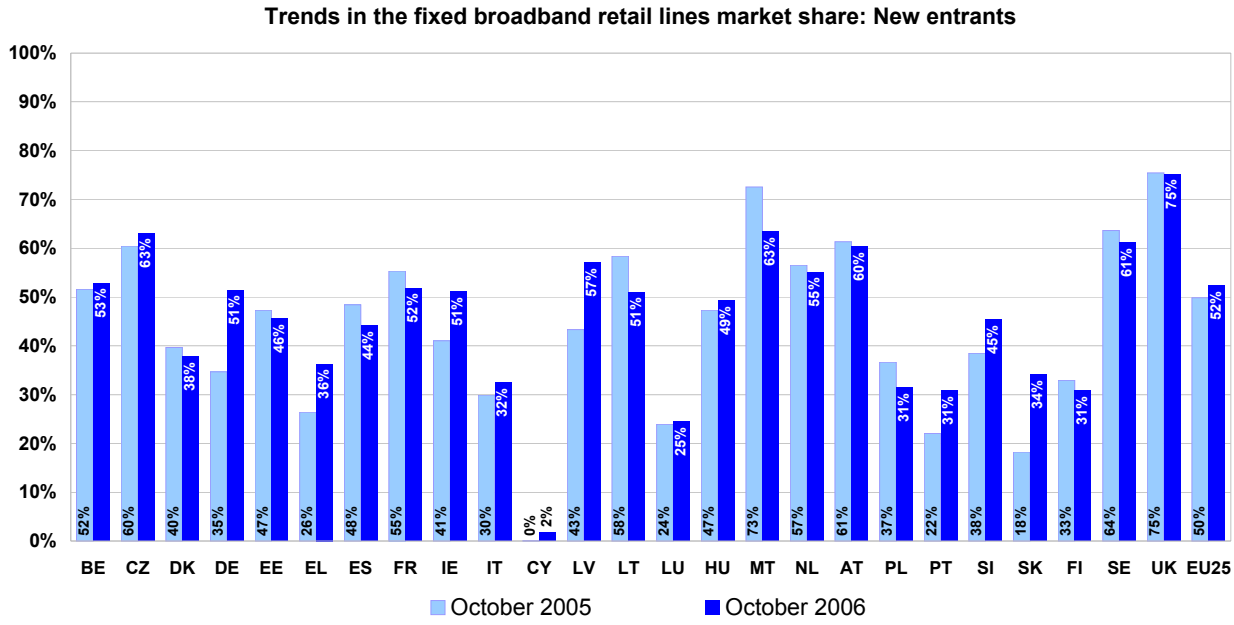


Data for Austria as of July 2006.

Red line represents the EU average.

The next series of charts provide further information on the trends observed in the three segments analysed previously. As can be seen in figure 12, new entrants are steadily increasing their presence in the overall broadband market, with an average 52% market share against 50% a year ago. This trend is however not uniform, and in 12 countries, Denmark, Estonia, Spain, France, Lithuania, Malta, the Netherlands, Austria, Poland, Finland, Sweden and the United Kingdom the fixed incumbent operator has increased its market share.

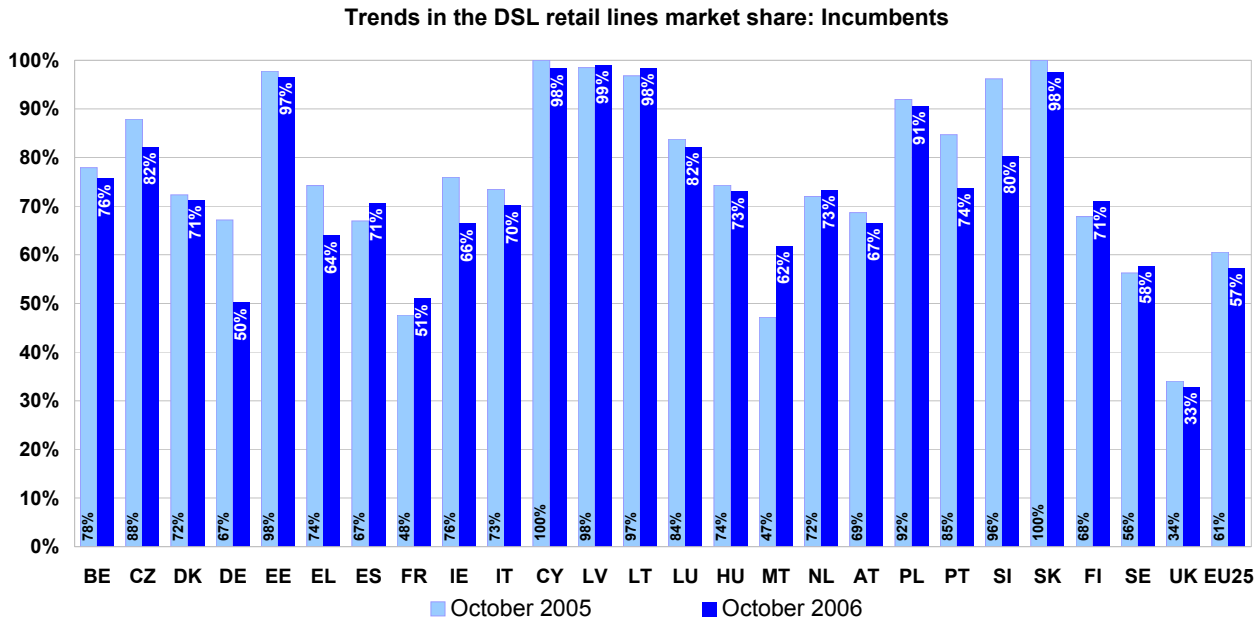
Figure 67



Data for Austria as of July 2006.

With regard to the trend in the number of DSL lines sold by incumbent operators in the same period, there has been a reduction of 4 percentage points on average, from 61% in October 2005 to 57% in October 2006.

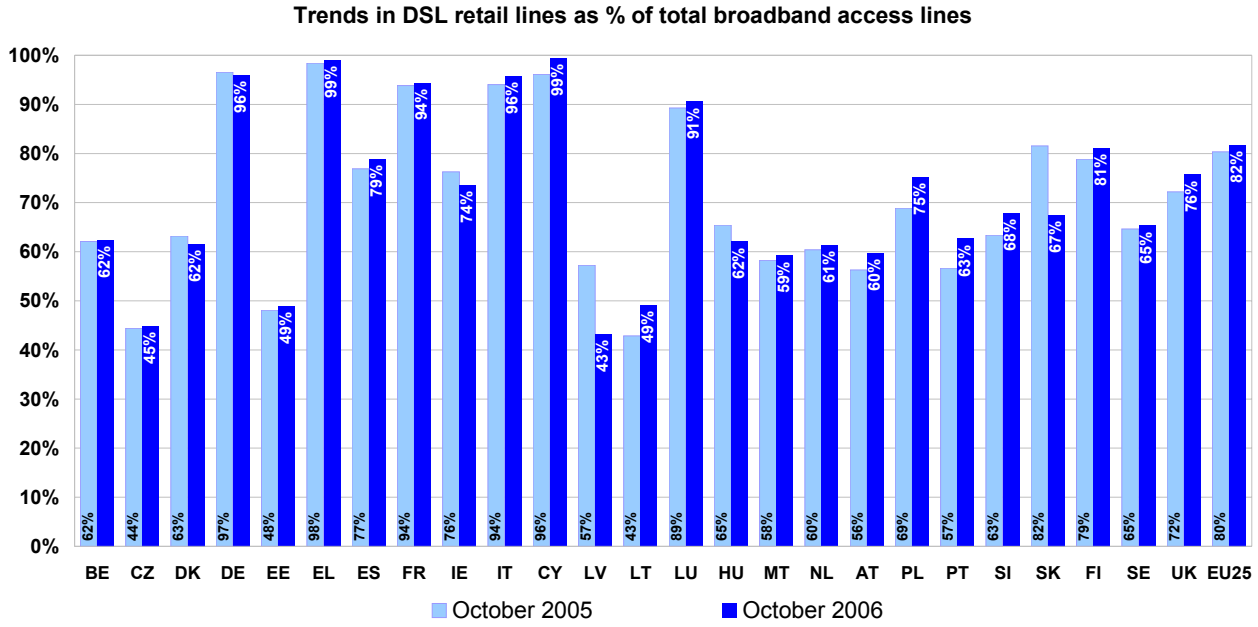
Figure 68



Data for Austria as of July 2006.

As it can be seen in Figure 69, the number of DSL lines has increased in the overall broadband retail market, representing 82% of all broadband lines against 80% in October 2005. However, in a number of countries other technologies have increased at a higher rate.

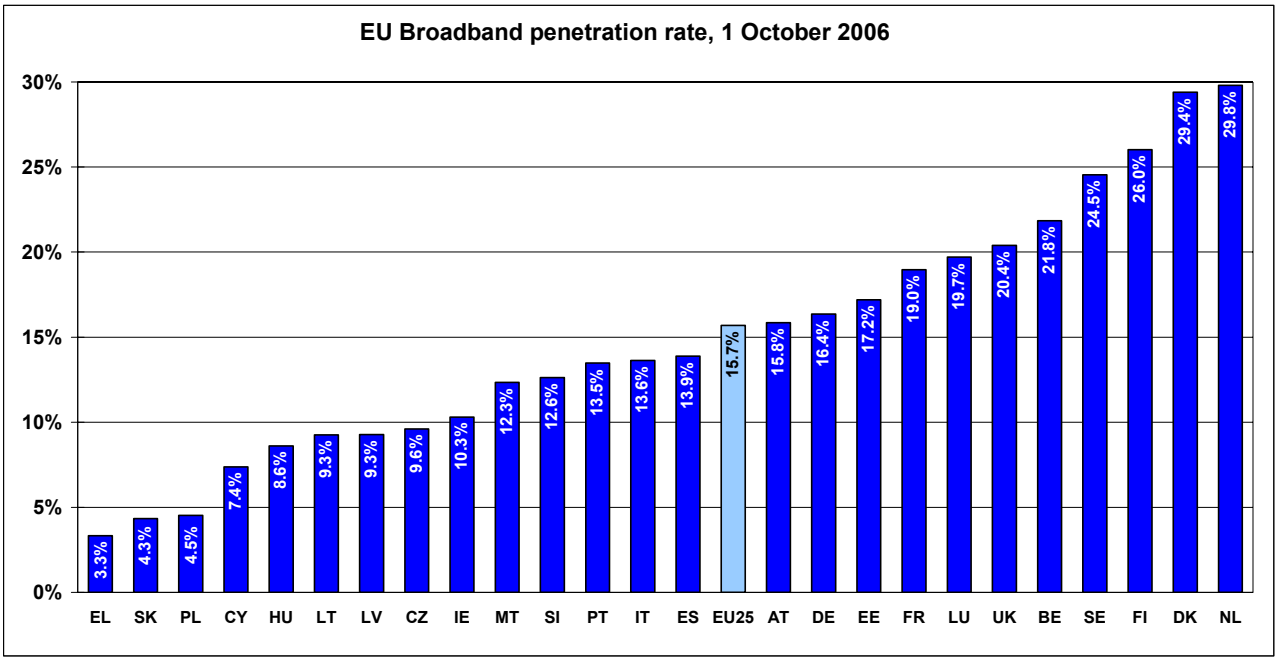
Figure 69



Data for Austria as of July 2006.

The following chart shows the penetration rate for broadband lines measured as the total number of broadband lines divided by the total population. The broadband penetration rate varies significantly across Member States ranging from 3.3% in Greece to 29.8% in the Netherlands.

Figure 70



Data for Austria as of July 2006. The estimate of the Austrian NRA for October 2006 is 16.4%.
According to Danish NRA 25.900 new entrants' cable and 37.747 new entrants' other (LAN) lines, provided by non-profit user associations should be added, even though the associations are themselves end-users. This change would influence also the penetration rate.

Availability of wholesale access October 2006											
		Fully unbundled lines supplied by the incumbent to new entrants			Shared access lines supplied by the incumbent to new entrants			Wholesale DSL lines supplied			
								Bitstream access		Simple resale	
Country	Incumbent's PSTN activated main lines	Unbundled lines	Requested lines	N. of agreements	Shared lines	Requested lines	N. of agreements	No. of lines	No. of agreements	Resale No. of lines	No. of agreements
BE	4 147 659	17 772	464	9	17 715	87	9	252 254	13	49 657	18
CZ	2 902 064	7 192		5	8 641		5	62 769	23		
DK	3 123 853	90 835		21	84 901		8	89 197	13	19 460	10
DE	38 300 000	4 300 000		101	43 000		17	1 300	5	2 900 000	24
EE	462 000	4 214	77	7							
EL	5 401 989	7 752	639	13	5 711	251	6	118 583	15		
ES	15 434 815	336 321	10 000	16	438 484	10 000	13	404 241	30	221 025	2
FR	32 359 000	1 584 853			1 928 280			1 617 023		383 950	
IE	1 700 000	18 825	699	5	1 066	3	5	86 962	11		
IT	21 278 077	1 826 000	44 800	27	342 000	8 300	9	1 075 000	250		
CY	410 735	933	971	2	2	3	2				
LV	600 000			2			2	885	11		
LT	749 233	279		1				2 388	12		
LU	224 620	6 350	230	5	102		5			9 227	1
HU	3 243 000	218	232	6	2 554	397	5	142 202	20	na	na
MT	202 331									11 284	11

NL	6 125 000	264 160		10	532 400		10	confidential	5		
AT	2 842 730	162 368			107			117 965			
PL	8 487 627	0	0	0	0	0	0	0	4	0	0
PT	3 434 030	172 079	5 561	4	3		1	60 408	8		
SI	817 178	10 178	1 801	3	6 491	1 124	3	19 634	13	6 935	4
SK	1 073 987									3 883	12
FI	2 210 088	269 577			76 428			85 224			
SE	5 127 000	107 000	n.a.	na	376 000	n.a.	na	na	na	130 000	n.a
UK	23 793 553	161 219		55	677 160		31	996 730	28	7 434 959	591
EU15	165 502 414	9 325 111	62 393	265	4 523 357	18 641	113	4 904 887	378	11 148 278	652
EU10	18 948 155	23 014	3 081	26	17 688	1 524	17	227 878	83	22 547	27
EU25	184 450 569	9 348 125	65 474	291	4 541 045	20 165	130	5 132 765	461	11 170 825	679

Data for Austria as of July 2006.

Spain: Please note that the counting methodology for bitstream and resale DSL has changed.

BROADBAND RETAIL LINES, OCTOBER 2006

October 2006		**New entrants' DSL lines on PSTN October 2006**						**Incumbents' access lines by other means**								**New entrants' access lines by other means**							
	Incumbent's DSL lines	Own network	Full ULL	Shared access	Bitstream access	Resale	Total	WLL	Cable modem	Leased lines	3G	Fiber to the home	Satellite	PLC	Other	Total	WLL	Cable modem	Leased lines	3G	Fiber to the home	Satellite	PLC	Other	Total

BE	1083397		12672	10984	274188	49657	347501									0	6249	857216	1189					123	86477
CZ	363382	0	7192	8641	62769	0	78602	0	0	0		0	0	0	0	0	306250	210000	0		220000	4000	45	0	54295
DK	699794	30	111415	65107	86768	18993	282313	10954	273866	3046					5636	293502	16955	201965	4036		20697	147	98	75883	31981
DE	6500000		3500000	43000	1300	2900000	6444300			51000			3000			54000		428000				500000	9500		48700
EE	109153	1103	2700	0	0	40	3843	1447	0	0		15326	0	0	74	16847	5781	56249	0		23502	0	0	15949	10181
EL	234304	0	7752	5711	118583	0	132046	0	0	896		0	330	0	0	1226	466	0	1131		480				2077
ES	3387955	4679	336321	438484	404241	221025	1404750			na			4222			4222	10588	1245015	14090		1389	1643	3695	1644	127806
FR	5746532		1584853	1928280	1617023	383950	5514106									0		660000							66000
IE	211897		18825	1066	86962		106853						343			343	62462	46861			5103				11426
IT	5382000	325	945963	306933	1037190	657	2291068	0	0	407		221	25680	0	194	26502	1198	20	4609		222196	83000			31123
CY	55294		933	0	0	0	933			273					22	295		0	40			2		2	44
LV	91129		139	10	119	675	943	249								249	9831	32004	18122		6677	440	1349	52139	12062

LT	152630	0	0	0	2388	0	2388	0		114		59			1785	1958	23555	61010	1348		19359			53027	15899
LU	67406		5348	102	0	9227	14677	0	743	216		0				959	77	7452	10		0			0	7539
HU	393274		218	2554	142202	na	144974	4700	40574	1500		na	na	0	na	46774	29600	248160	3500		1000	na	0	na	28260
MT	18269					11284	11284									0		20336							20336
NL	2186000		264160	532400	confidential		796560									0		1801962			830000				1884962
AT	520041		143301	101	117965		261367									0	17742	502546			1000	1000	5200	1200	528688
PL	1177224	122904	0	0	0	0	122904	0	272	0		0	0	0	6029	6301	11203	395641	5373		1144	97	0	7324	420782
PT	657913		164936	3	69895	na	234834	na	325482	1049		na	na	na	na	326531	2797	198764	1685				1500		204746
SI	137701	0	10178	6636	9287	7665	33766	0	237	0		182	0	0	0	419	122	78261	0		1935	0	0	724	81042
SK	153711	0	0	0	0	3883	3883	0		256						256	2800	30761	1082		28343	26		12650	75662
FI	788166		159571	76428	85224		321223	1513	92136						63555	157204	2616	81375					984	16019	100994
SE	838000	na	107000	376000	0	130000	613000	0	0	2000		24000				26000	8000	420000	5000		31000000	850	0		743850
UK	3060475	65423	161219	677160		5371214	6275016									0	2500	2980400				6000			2988900

EU 15	31363880	70457	7523336	4461759	3899339	9084723	25039614	12467	692227	58614		2422 1	3357 5	0	69385	890489	131650	943157 6	31750		6438 65	1426 40	20977	94869	1049 732
EU 10	2651767	124007	21360	17841	216765	23547	403520	6396	41083	2143		1556 7	0	0	7910	730 99	389142	113 2422	29465		10 3960	4565	1394	141815	180 763
EU 25	34015647	194464	7544696	4479600	4116104	9108270	25443134	18863	733310	60757		3978 8	3357 5	0	77295	963588	520792	105 63998	61215		74 7825	14 7205	22371	236684	123 0090

Data for Austria as of July 2006.

According to Danish NRA 25.900 new entrants' cable and 37.747 new entrants' other (LAN) lines, provided by non-profit user associations should be added, even though the associations are themselves end-users.

Spain: Please note that the counting methodology for bitstream and resale DSL has changed.

6.4. Prices for unbundled local loop

This section illustrates the cost of connection and monthly rental for both full unbundled access and shared access to the loop. Monthly rental and connection fees are presented as well as the total average monthly cost (over three years).

It is assumed that the loop is active and it will be used to provide both telephony and DSL services.

In some Member States where a whole range of additional one-off costs may exist, are not considered in the chart.

These may include cost of co-location, of the cable termination point, installation at the end-user premises, or disconnection, etc.

Unless otherwise stated, LLU/SA connection fees include the technical expertise to assess the speed that can be conveyed through and exclude the cost of co-location. Furthermore, charges in Member States may be different in the case of subsequent access. Only the price for a single line is presented here.

Data is not always comparable with that of the previous report, due to changes in methodology occurring in some countries.

6.4.1. Monthly average total cost

The following charts illustrate the monthly total cost for the full LLU and shared access (connection and monthly fees) based on the assumption that the loop is used for three years. EU average since 2004 is also shown.

Figure 71

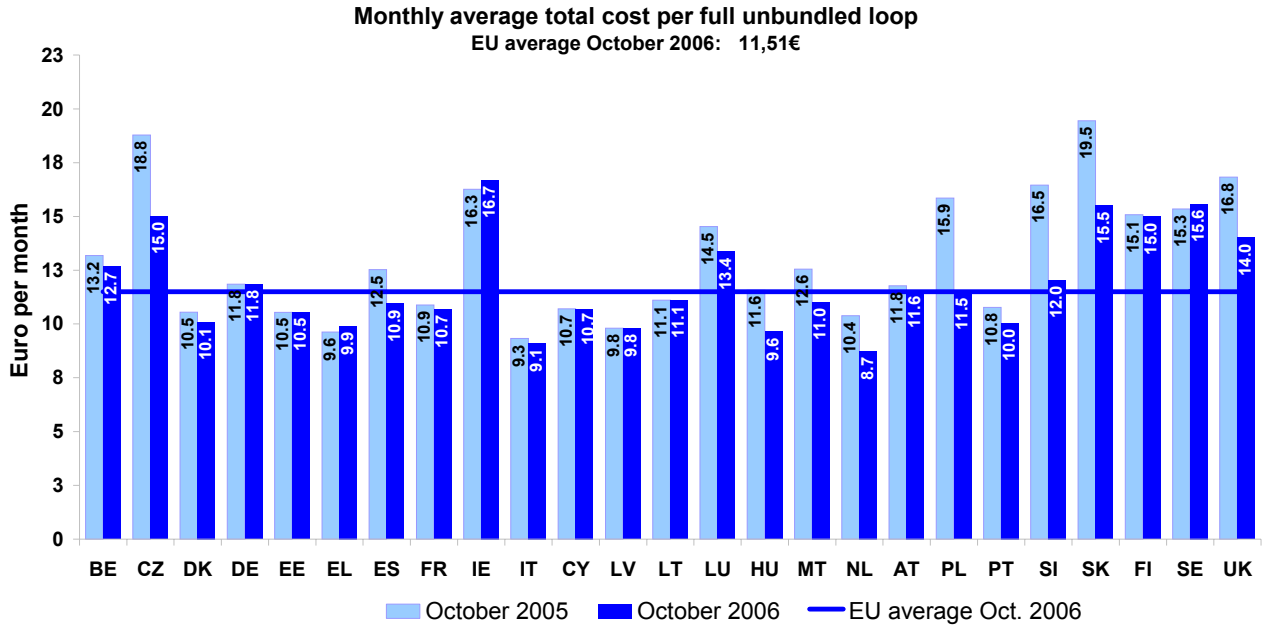


Figure 72

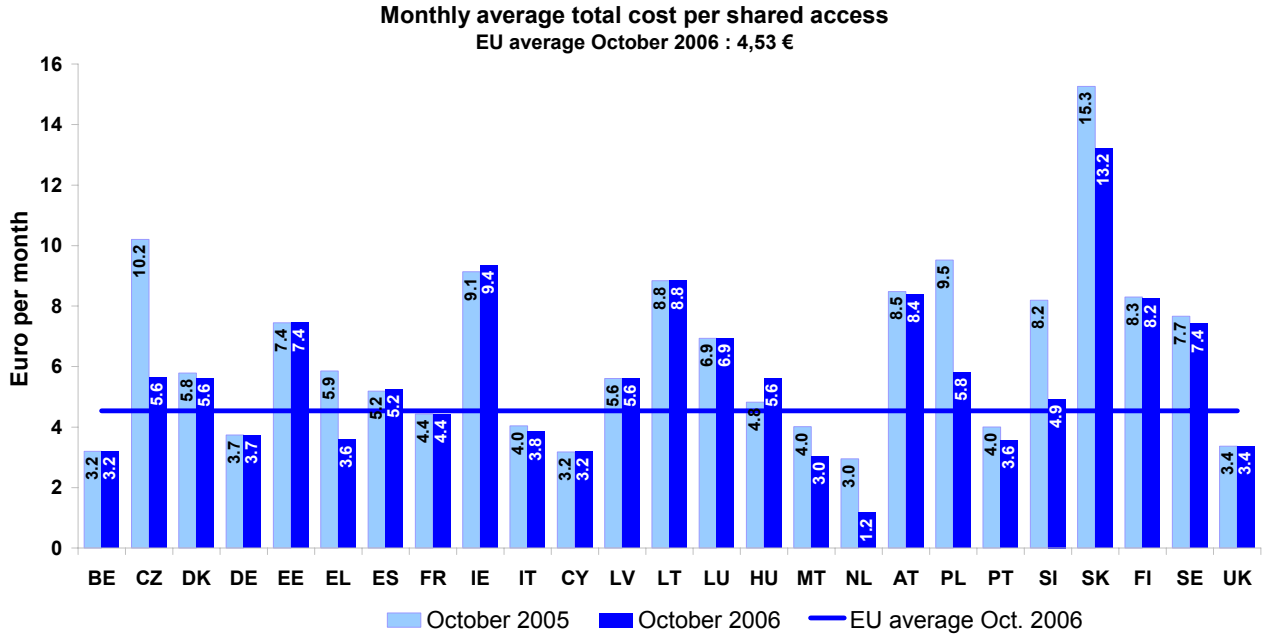


Figure 73

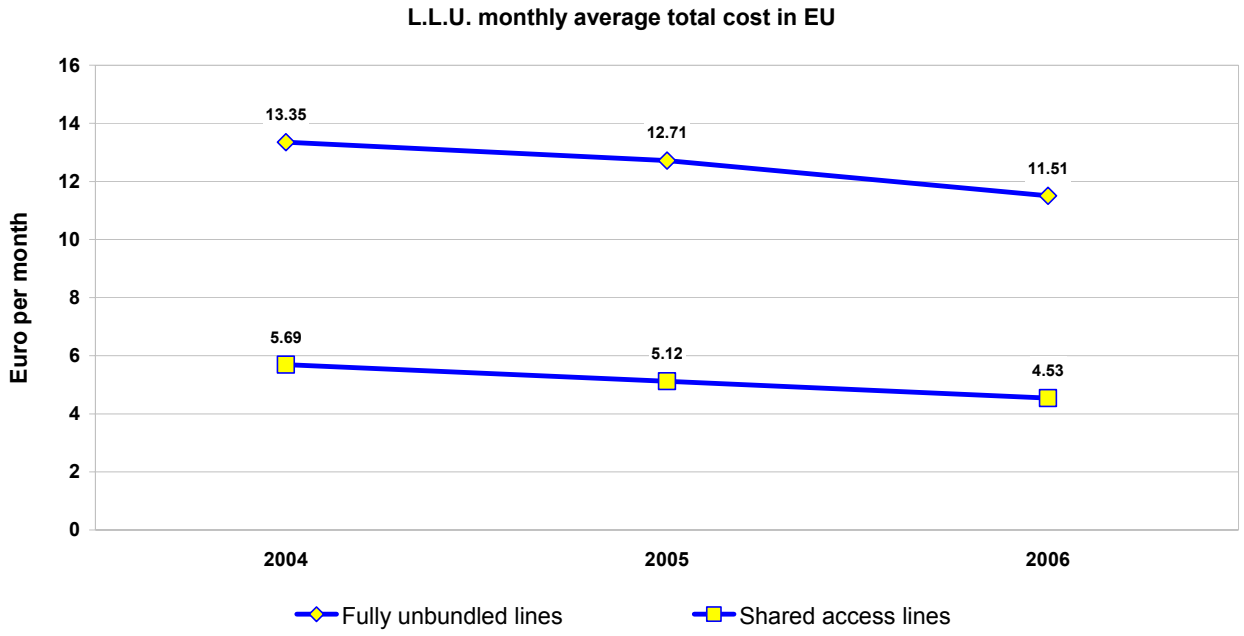
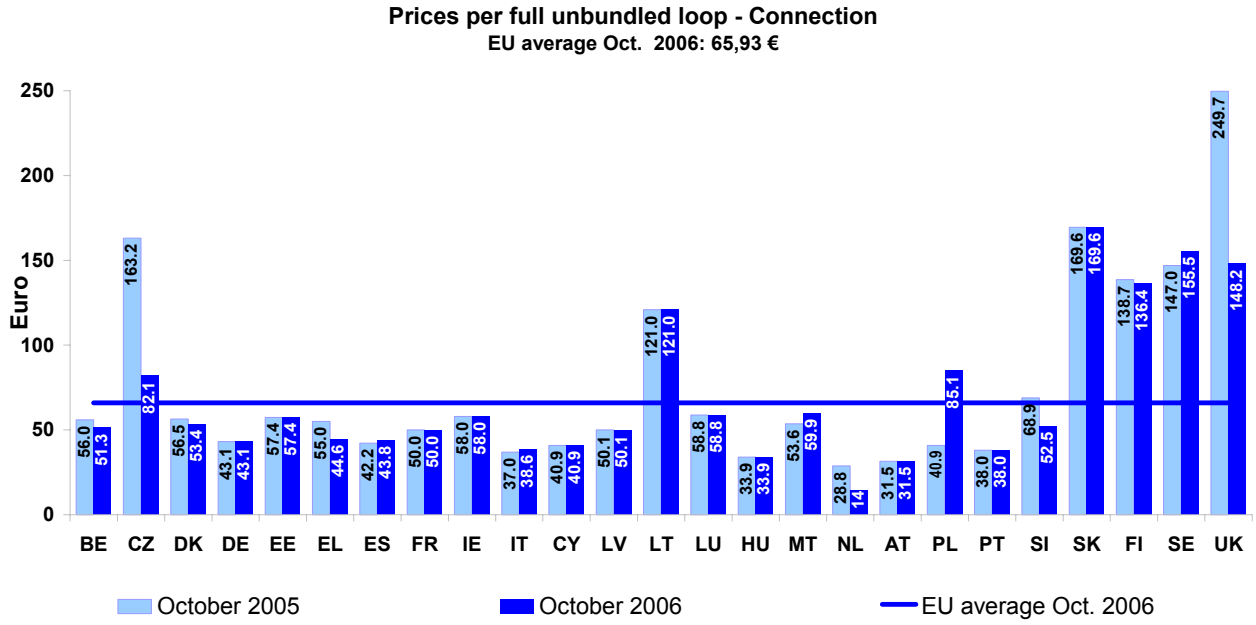


Figure for 2004 do not include Malta, Poland and Slovakia.

6.4.2. Connection and monthly rental for full unbundled local loop

Figure 74



Line test to assess the speed that can be conveyed through is included in all countries except Poland, Austria and Estonia. No information is available for Germany; Slovenia, The Netherlands, Finland and Slovakia.

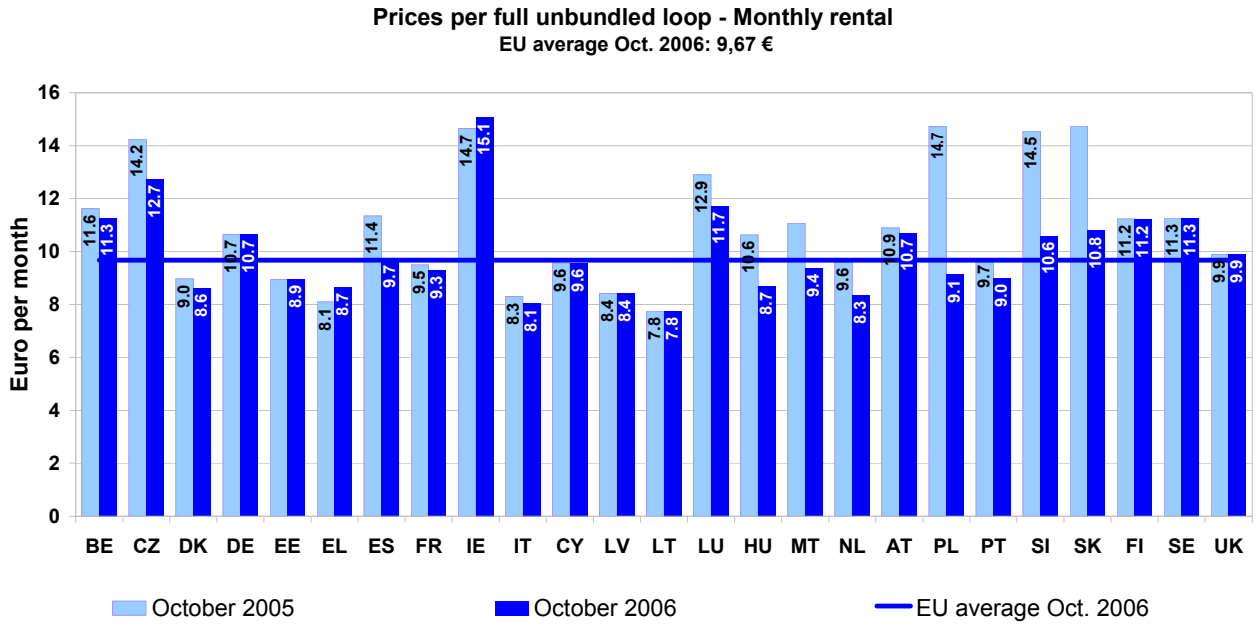
Belgium: Additional costs are charged to the incumbent if a cable termination point is not present. The connection fee for a non-active loop is 47,47 €

Ireland: The connection charge becomes lower as the cumulative volume of the order increases (above 20 000 lines).

Italy: Price not approved by NRA. The connection fee for a non-active loop is 55,7 €.

Austria: Disconnection fees are included. The connection fee for a less than 1 year duration contract is 54.50 €.
Poland: Prices applied from 5 October 2006. Price for splitter is not included.
Finland: Weighted average of 39 SMP operators providing LLU. Prices vary between 80 € and 202 €.

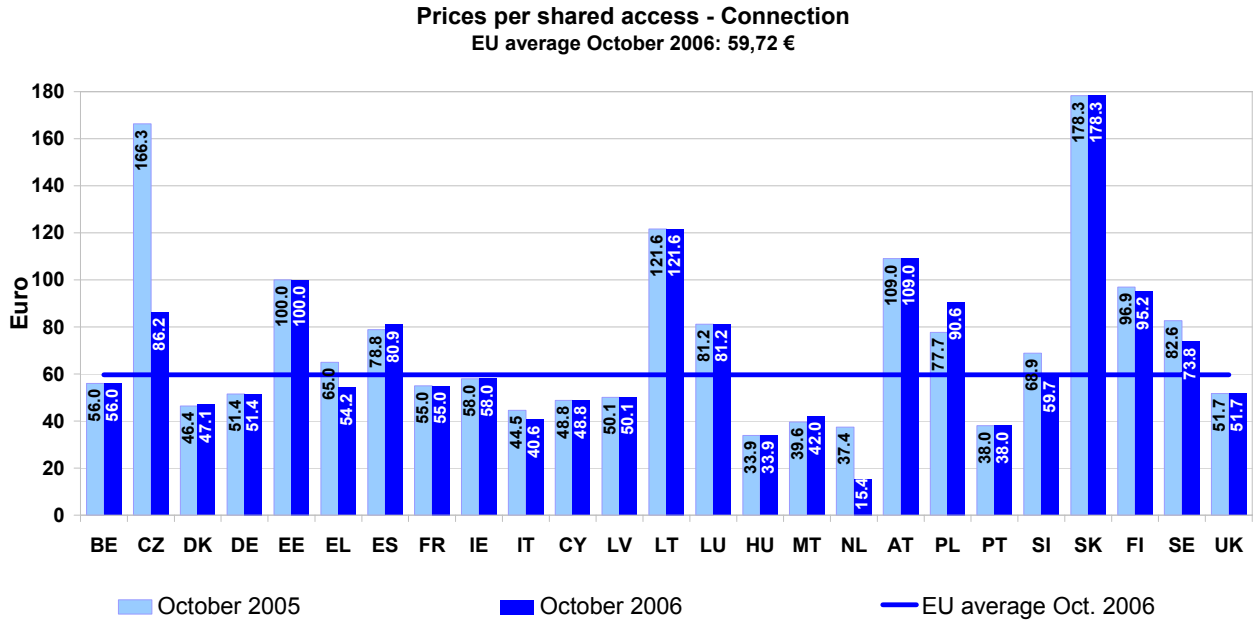
Figure 75



Italy: Price not approved by NRA.
Poland: Prices applied from 5 October 2006.
Finland: Weighted average of 39 SMP operators providing LLU. Prices vary between 7.9 € and 21 €.

6.4.3. Connection fees and monthly rental for shared access

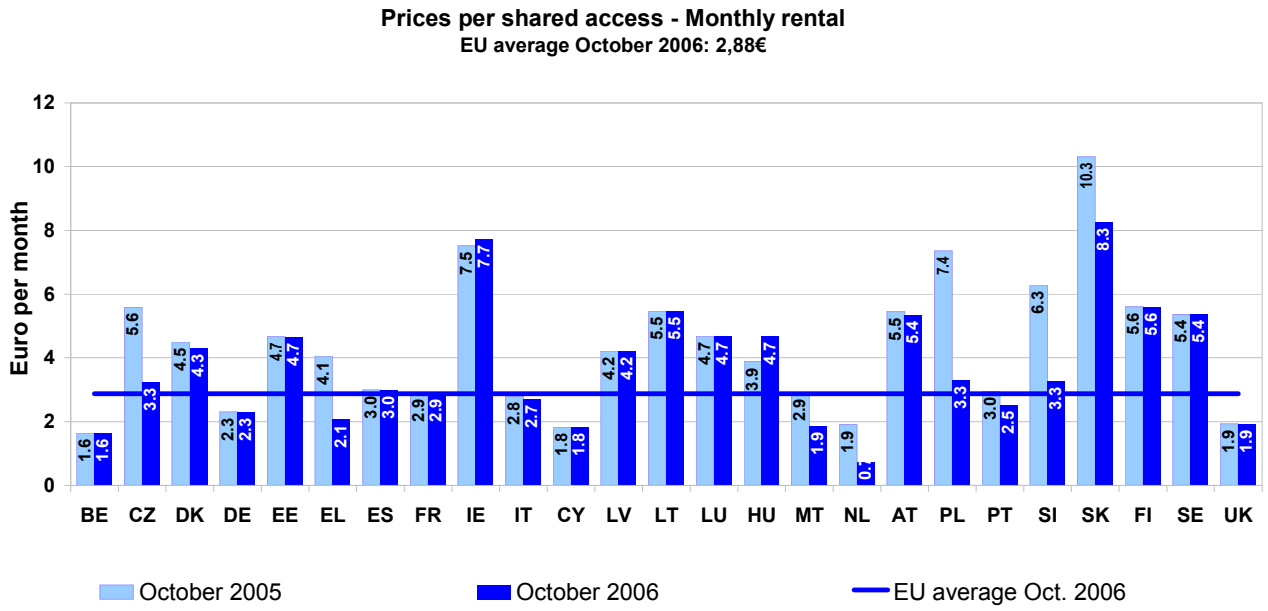
Figure 76



Line test to assess the speed that can be conveying through is included in all countries except Poland and Austria. No information available for Germany; Estonia; Italy , Slovenia; Sweden, the Netherlands and Slovakia
Figures include the cost of the splitter provided by the incumbent apart from Italy, Belgium; Estonia; Latvia and Ireland. In Malta, Portugal, Austria and Ireland, the splitter is provided by alternative operators. No information is available on this cost for Germany; Italy; Cyprus;

Lithuania and Sweden. In France and Czech Republic the cost of the splitter is included in the monthly rental. In Slovenia the cost of the splitter is included in the connection fee if the splitter is placed at the collocation facilities.
Belgium: Additional costs are charged to the incumbent if existing cable termination point is not present.
Estonia: Price for new loops only.
Ireland: The connection charge becomes lower as the cumulative volume of the order increases (above 20 000 lines).
Italy: Price not yet approved by NRA.
Austria: Disconnection fees are included.
Poland: Prices applied from 5 October 2006.
Finland: Weighted average of 39 SMP operators providing LLU. Prices for the connection fee vary between 60 € and 201.83 €.

Figure 77



France, Luxembourg: Figures include the cost of the splitter.
Poland: Prices applied from 5 October 2006.
Slovenia: The cost of the splitter is included in the monthly rental if the splitter is placed at the end-users' premises.
Finland: Weighted average of 39 SMP operators providing LLU. Prices for monthly rental vary between 4,31 € and 10,51 €.

7. PUBLIC VOICE TELEPHONY TARIFFS

This section examines the charging system, the line rental charges and the main tariffs for public fixed voice telephony charged by the incumbent operators in each Member State in September 2006. The price trend over the past nine years is also analysed.

The incumbent operators are: Belgacom for Belgium, Telefonica O2 for Czech Republic, TDC for Denmark, Deutsche Telekom for Germany, Elion for Estonia, OTE for Greece, Telefonica for Spain, France Telecom for France, Eircom for Ireland, Telecom Italia for Italy, CYTA for Cyprus, Lattelekom for Latvia, Lietuvos Telekomas for Lithuania, P&T Luxembourg for Luxembourg, T-Com for Hungary, Maltacom for Malta, KPN for the Netherlands, Telekom Austria for Austria, Polish Telecom for Poland, Portugal Telecom for Portugal, Telekom Slovenije for Slovenia, Slovak Telecom for Slovakia, TeliaSonera for Finland (formerly Sonera), TeliaSonera for Sweden (formerly Telia), and British Telecom for the United Kingdom.

The incumbent operators still retain a large market share, but new entrants are increasingly gaining market share by offering cheaper prices for certain types of calls (usually long-distance (national) or international) or destination. The prices charged by incumbents do not necessarily, therefore, represent the lowest prices available. A comparison between the rates charged by incumbents and alternative operators for a sample of countries is also shown.

The figures and information are taken from a study carried out for the Commission by Teligen, Harris Interactive UK. The data are collected from primary sources (i.e. directly from the incumbent operators).

NRAs were given the possibility to check these data before finalizing this report. All NRAs, with the exception of Ireland, Italy, Latvia, Slovenia and Poland provided comments and approved these data.

Different sets of charges for fixed national voice telephony services are shown in the following sections:

- the minimum costs for different types of calls (local, long-distance (national), international calls and calls towards mobile networks), depending on the charging system adopted;

- the monthly rental charged by incumbent operators;

- the charges for a composite basket of calls (local, long-distance (national), international fixed calls and calls to mobile), that gives an estimate of the average monthly spending by a typical “European business/residential user” for the whole range (national and international) of calls;

- the charges for a basket of national calls, that gives an estimate of the average monthly spending by a typical “European business/residential user” for fixed national calls;

- the basket of international calls for each country that indicates the average price of a single call from the originating country to all other OECD destinations. In addition, the price of individual calls to specific destinations is also shown.

- the price of some individual calls (3- and 10-minute local, long-distance (national) and international calls) at peak time, inclusive of any initial charge. For those countries where unit-based charging is used, the price of a whole unit is calculated.

For the various types of calls, a benchmark based on a comparison with US and Japan is also included. For the USA, the prices for national calls are those charged by Verizon (in New York city) and the prices for international calls are those charged by AT&T. For Japan, the national call prices are those charged by NTT and the international call prices are those charged by KDD.

The EU average tariffs shown in the charts are weighted average (by population of the Member States).

7.1. Charging system

The billing system for public voice telephony services usually comprises two components: an initial charge applied at the beginning of a call and a charge for the remainder of the call (that may not depend on the type of initial charge used).

7.1.1. Initial charges

There are different types of charges applied at the beginning of a call, either alone or in combination. The charging method used for the remainder of the call may not depend on the type of initial charge used. The types of charges are:

- Call set-up charge raised at the start of the call (when the call is answered). This charge does not offer any call time. Per second or per unit charges apply from the beginning of the call.

- Initial charge that is used in the same way as call set-up, but in addition includes a certain number of seconds call time before normal time-based charging starts.

- Unit charge in effect works the same way as the initial charge: A full unit is charged at the beginning of the call, providing a certain number of seconds call time until the next unit is charged. Depending on the principle used by the operator (synchronous/ asynchronous) the number of seconds call time in the first unit may be less than the specified unit duration.

- Minimum charging is normally used with per second billing, to ensure the operator obtains a minimum revenue per call. If the call duration is short, the actual call charge may be less than the minimum charge. In such cases the minimum charge will be applied.

In the calculation of the minimum charge for calls using per second billing it is assumed that the call is terminated as soon as it starts, making the minimum charge for the call equal to any call set-up or defined minimum call charge. If no such additional charges exist, the minimum charge will be zero.

7.1.2. Charging system during the call

There are, in principle, 3 ways of charging calls. The fact that most operators tend to publish the duration charges on a per minute basis does not itself indicate which system is used. The 3 principles are:

- Real time charging (also known as “per second billing”) allows the cost of the call to be calculated to the exact duration of the call (normally nearest second). A call set-up charge, initial charge or minimum charge may be applied to this structure, in addition to the duration charge.

- Unit based charging uses a fixed price unit. The duration of this unit will vary with the destination of the call and time of day. Call duration will always be raised to a multiple of whole units, so the user will nearly always pay for more time than is used. A call set-up charge may be applied to this structure, but is relatively rare.

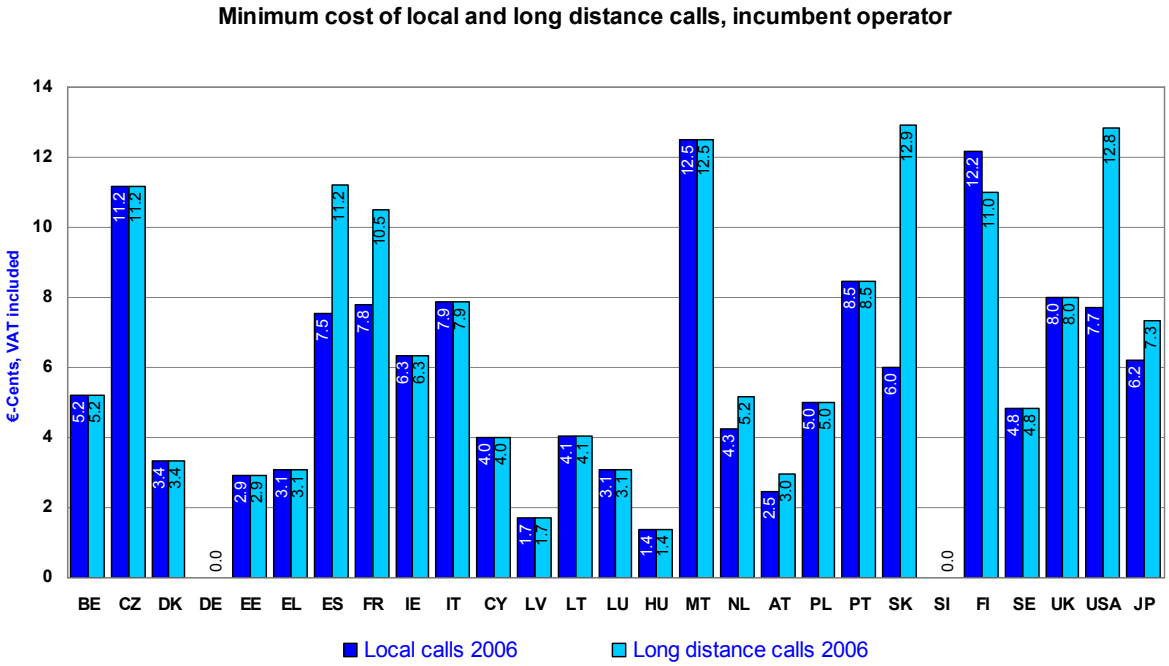
- Fixed period charging uses a variable price, but fixed duration unit. The call is normally charged on a per minute basis, or per 6 seconds. The price for the period will vary with destination and time of day. The charged duration of the call will be raised to a multiple of whole periods. A call set-up charge or initial charge is often implemented in the form of a higher charge for the first minute or period. This initial charge may vary with destination and time of day.

The real time charging method can be perceived to be the one fairest to the customer, as he/she will only pay for what is actually used. This does however not guarantee that this method will always give the lowest overall prices. What has happened in some countries is that when going from a unit-based system to real time charging the average per minute price have been kept the same. The cost per call has then often been seen to go up because an additional (and new) call set up charge has been added. Especially medium duration calls may suffer, depending on the price structure before and after the change.

But it is no doubt that the real time charging method is more convenient to the user, as it is easier to understand and relate to.

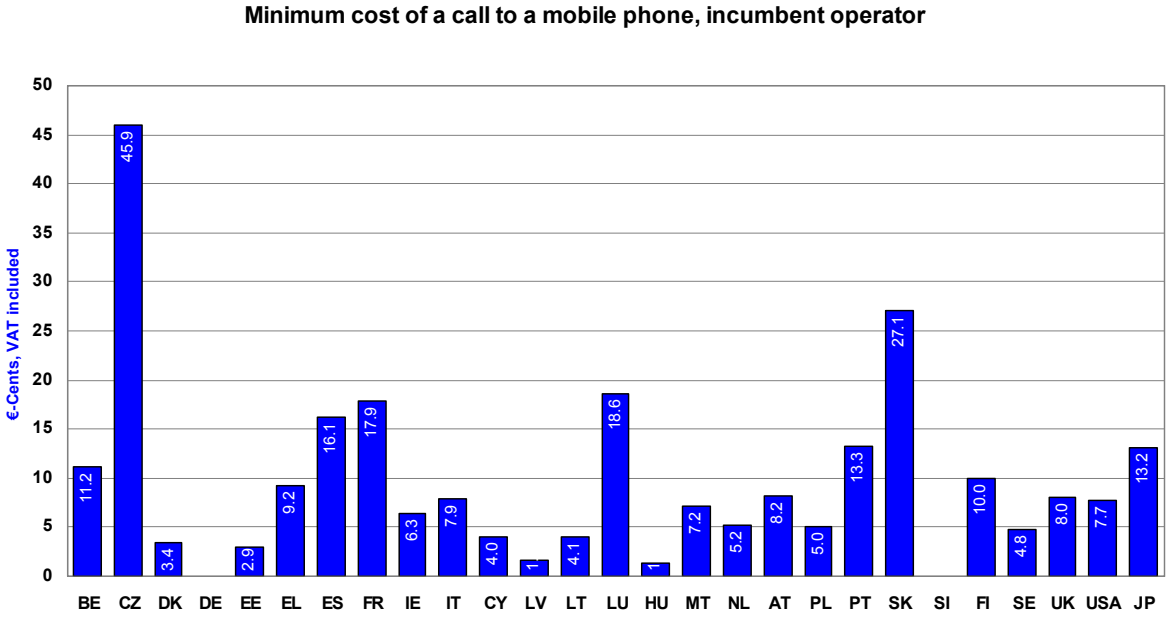
The added cost of call set up charges is by some operators offset by a duration allowance per call, making the first part of the call “free” once the call set up charge is levied. This provides a similar mechanism to the minimum charge used by some other operators

Figure 78



DE, SI: No minimum or set-up charge.

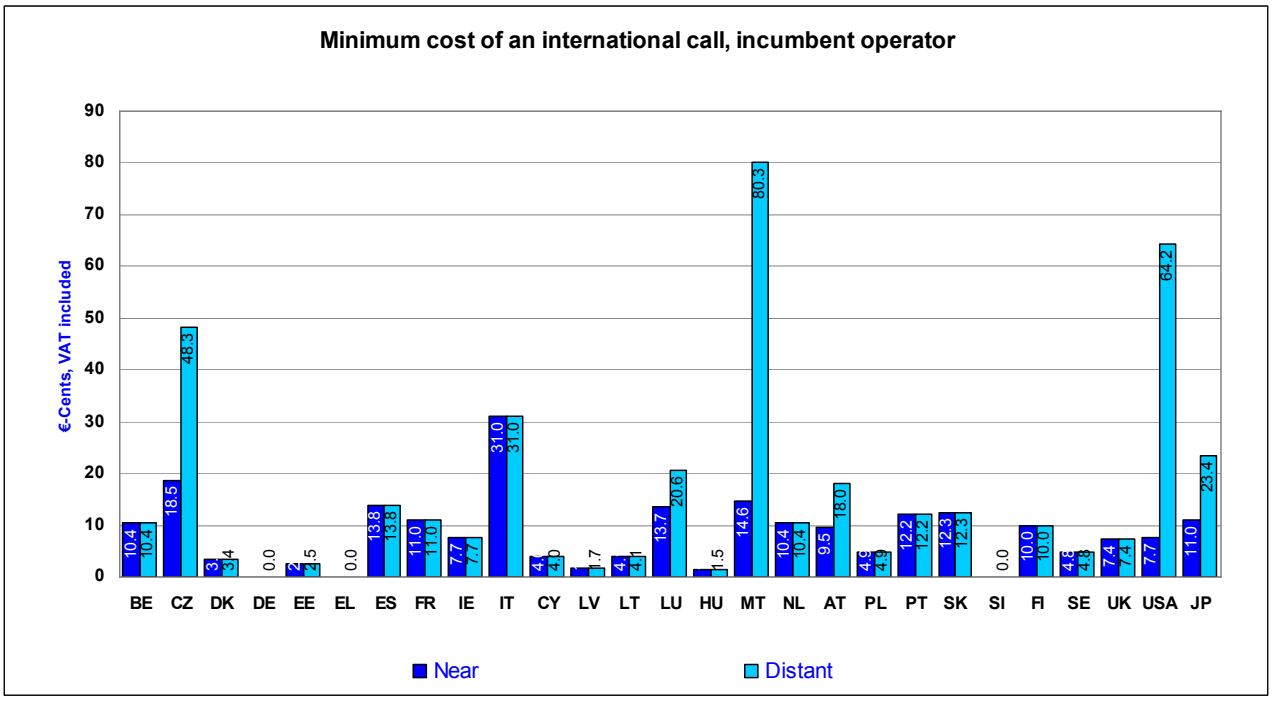
Figure 79



DE, SI: No minimum or set-up charge.

Initial charges for international calls will normally follow similar rules as for national calls. Where unit based charging is used the initial period duration covered by the first unit may change with the destination. In most countries prices are the same for business and residential customers. Differences may occur in Austria, France, the UK and USA.

Figure 80



DE, EL, SI: No minimum or set-up charge.

7.2. Monthly rental charged by the incumbent operators

The following charts show the incumbent's monthly line rental charges for residential and business users in September 2006 and September 2005. In order to reflect the real charges actually paid by users, values are expressed in €, including VAT for residential users and excluding VAT for business users.

A number of countries have different rental charges for business and residential customers.

In Finland and Japan the monthly rental will depend on where in the country the line is connected. The charges shown are for the capital/most densely populated area.

Figure 81

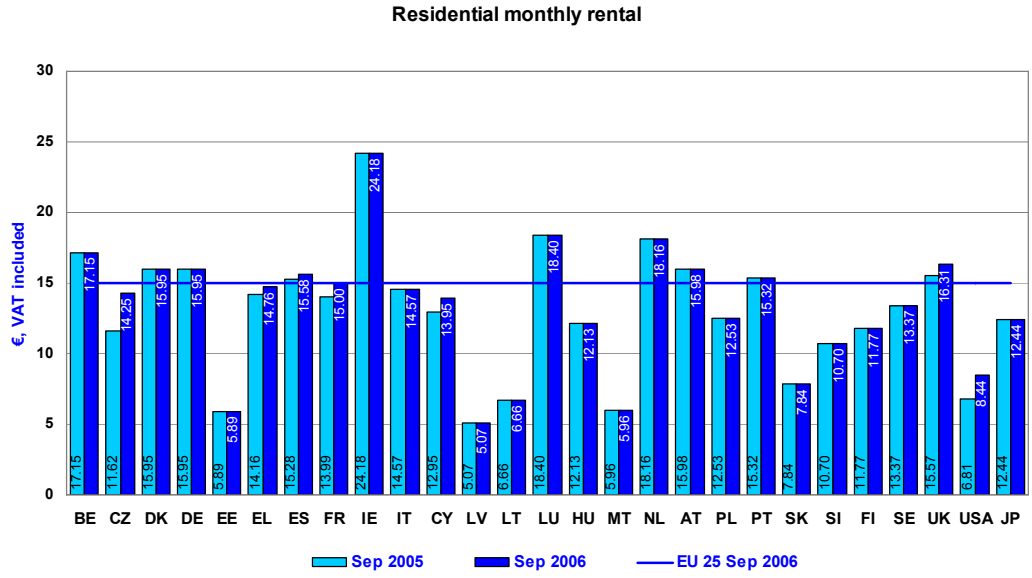
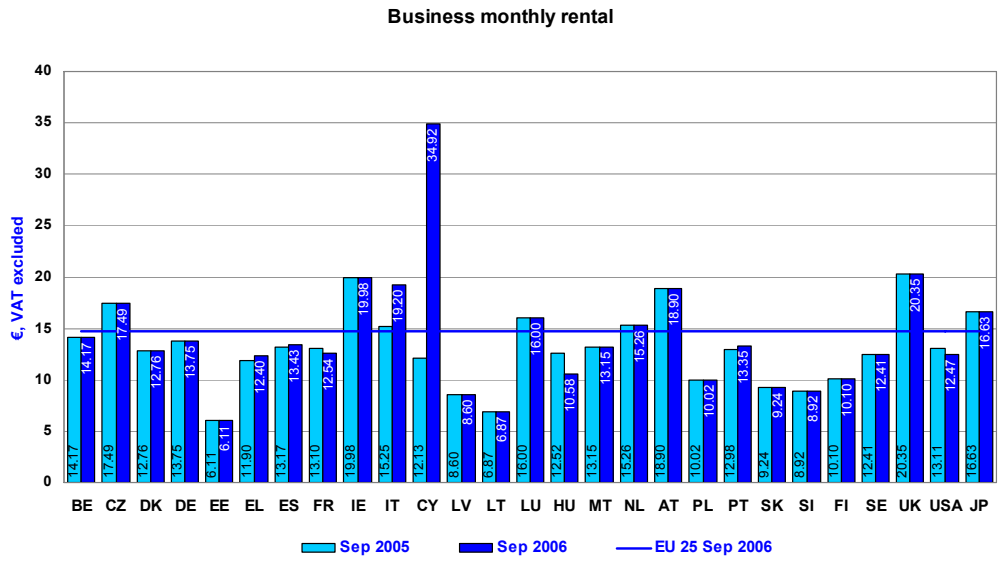


Figure 82



The following charts show the EU weighted average variation in nominal terms of the residential and business monthly line rental charge. Averages for EU25 and EU15 are presented.

Figure 83

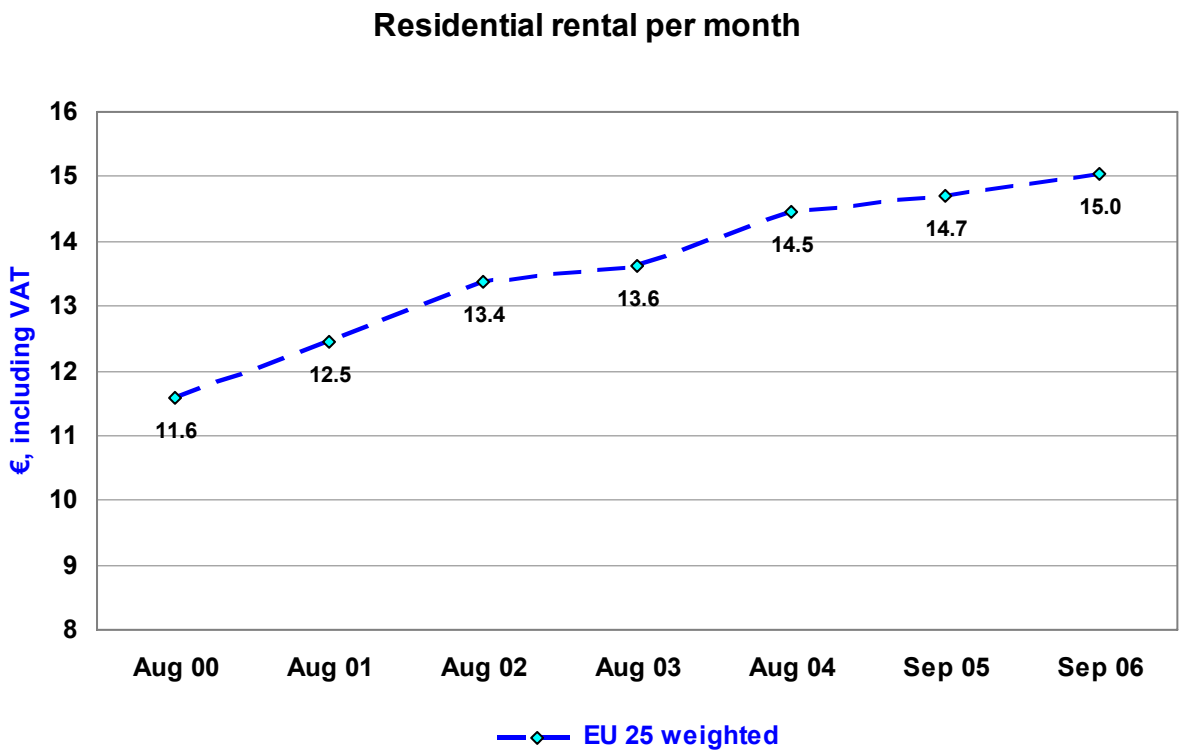
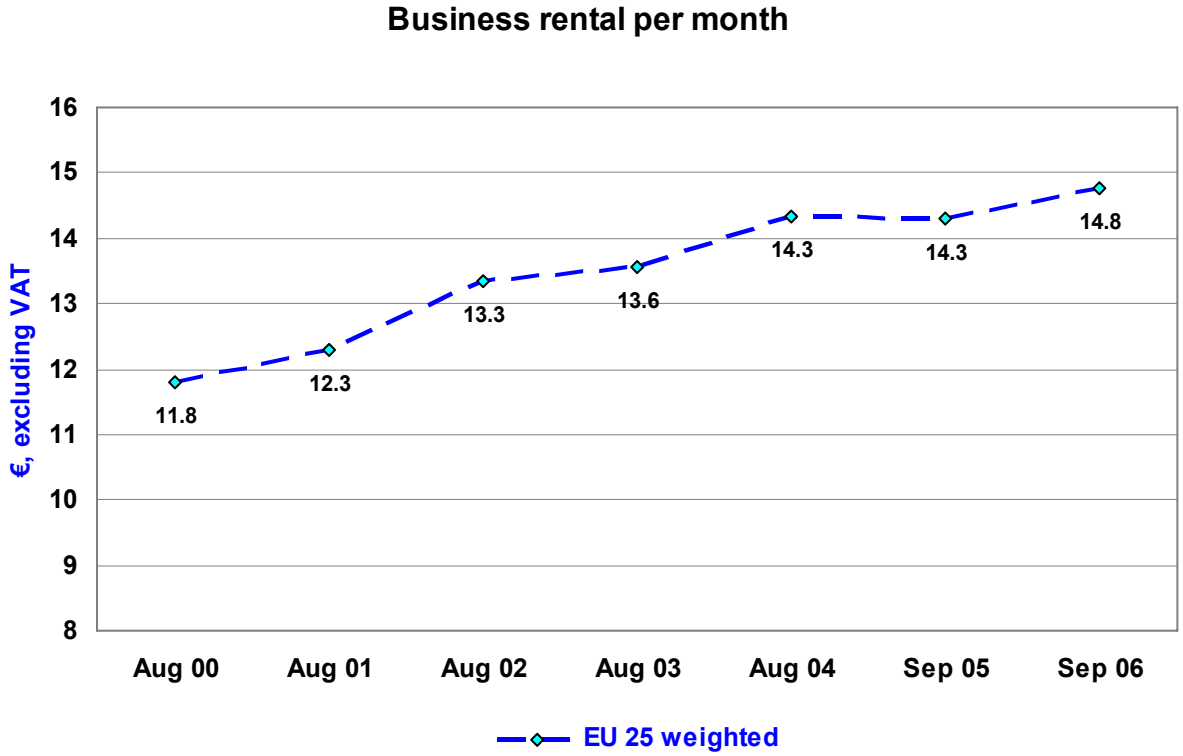


Figure 84



7.3. Average monthly expenditure (composite call basket)

The figures presented in this section are intended to provide an estimate of the average monthly expenditure of a "standard" European consumer (business and residential). The Basket Methodology for Telecommunications Cost Comparison has been devised by the OECD and accepted in most countries as the most stable and neutral method of comparison.

The user is assumed to have a contract for the provision of voice telephony services with the incumbent operator, and to use only this operator for all types of calls (local, long-distance (national), international, calls to mobile). Since consumers are making increasing use of call-by-call carrier selection, in particular for specific highly discounted types of calls (i.e. international and long-distance (national)), the figures given below are purely indicative, and do not necessarily reflect the cheapest solution available.

The charts below show the average monthly expenditure for standard residential and business users as of September 2006, expressed in €, based on the standard tariffs charged by the incumbent operators (i.e. excluding any discount packages). This means that lower costs can be achieved if the user subscribes to one or more discounted packages.

The basket of calls used to estimate average monthly expenditure is the "2000 composite OECD basket" which includes fixed national calls, international calls and calls to mobile networks.

The OECD residential/business baskets are defined as follows (on an annual basis):

The fixed (i.e. non-recurring) charges include the annual line rental charge plus the charge for the installation of a new line (depreciated over 5 years). Fixed charges for residential users include VAT, while for business users VAT is excluded.

The usage charge for residential users refers to a basket of 1.200 national calls to fixed lines, plus 120 calls (with an average duration of 2 minutes) to mobile networks (representing 10% of the number of calls to fixed lines), plus 72 international calls (representing 6% of the number of calls to fixed lines). The usage charges for national calls to fixed lines are calculated with a weighted distribution over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during the weekend). The call duration varies from 2.5 to 7 minutes, depending on time and distance. The usage for residential users is weighted towards off-peak hours, and with typically long calls. Only 36% of the calls are within normal business hours; 74% are for distances below 10 km; 9% are for distances above 100 km.

The usage charge for business users refers to a basket of 3 600 national calls to fixed lines plus 360 calls (with an average call duration of 2 minutes) to mobile networks, plus 216 international calls. The usage charges for national calls to fixed lines are calculated with a weighted distribution over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during the weekend), and with a call duration of 3.5 minutes regardless of time of day and distance. The usage for business users is weighted towards business hours, and with typically short calls. Over 86% of the calls are within normal business hours; 64% are for distances below 10km; 12.5% are for distances above 100 km.

A full description of the methodology can be found at the end of this report.

There was a revision of the OECD baskets in February 2006.

Highlights of the new 2006 OECD baskets are:

- 5 new baskets for Low, Medium and High residential usage and business baskets for SOHO and SME usage.
- Fixed to Mobile calls now include calls to up to 4 national mobile networks, weighted by subscriber numbers.
- A range of tariff packages from the incumbent operator are now included, with automatic selection of the cheapest package for each basket.
- Traffic weights and volumes have been updated with recent information.

Low usage residential basket

The usage charge for low usage residential users refers to a basket of 600 national calls, where 76% (456 calls) are to fixed lines, 19% (114 calls) are to mobile networks, and 5% (30 calls) are to international destinations. The usage charges for national calls to fixed lines are calculated with a weighted distribution over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during the weekend). The call duration varies from 3.7 to 7 minutes, depending on time and distance. The usage for residential users is weighted towards off-peak hours, and with typically long calls. 58% of the calls are within normal business hours; 76% are for distances below 10 km; 7% are for distances above 100 km.

Medium usage residential basket

The usage charge for low usage residential users refers to a basket of 1200 national calls, where 75% (900 calls) are to fixed lines, 23% (276 calls) are to mobile networks, and 2% (24 calls) are to international destinations. The usage charges for national calls to fixed lines are calculated with a weighted distribution over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during the weekend). The call duration varies from 3.7 to 7 minutes, depending on time and distance. The usage for residential users is weighted towards off-peak hours, and with typically long calls. 55% of the calls are within normal business hours; 70% are for distances below 10 km; 11% are for distances above 100 km.

High usage residential basket

The usage charge for low usage residential users refers to a basket of 2400 national calls, where 65% (1560 calls) are to fixed lines, 31% (744 calls) are to mobile networks, and 4% (96 calls) are to international destinations. The usage charges for national calls to fixed lines are calculated with a weighted distribution over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during the weekend). The call duration varies from 3.7 to 7 minutes, depending on time and distance. The usage for residential users is weighted towards off-peak hours, and with typically long calls. 60% of the calls are within normal business hours; 77% are for distances below 10 km; 7% are for distances above 100 km.

SOHO business basket

The usage charge for low usage residential users refers to a basket of 1800 national calls, where 67% (1206 calls) are to fixed lines, 29% (522 calls) are to mobile networks, and 4% (72 calls) are to international destinations. The usage charges for national calls to fixed lines are calculated with a weighted distribution over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during the weekend). The call duration varies from 1.9 to 3.1 minutes, depending on time and distance. The usage for residential users is weighted towards off-peak hours, and with typically long calls. 79% of the calls are within normal business hours; 68% are for distances below 10 km; 12% are for distances above 100 km.

SME business basket

The usage charge for low usage residential users refers to a basket where 30 users each have 2800 national calls, where 72% (2016 calls) are to fixed lines, 20% (560 calls) are to mobile networks, and 8% (224 calls) are to international destinations. The usage charges for national calls to fixed lines are calculated with a weighted distribution over 14 distances from 3 to 490 km, at representative times of day (4 calls during the week and 2 during the weekend). The call duration varies from 1.9 to 3.1 minutes, depending on time and distance. The usage for residential users is weighted towards off-peak hours, and with typically long calls. 81% of the calls are within normal business hours; 71% are for distances below 10 km; 11% are for distances above 100 km.

The different 2006 OECD baskets may select different tariff packages as the cheapest. The revision brought a new element into the baskets, namely the inclusion of more tariff packages for each country. This allows for a comparison of the “standard” package with the “cheapest” package.

7.3.1. 2000 OECD baskets

Figure 85

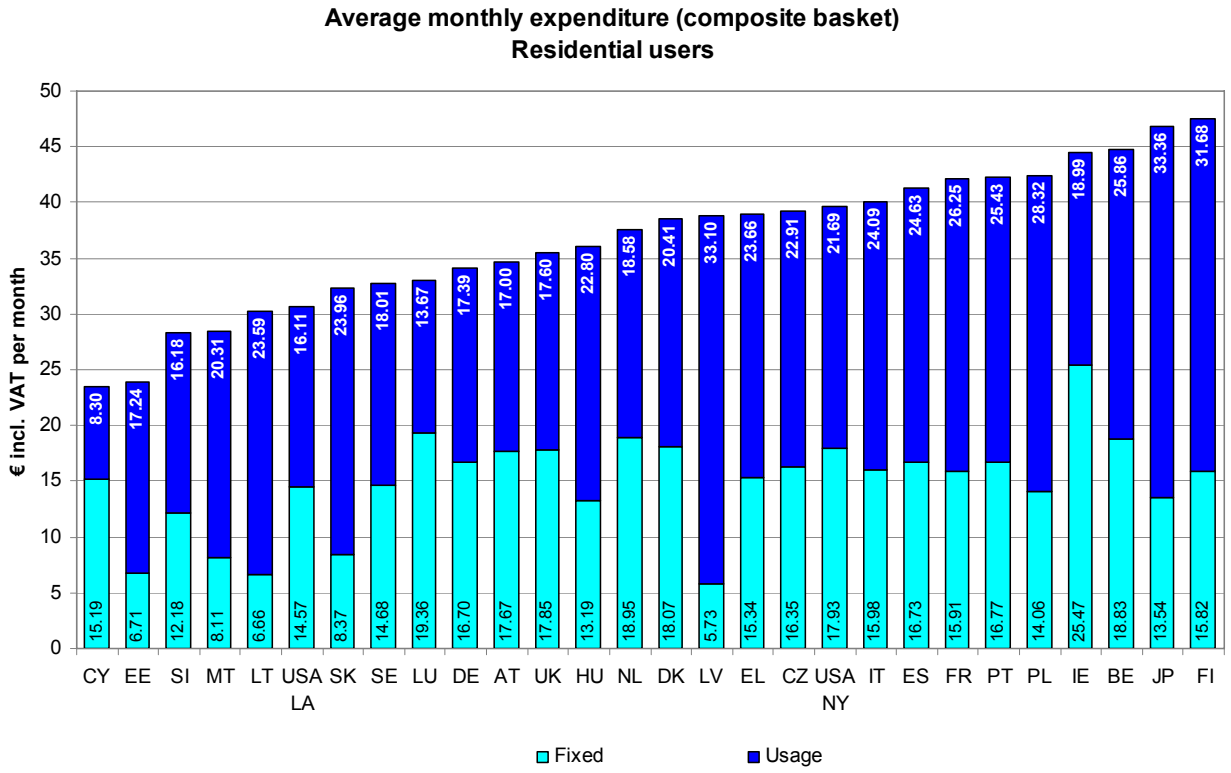
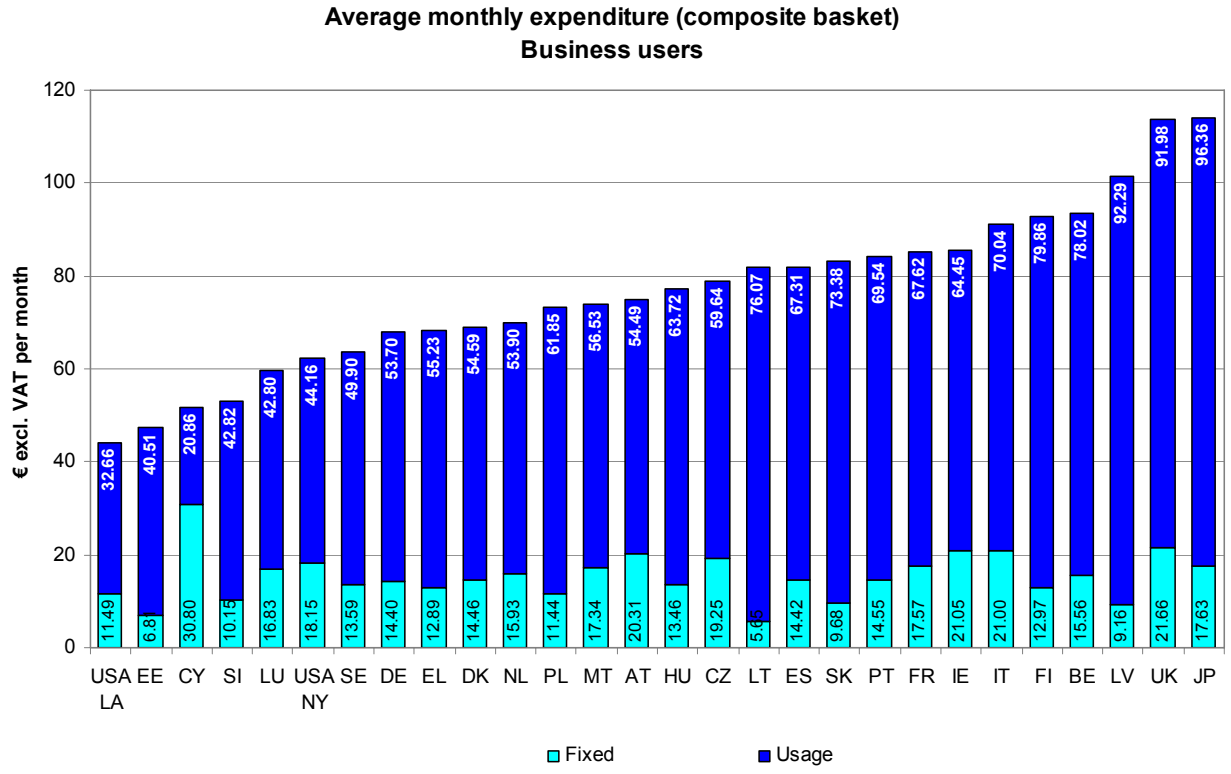


Figure 86



7.3.2. 2006 OECD baskets

Figure 87

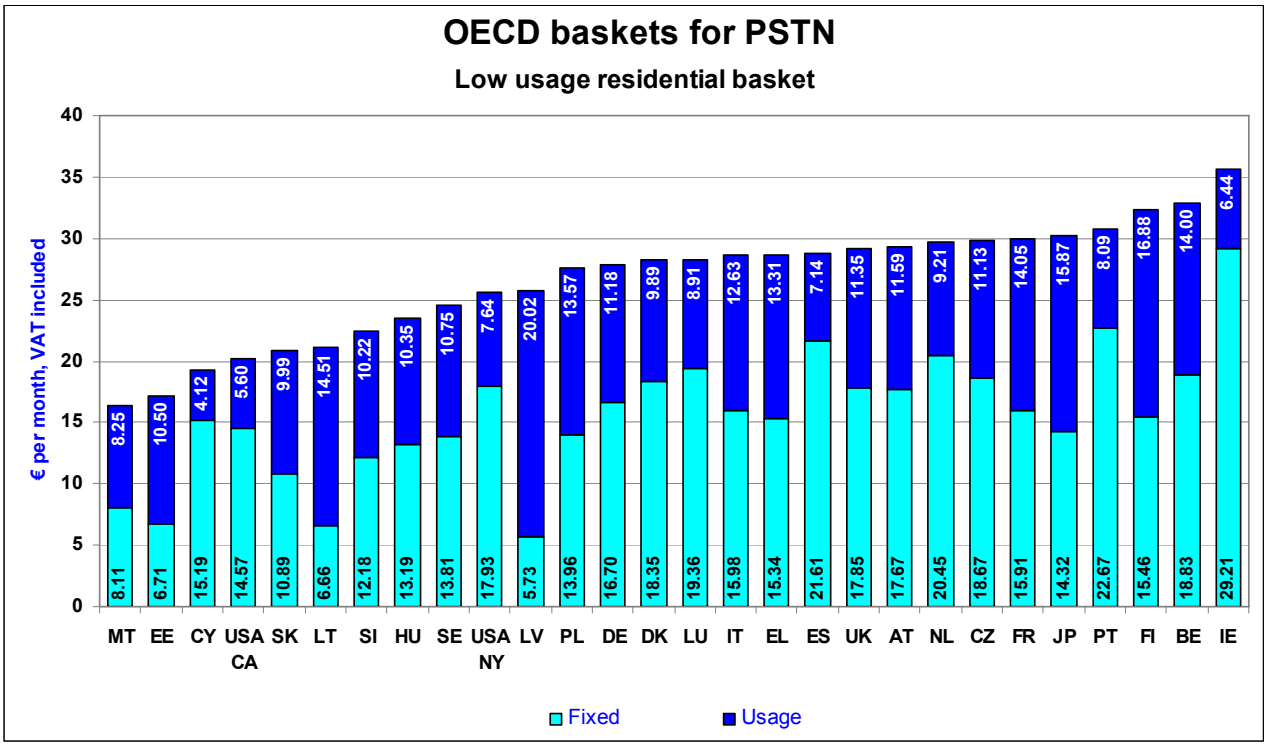


Figure 88

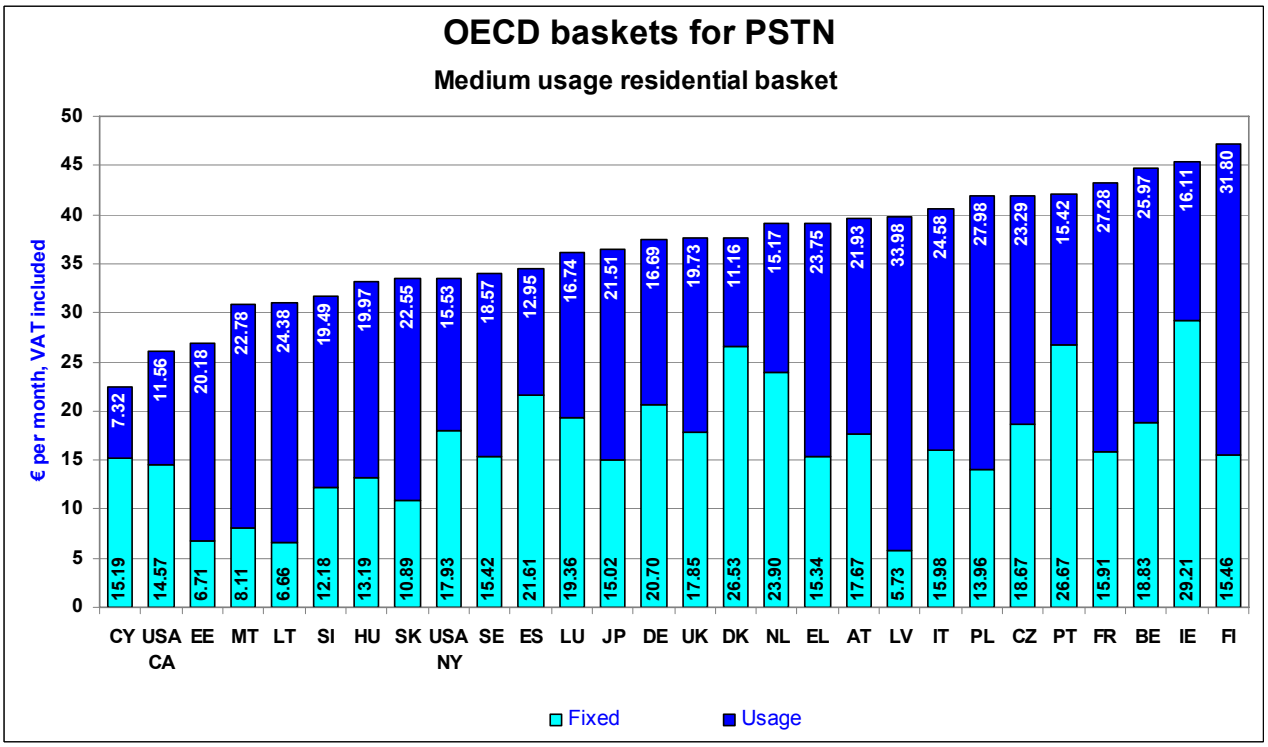


Figure 89

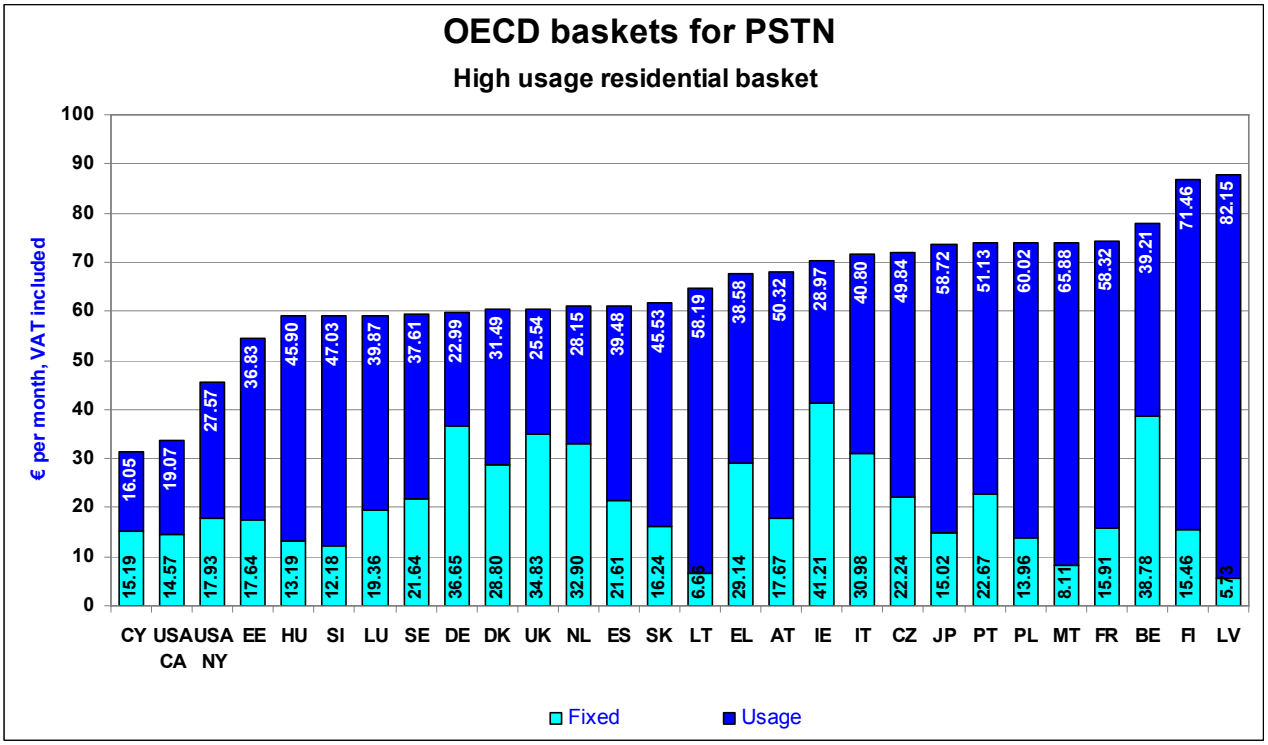


Figure 90

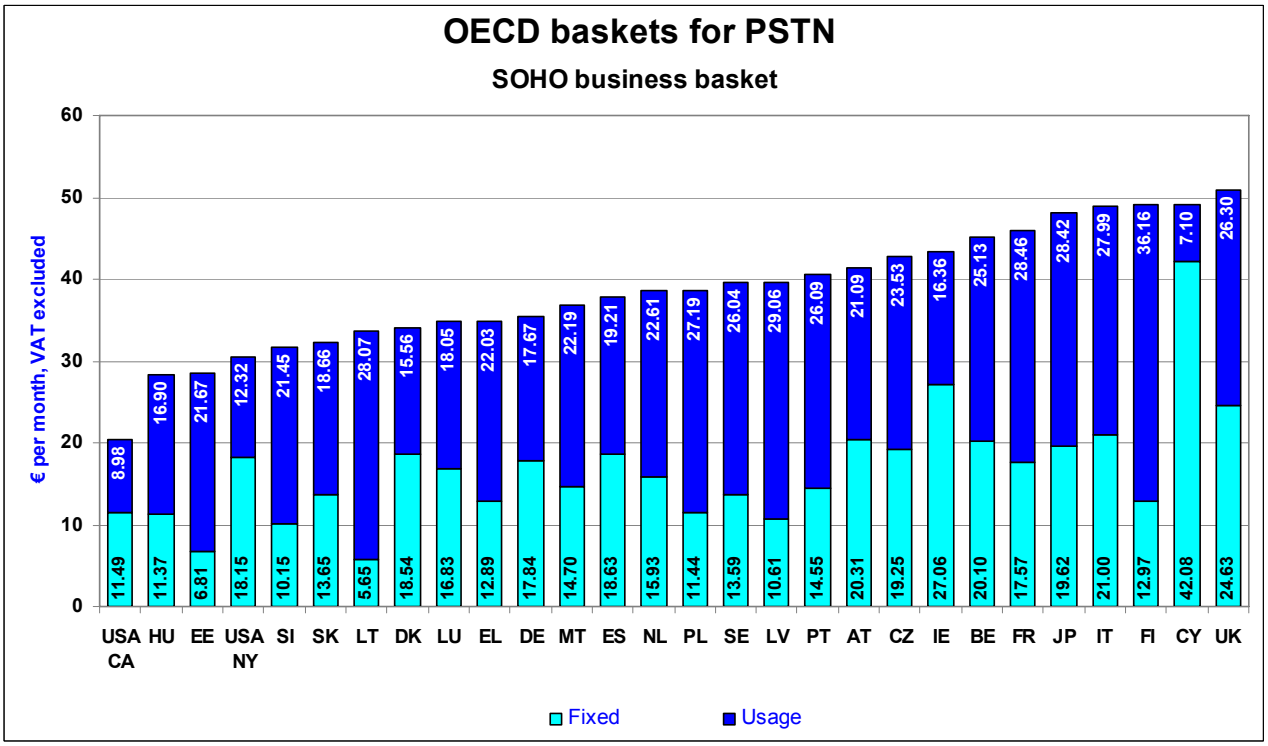
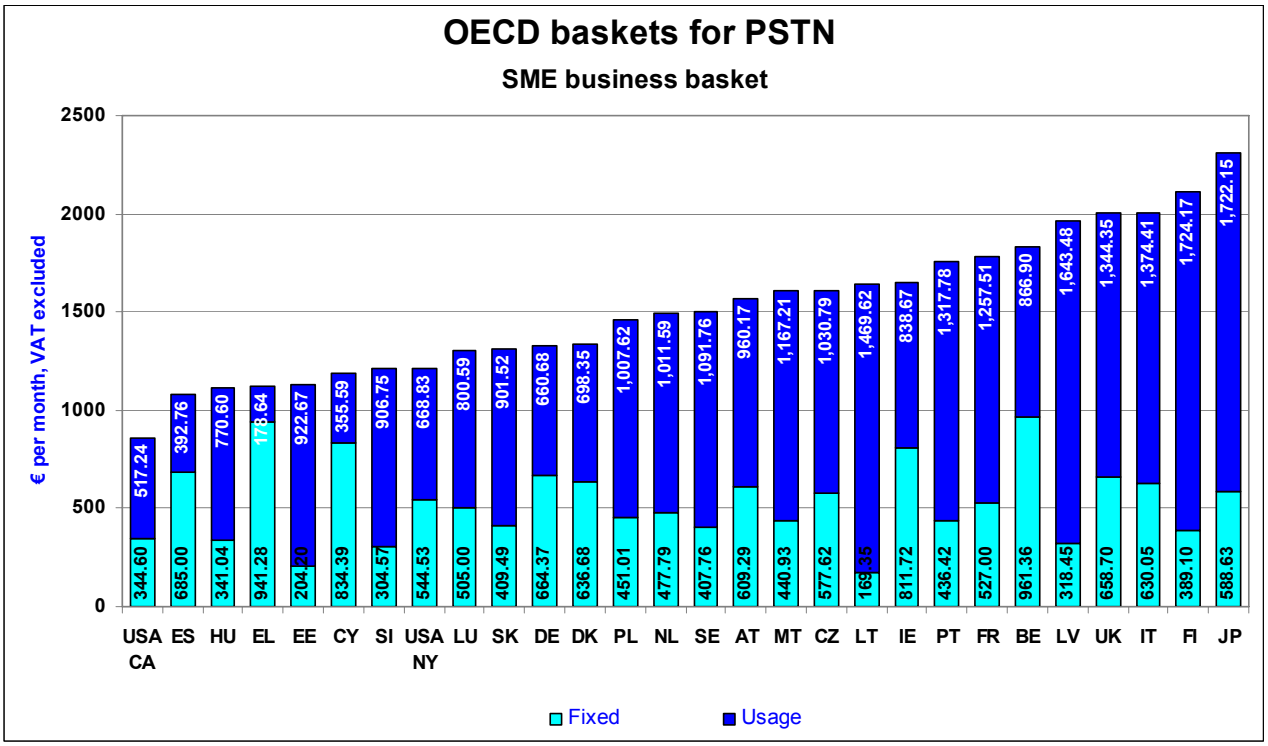


Figure 91



7.3.3. Comparison of the "Standard" package with the "Cheapest" package

Figure 92

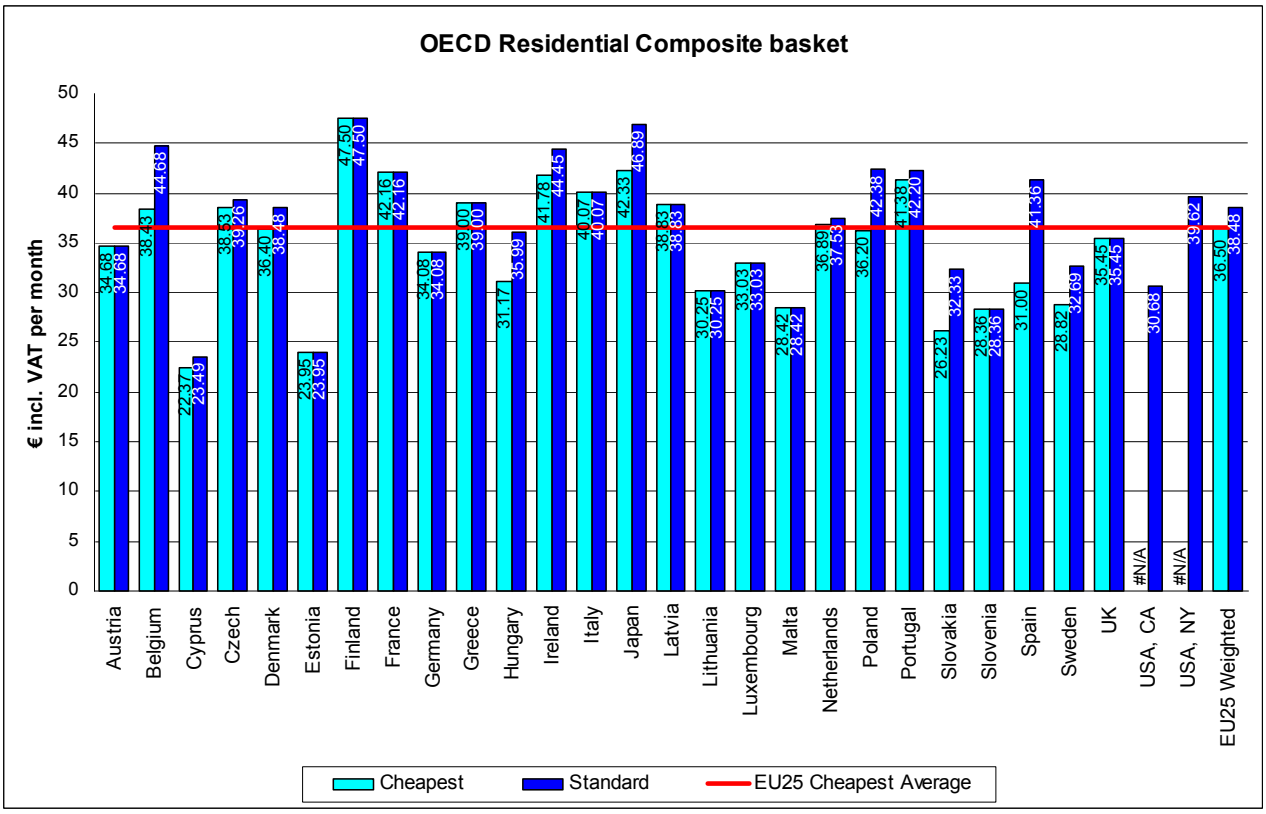
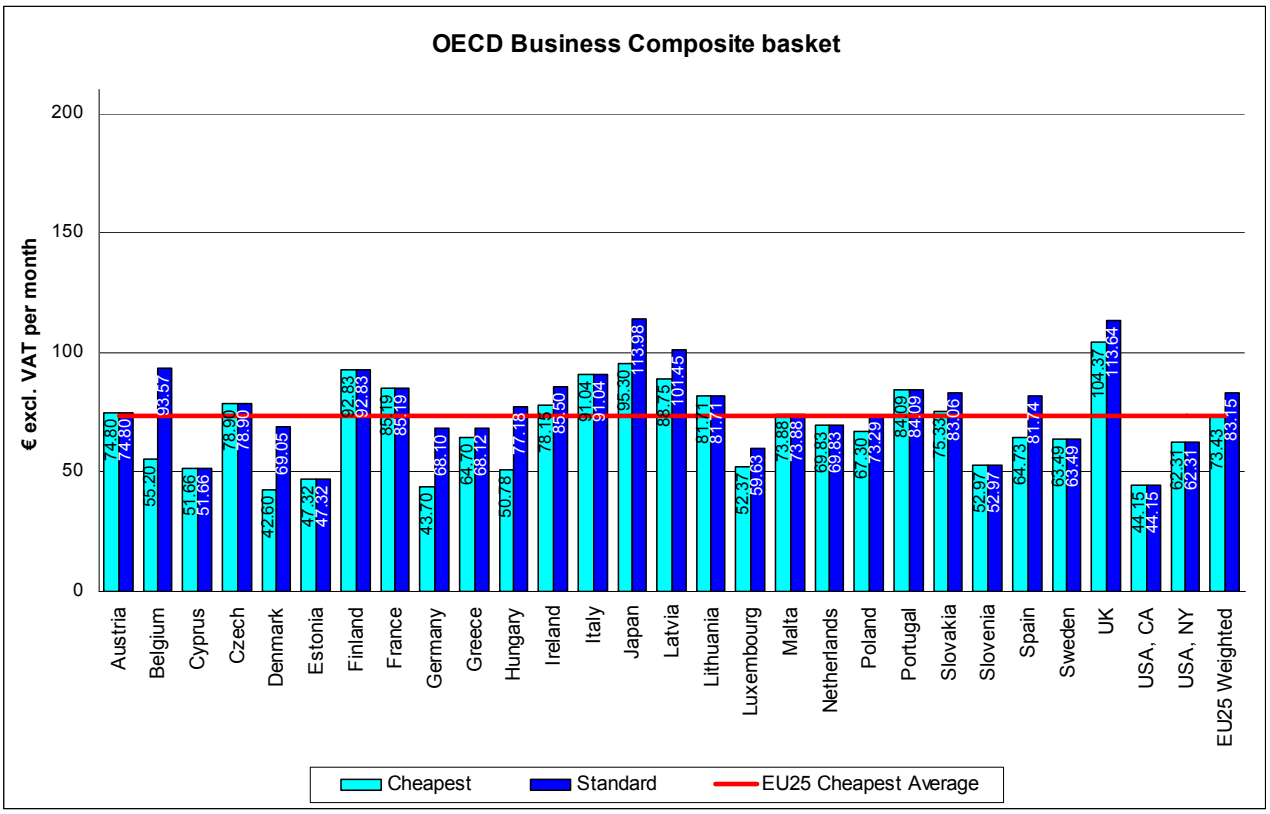


Figure 93



7.4. Price of fixed national calls by the incumbent operator

7.4.1. Prices charged by the incumbent operators for individual fixed national calls

This section shows the prices charged by the incumbent operators for individual fixed calls (the same call prices apply to business and residential users). For those countries where unit based charging is used, the cost of the amount of full units is calculated. Any call set-up charges, minimum charges and/or call specific duration allowances have been taken into account.

Prices refer to peak hours (weekdays 11.00) and are expressed in € including VAT. Except where otherwise specified, the figures refer to September 2006. Prices are indicated for three-minute and ten-minute calls over two distances: 3 km (equivalent to a local call) and 200 km (equivalent to a national call). In several countries the tariff changes at exactly one of these distances: in these cases, the rates for the lower distance band are used.

The price of a three-minute call is more affected by the magnitude of the call set-up charge than the price of a ten-minute call.

Where different tariff packages exist, the basic, residential package is selected. Otherwise the standard tariff is used. No discount packages are taken into account.

The EU average value is the average of the EU countries weighted according to the national population.

Figure 94

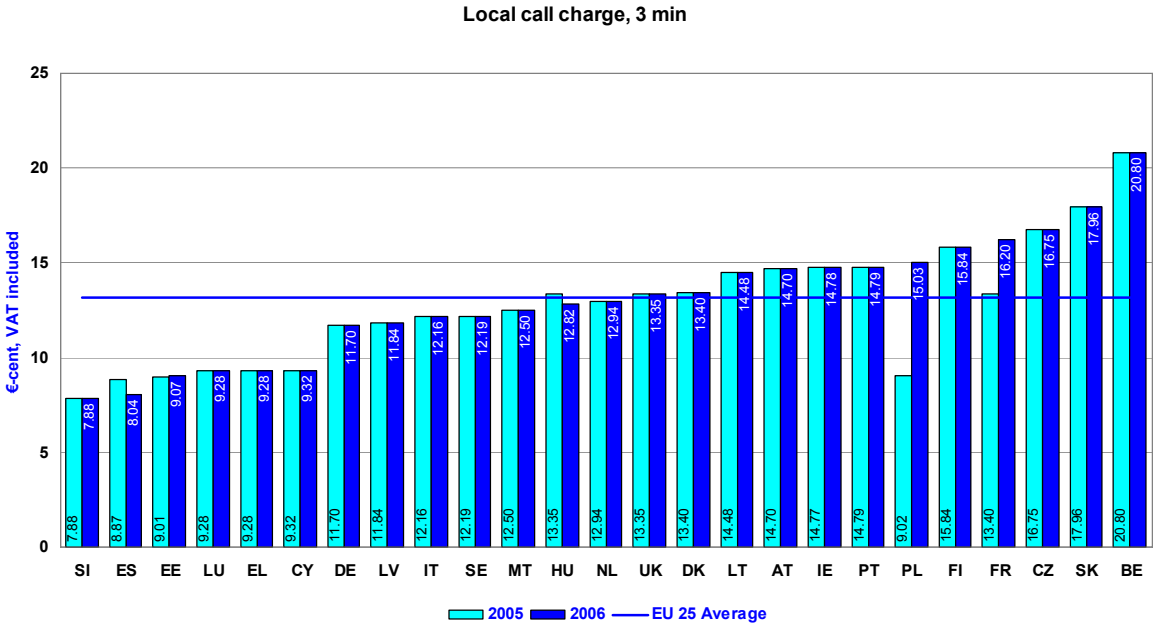


Figure 95

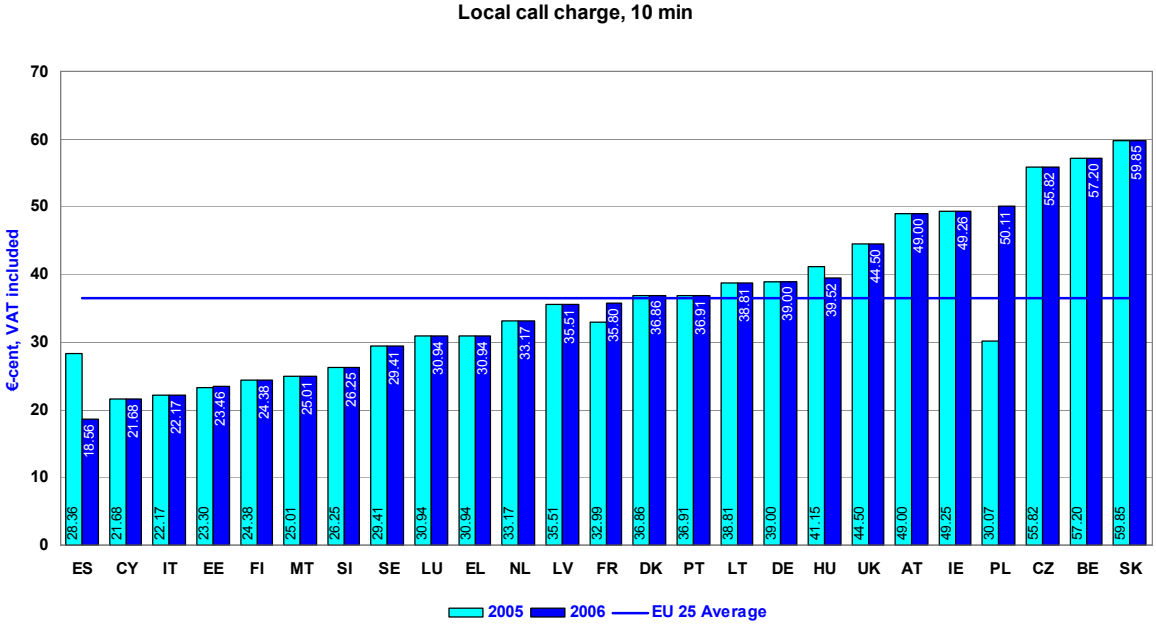


Figure 96

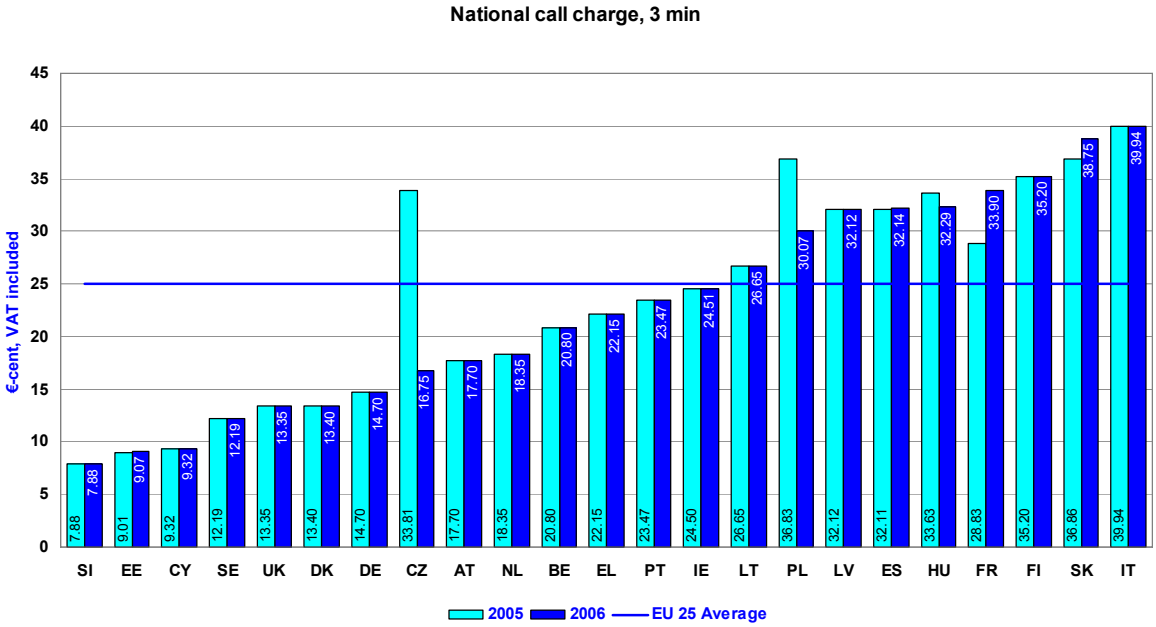


Figure 97

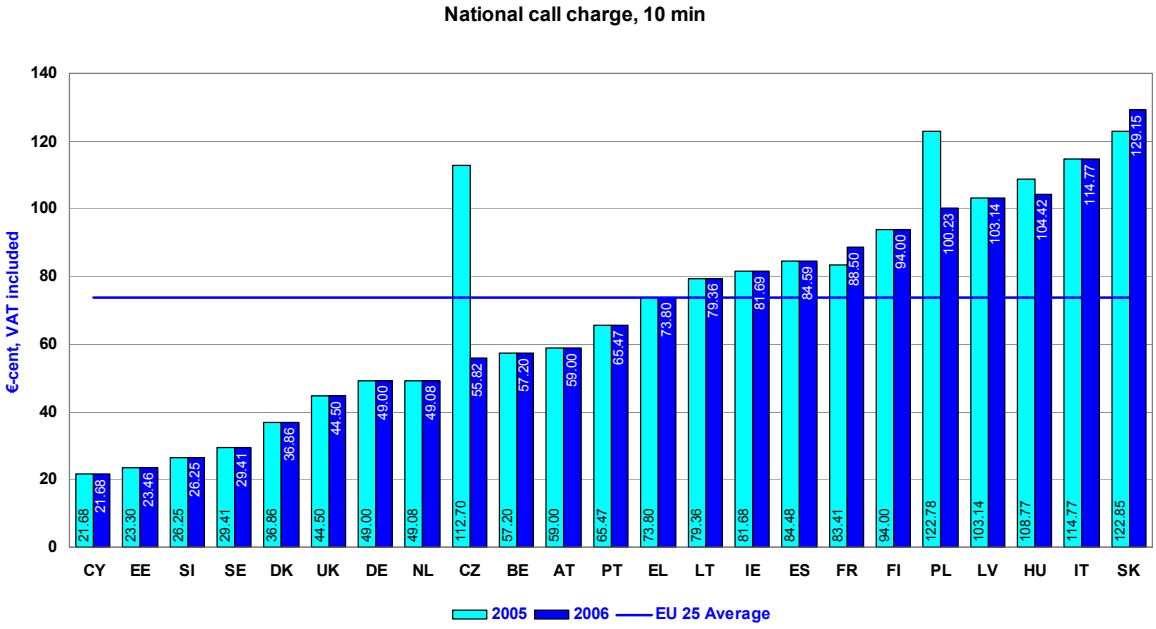


Figure 98

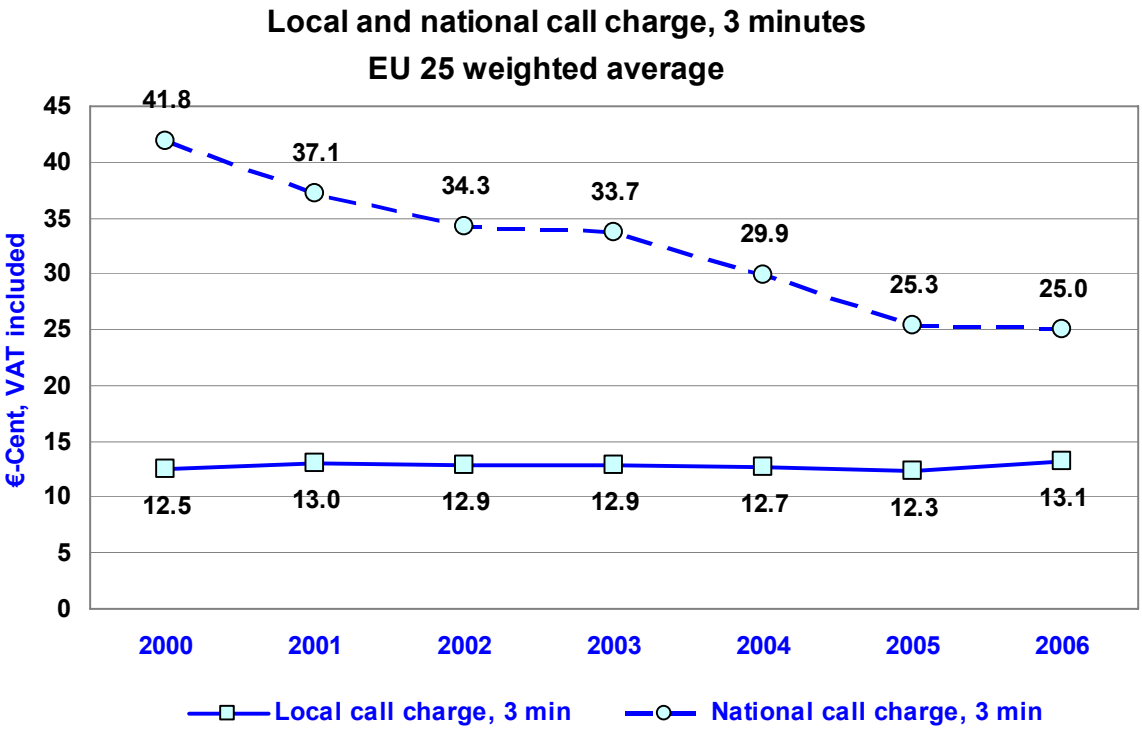
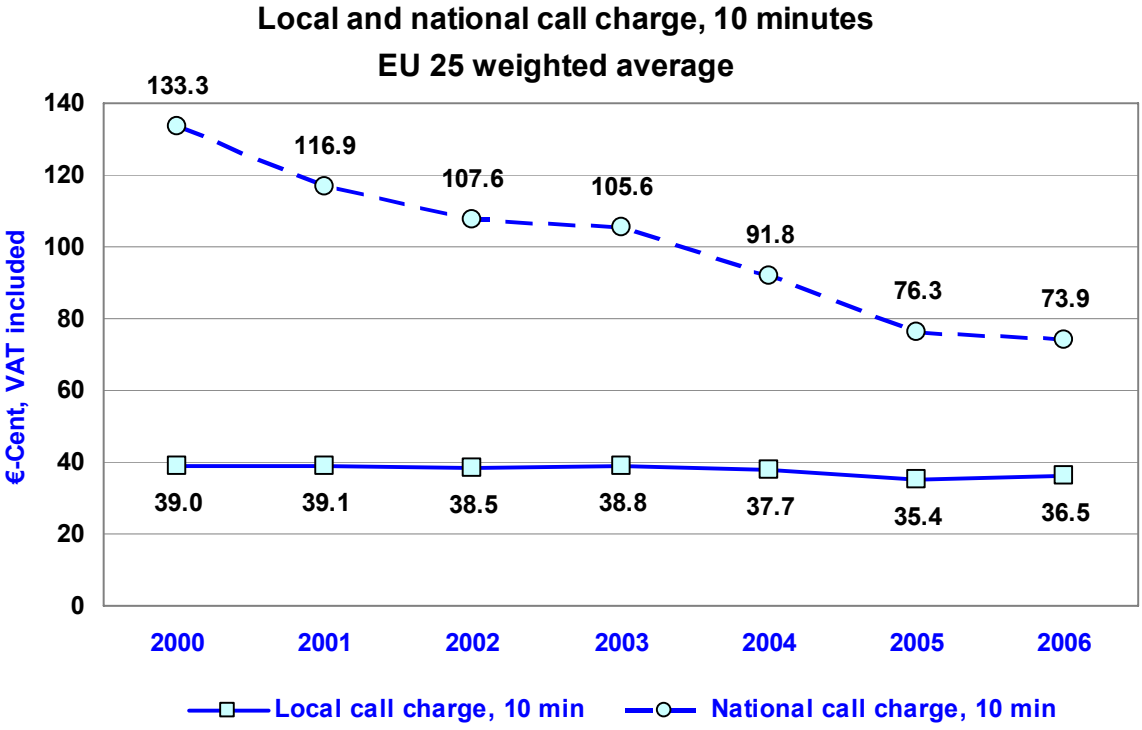


Figure 99



7.5. Trend of the basket for fixed national calls (national basket)

Figure 100

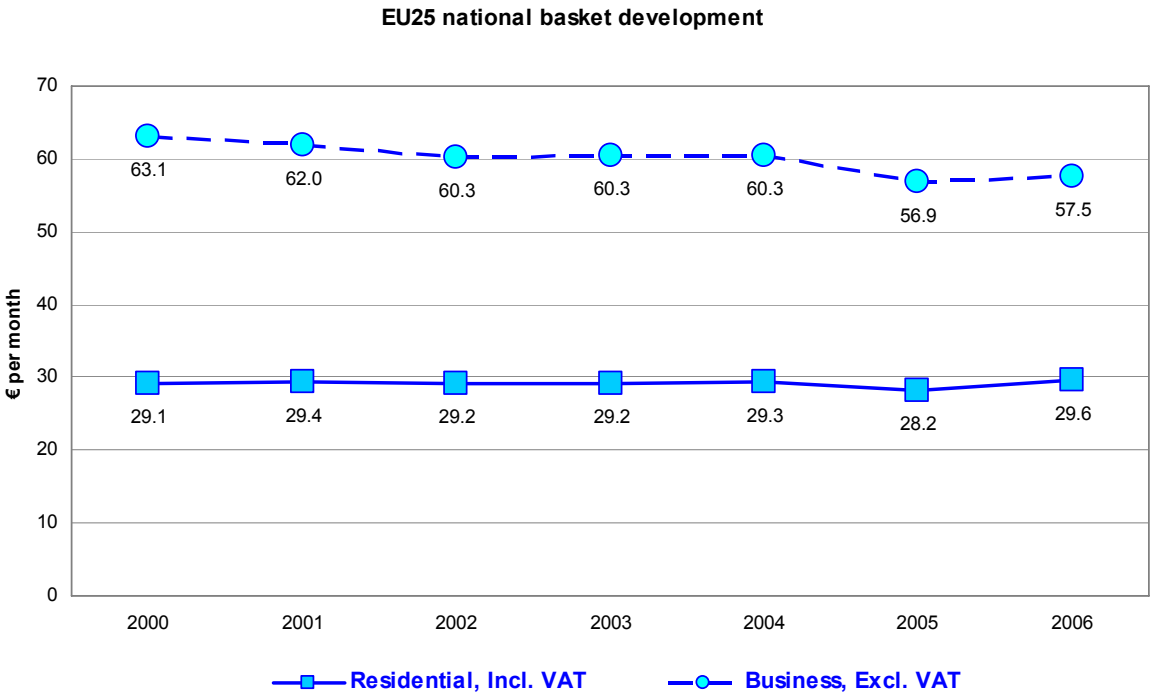
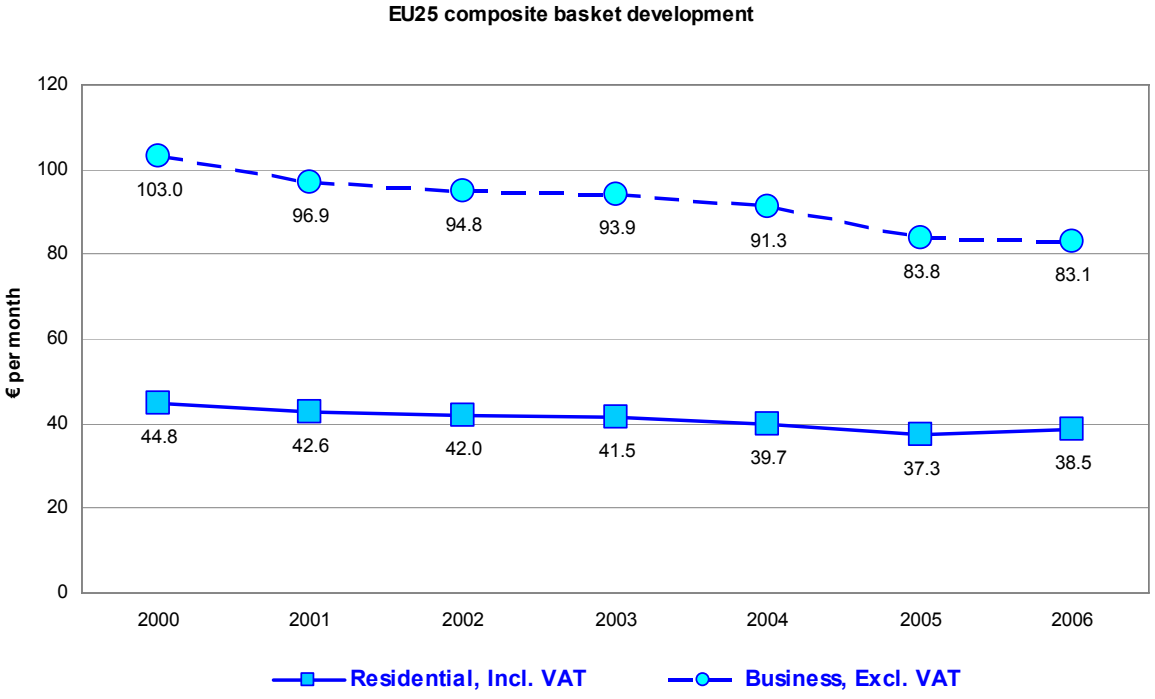


Figure 101



Since 2000 all EU25 MS are included except Malta, which is included since 2003.

7.6. Price of fixed national calls by alternative operators

This section compares the prices charged for public voice telephony services by the incumbent operators and by the largest competitor in each Member State. The tariff packages selected will impact on this comparison, although care has been taken to ensure reasonable comparability.

Figure 102

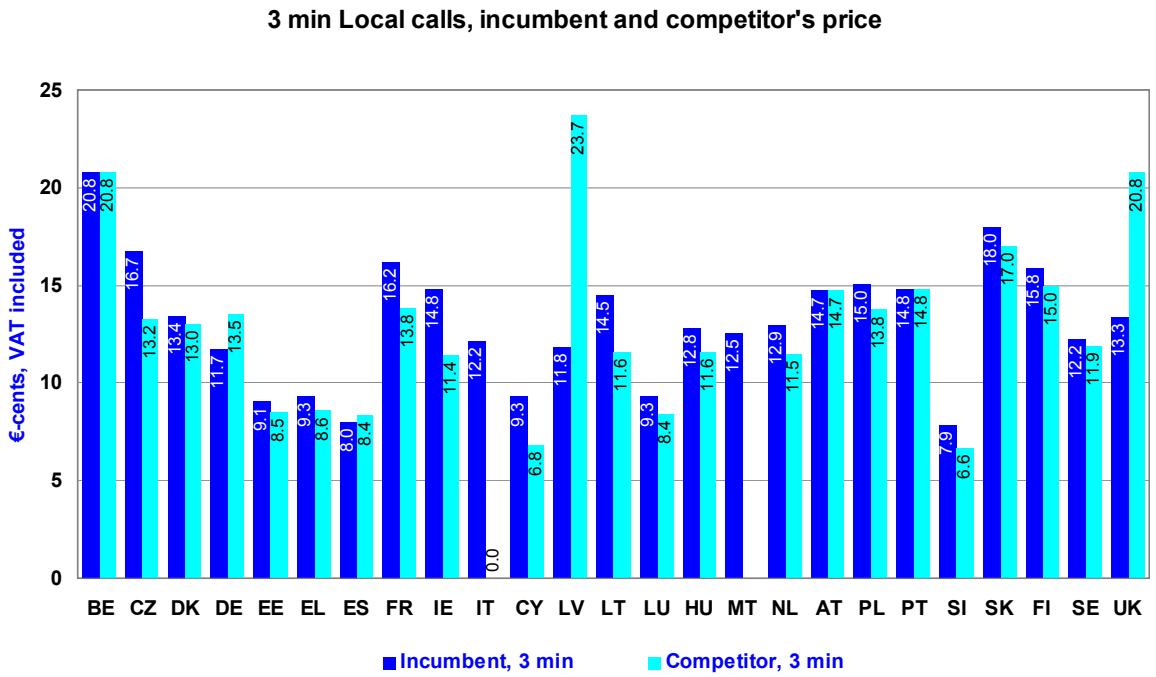


Figure 103

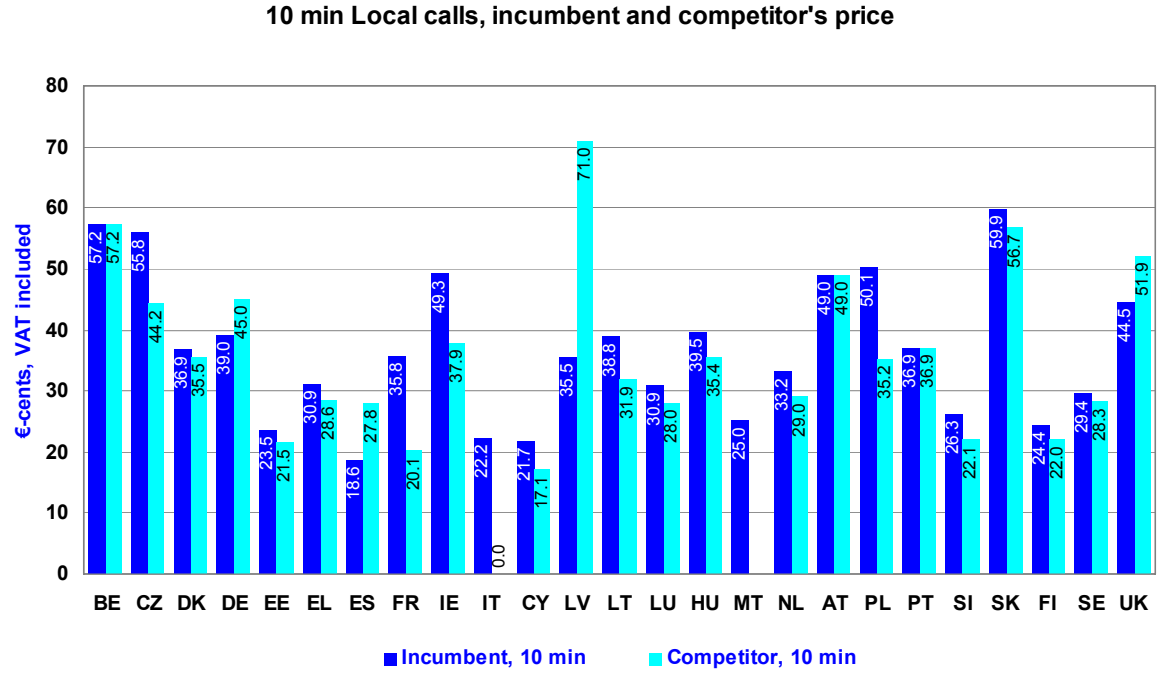


Figure 104

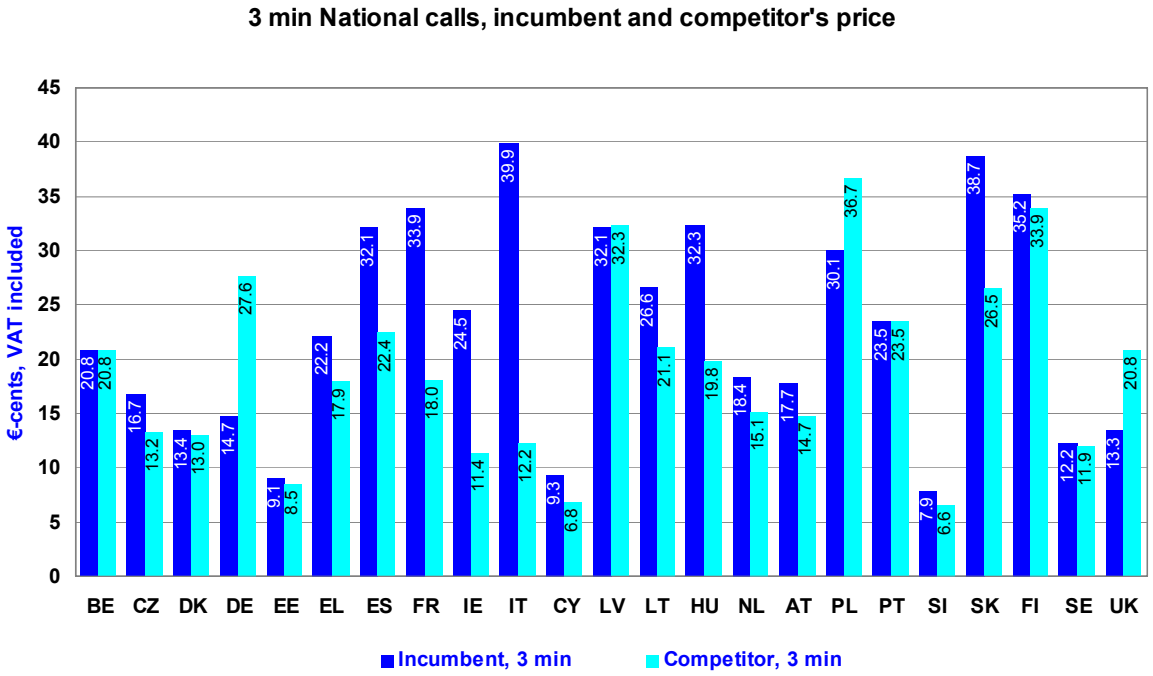
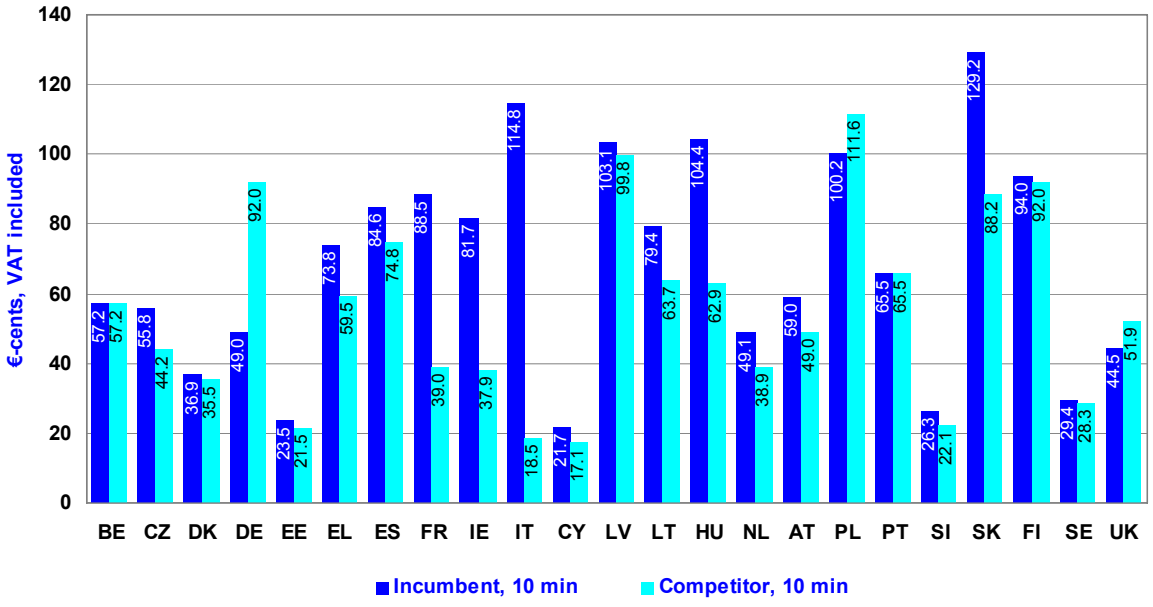


Figure 105



7.7 Incumbent operator price for an average fixed international call (international call basket)

The basket of international calls for each country provides an estimate of the average cost of an international call.

For the basket comparison of international PSTN call charges, the OECD traffic weight basket methodology is used. The basket calculates an average charge for calls to all OECD destination countries.

The residential basket includes VAT. Call charges are weighted between peak and off-peak hours: 25% for peak hours and 75% for off-peak hours. The business basket excludes VAT. Call charges are weighted 75% for peak hours and 25% for off-peak hours. The average price of an international call is lower for business users than for residential users because of the heavier weighting given to three-minute peak-hour calls, which are, on average, cheaper than five-minute off-peak calls, and because VAT is excluded for business users but included for residential users.

International call charges vary widely with the destination, and the basket results are based on a weighted average call charge. Traffic weighting is used, as defined by the OECD for the destination weighting, as per the revision in 2000. This method applies a weight to each destination based on the traffic volumes reported on that route (ITU statistics).

All tariffs are standard prices from ex-incumbents operators, and both these operators and new entrants may offer lower prices.

The EU average value is the average of the EU countries weighted according to the national population.

A full description of the methodology can be found at the end of this report.

Figure 106

Average price for an international call, residential user

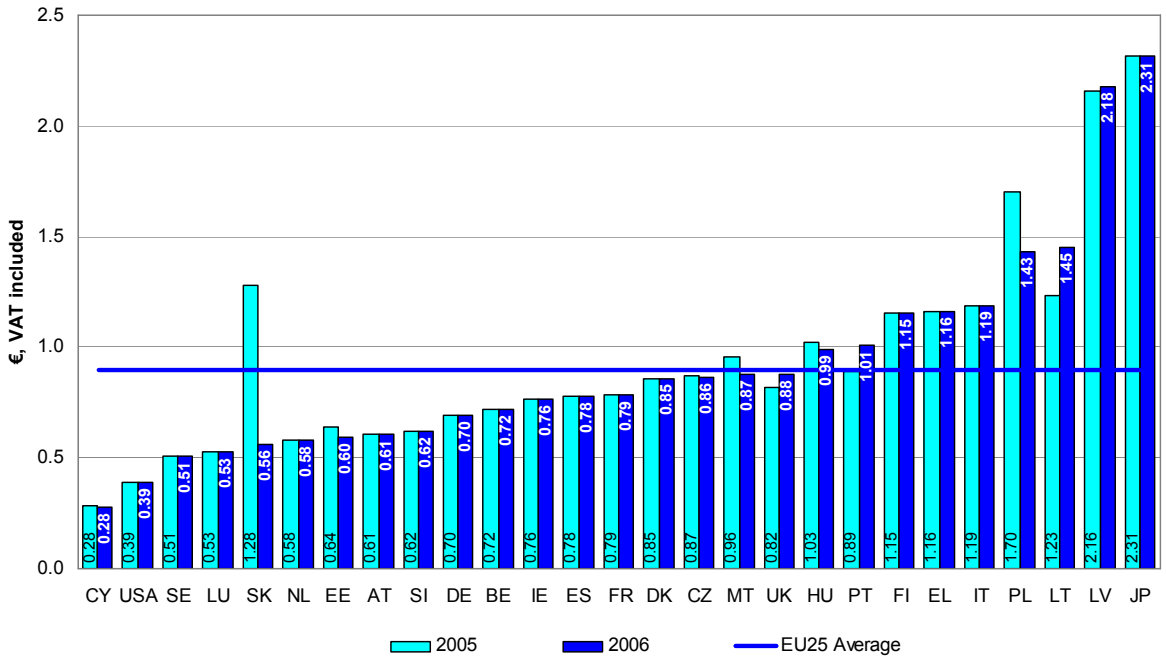


Figure 107

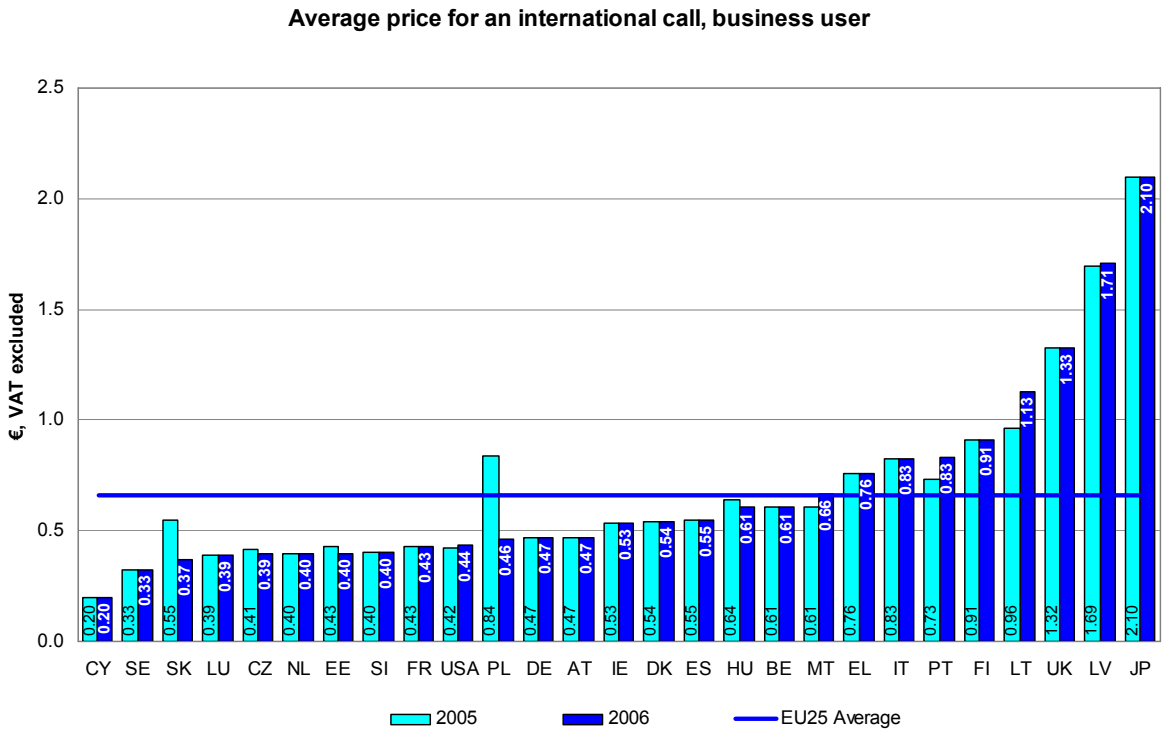
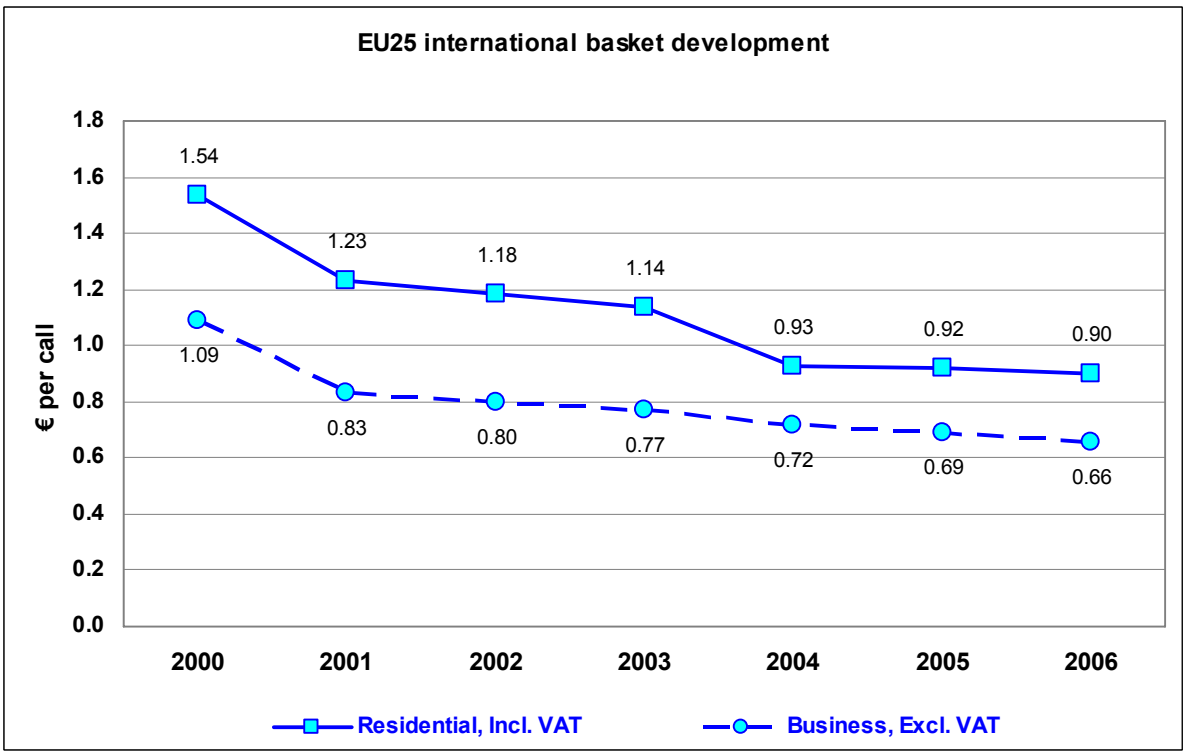


Figure 108



7.8. Incumbent operator price of calls to eu, japan, usa

The following two charts show the prices of a 10-minute international call (including VAT) during peak hours (weekday 11.00AM) to four different destinations: Near EU country, Distant EU country, USA and Japan. Figures are expressed in €, including VAT, and they refer to the European incumbent operators and the EU weighted average. The table below summarises the definition of near and distant EU destination countries.

.From:	Near EU	Far EU
BE	FR	EL
CZ	DE	FI
DK	SE	EL
DE	FR	EL
EE	FI	EL
EL	IT	DK
ES	PT	DK
FR	BE	EL
IE	UK	EL
IT	EL	DK
CY	EL	DK
LV	SE	EL
LT	SE	EL
LU	DE	EL
HU	AT	FI
MT	IT	FI
NL	DE	EL
AT	DE	EL
PL	DE	EL
PT	ES	DK
SK	CZ	FI
SI	AT	FI
FI	SE	EL
SE	DK	EL
UK	FR	EL

Figure 109

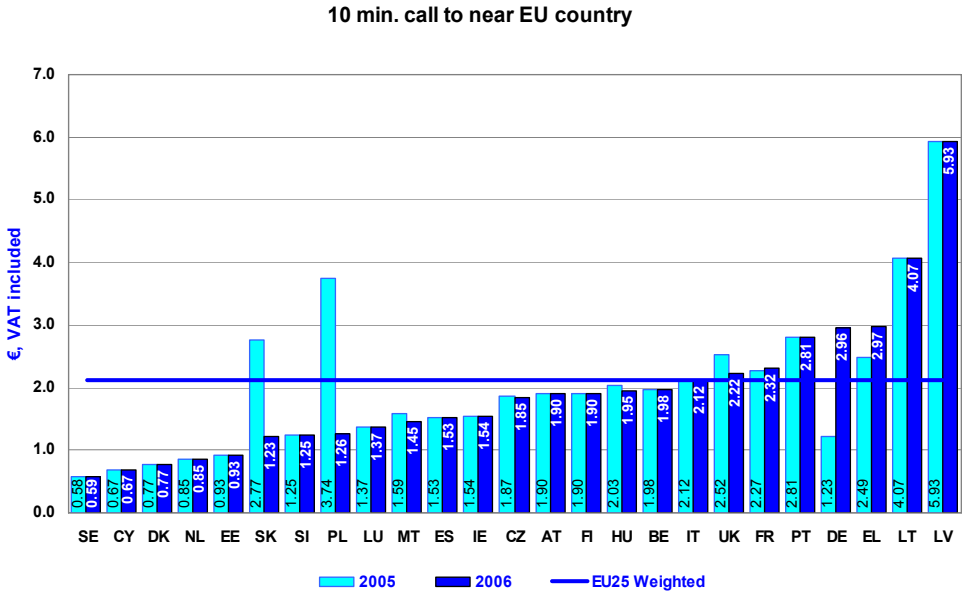

10 min. call to near EU country
€, VAT included
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
SE CY DK NL EE SK SI PL LU MT ES IE CZ AT FI HU BE IT UK FR PT DE EL LT LV
0.58 0.59 0.67 0.67 0.77 0.77 0.85 0.85 0.93 0.93 2.77 1.23 1.25 1.25 3.74 1.26 1.37 1.37 1.59 1.45 1.53 1.53 1.54 1.54 1.87 1.85 1.90 1.90 1.90 1.90 2.03 1.95 1.98 1.98 2.12 2.12 2.52 2.22 2.27 2.32 2.81 2.81 1.23 2.96 2.49 2.97 4.07 4.07 5.93 5.93
2005
2006
EU25 Weighted

Figure 110

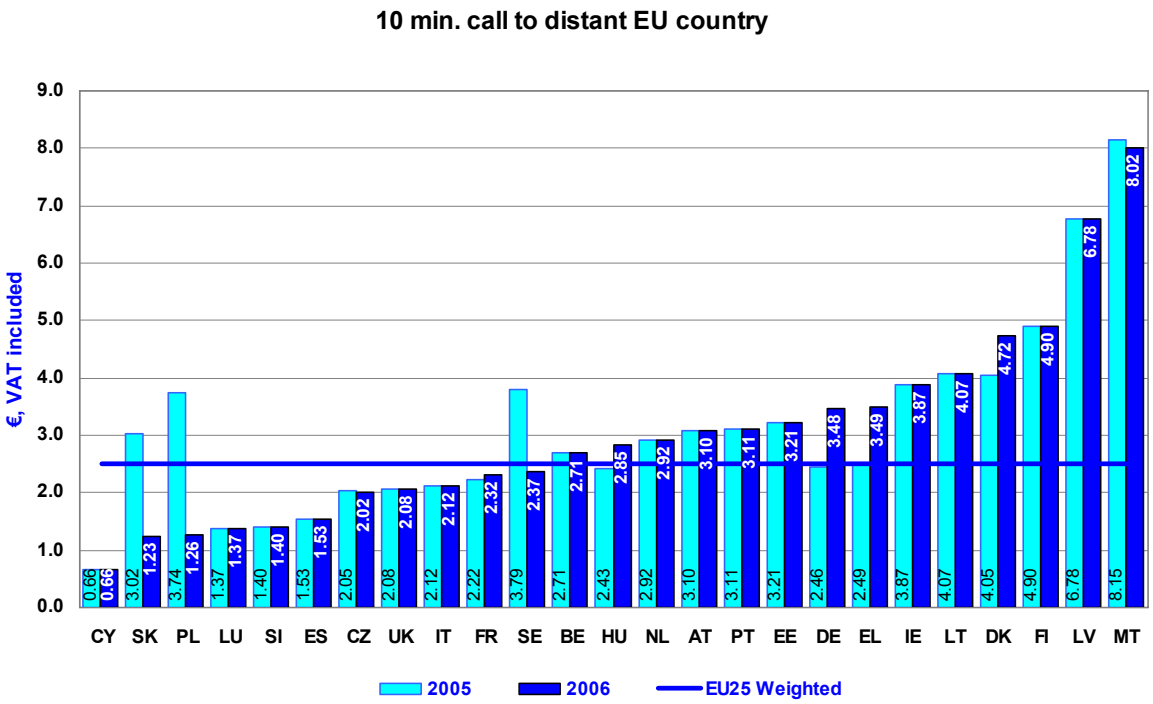


Figure 111

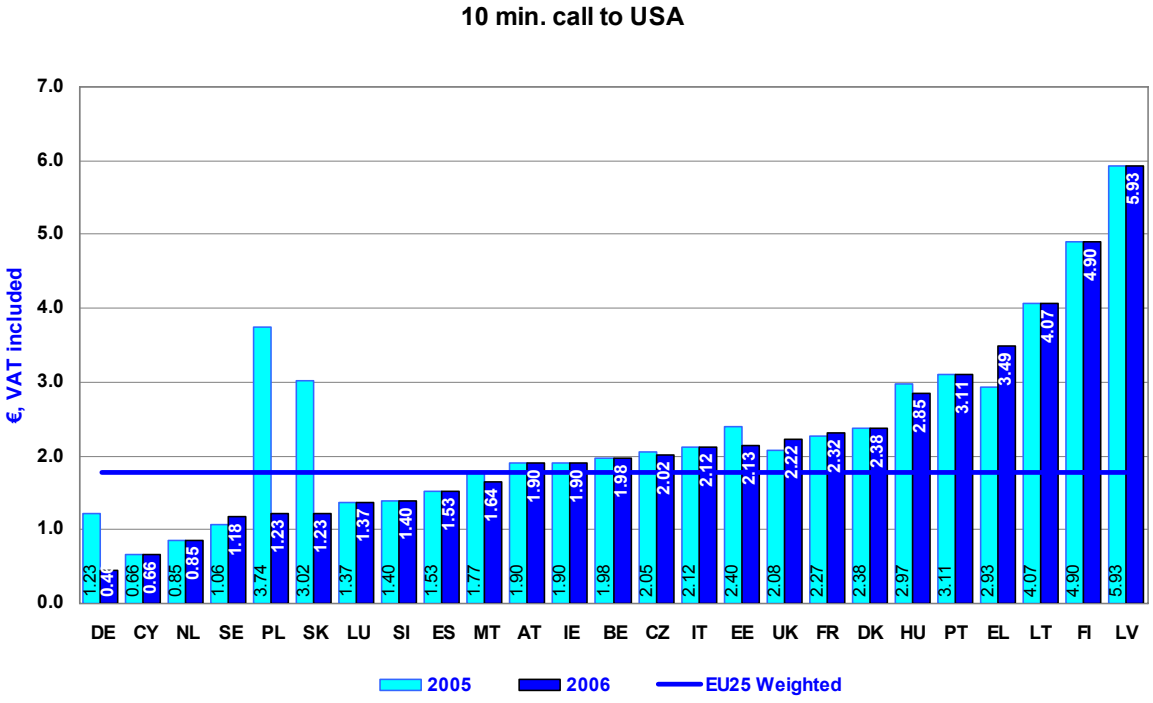
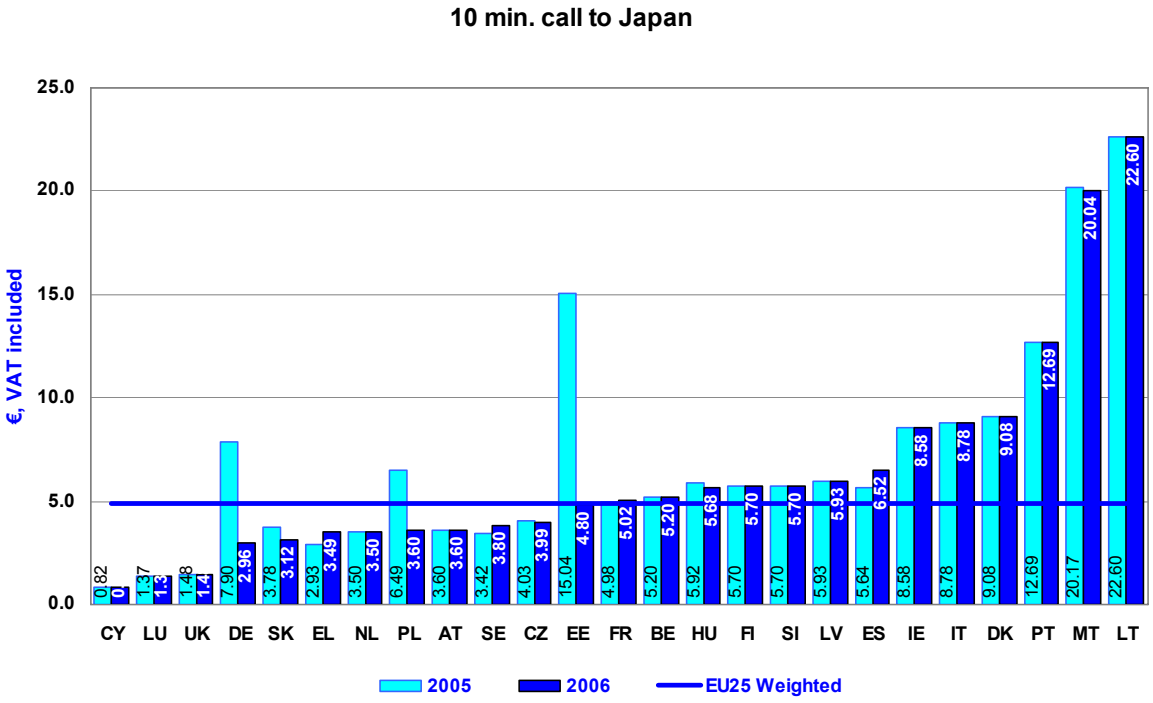


Figure 112


10 min. call to Japan
€, VAT included
25.0
20.0
15.0
10.0
5.0
0.0
CY LU UK DE SK EL NL PL AT SE CZ EE FR BE HU FI SI LV ES IE IT DK PT MT LT
0.82 0 1.37 1.3 1.48 1.4 7.90 2.96 3.78 3.12 2.93 3.49 3.50 3.50 6.49 3.60 3.60 3.60 3.42 3.80 4.03 3.99 15.04 4.80 4.98 5.02 5.20 5.20 5.92 5.68 5.70 5.70 5.70 5.70 5.93 5.93 5.64 6.52 8.58 8.58 8.78 8.78 9.08 9.08 12.69 12.69 20.17 20.04 22.60 22.60
2005
2006
EU25 Weighted

7.9. Alternative operators' price for fixed international calls

The equivalent prices for competitor providers in the EU countries are shown in the charts below. One competitor per country has been analyzed. The prices are shown for a 10 minute call, at peak time weekdays.

Prices include VAT and are applicable for September 2006.

Figure 113

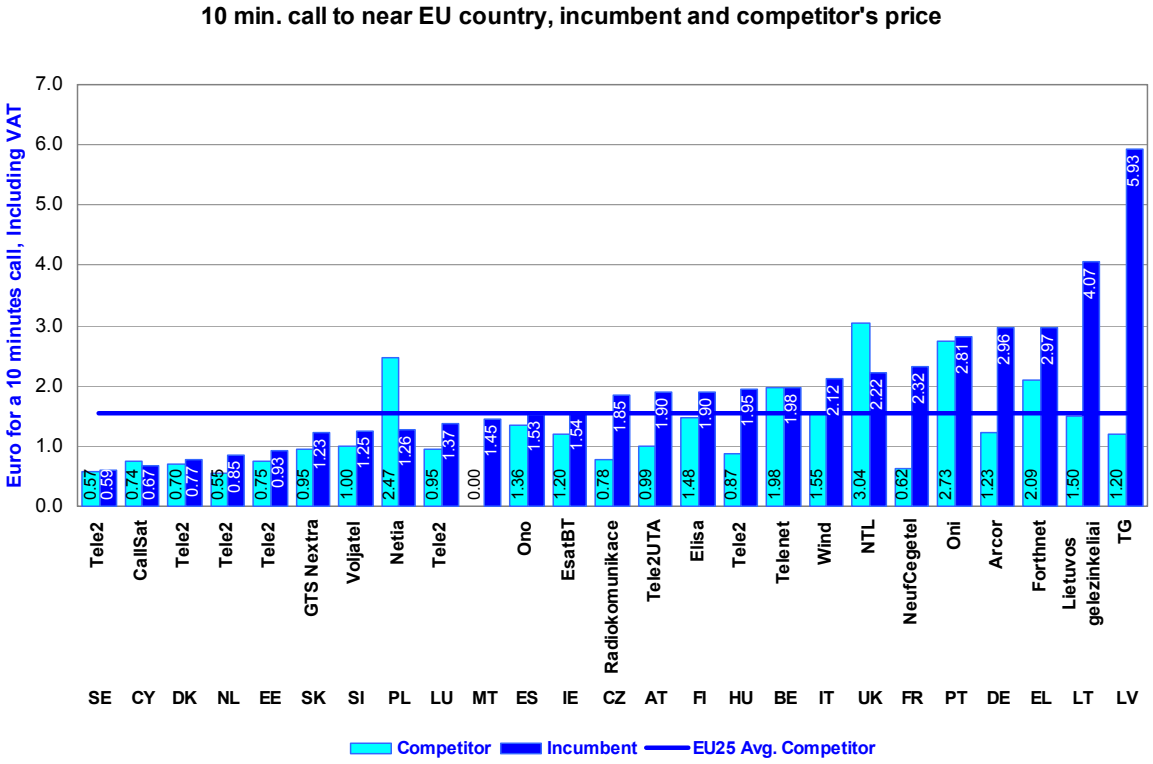


Figure 114

10 min. call to distant EU country, incumbent and competitor's price

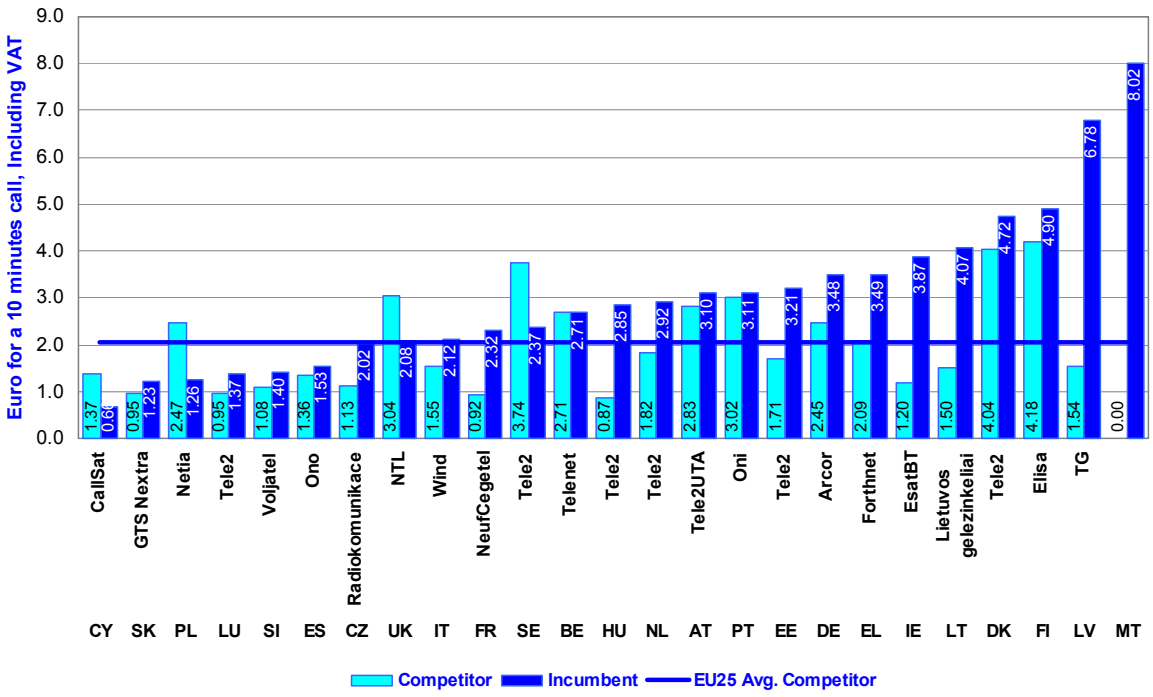


Figure 115

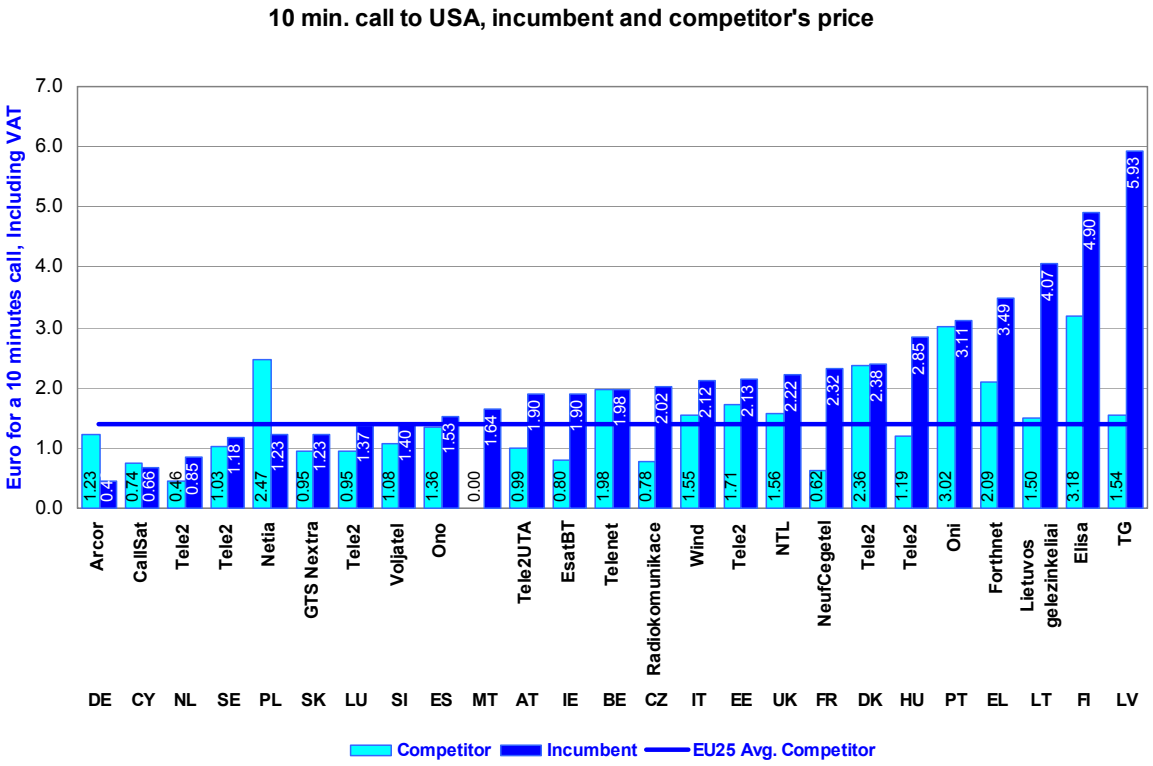
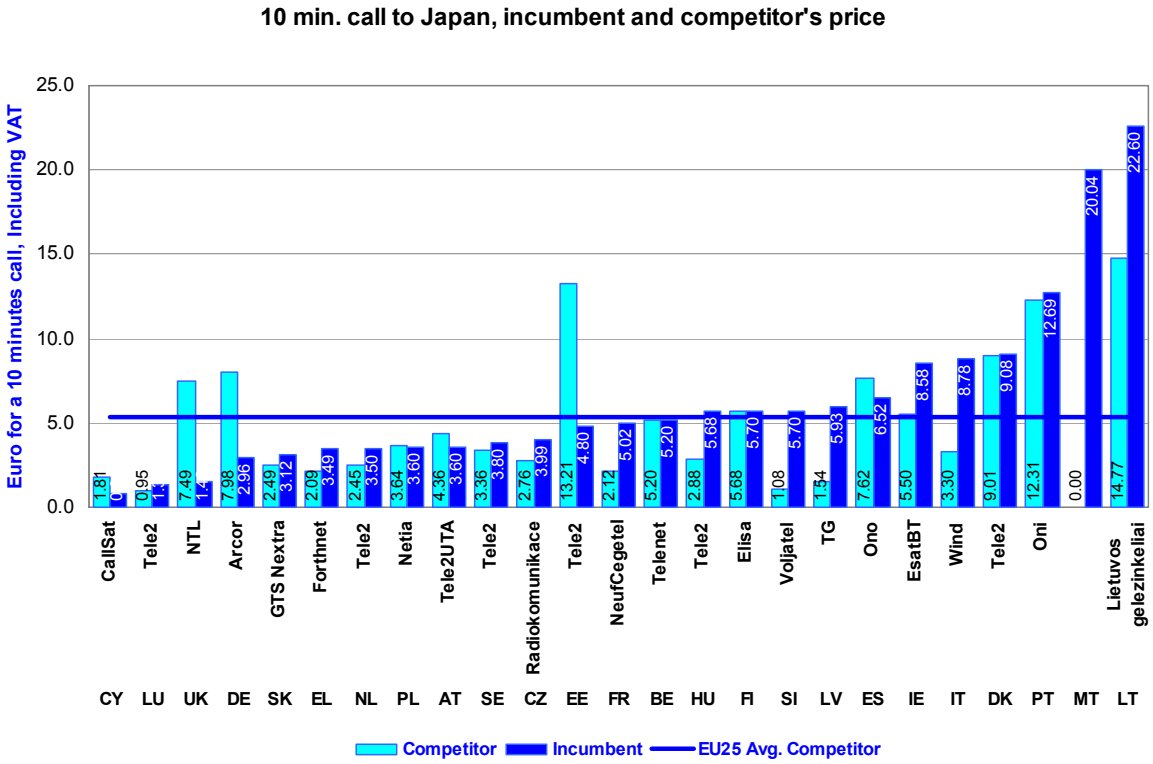


Figure 116



8. LEASED LINES RETAIL TARIFFS

This section contains an overview of prices charged by incumbent operators to end users in each Member State for national and international leased line services as at 1 September 2006. Figures do not cover wholesale prices. Price developments are also analysed over the period August 2000 - September 2006.

The figures and the information are taken from a study carried out by Teligen-HI, United Kingdom for the Commission. Data on standard retail prices charged by incumbent operators have been collected in each country.

8.1. Incumbents' national leased lines

National leased line data is provided for 2005 and 2006. Two distances are covered: 2 km (local circuits), and 200 km. Tariffs are taken from the incumbent operator in each country. Other operators may offer other prices. In order to properly reflect the tariff structures used in some countries, the circuits may be considered in one of two different ways, depending on tariff structure. The one to apply will differ from carrier to carrier. The principles used in this report for calculating the price of a full circuit are:

	1: When tariff specifies local tail prices separately, in addition to main circuit.		2: When tariff specifies a single price for the circuit, end to end, including local tails.	
	Local tail length	Main circuit length	Local tail length	Main circuit length
2 km circuit	1 km	0	0	2 km
200 km circuit	2 km	196 km	0	200 km

Note: The local tail length is per tail, i.e. there will be 2 such tails with each circuit.

Where several tariff options exist depending on type of location, the criteria for choice is as follows:

- 2 km circuits are always within a major city (usually the Capital)
- 200 km circuits are between a major city and a “minor” city

As the definitions vary between countries, the type of tariff option chosen will also vary (see details below). The countries where the price may vary with location or other non-distance related definitions are: Belgium, France, Austria, Finland, Sweden and the United Kingdom.

Some operators apply termination charges per local end, without necessarily covering the local tail circuit within that charge.

4 types of circuits are covered: 64 kb/s, 2 Mb/s, 34 Mb/s and 155 Mbit/s. As not all carriers publish tariffs for all these bitrates and all years, there may be some gaps in the information, especially for higher bitrates.

Some carriers offer 2 Mb/s circuits as both structured and unstructured. In this analysis only unstructured circuits are included.

Also, some carriers offer different types of leased lines, often in the form of “basic circuits” and circuits in a managed network. Only “basic circuits” are included in this analysis, as the managed network services are not comparable between carriers.

Lately a few carriers have decided not to publish their prices for some or all types of leased lines. This makes it increasingly difficult to present a full overview of the prices in all 25 EU countries.

For the USA the prices of Verizon intra-LATA circuits for New York State have been used. The bitrates of leased lines offered in some countries may be different from the ones found in most EU Member States. Some operators may offer 56 kb/s instead of 64 kb/s, 1.5 Mb/s instead of 2 Mb/s, 45 or 50 Mb/s instead of 34 Mb/s, and 140 or 150 Mb/s instead of 155 Mb/s. Prices shown in the tables and graphs in this section of the report have been adjusted according to the difference in capacity.

All prices are presented in EURO per year, excluding VAT. National leased lines prices as at 1 September 2006

The validity dates of the tariffs used in this section are:

	Valid date		Valid date		Valid date
Belgium	01/06/04	Cyprus	01/01/06	Slovenia	01/12/02
Czech Republic	01/07/06	Latvia	01/06/99	Slovakia	01/09/06
Denmark	01/06/06	Lithuania	27/06/03	Finland	
Germany	01/07/06	Luxembourg	01/05/06	Sweden	
Estonia	15/06/06	Hungary	01/01/02	United Kingdom	01/01/04
Greece	03/04/06	Malta	01/12/04	Japan	01/01/05
Spain	15/05/06	Netherlands	01/04/06	USA, Verizon	21/05/05
France	01/08/06	Austria	01/09/01	USA, Pacbell	12/03/03
Ireland	18/06/03	Poland	01/01/00		
Italy	01/11/03	Portugal	01/09/06		

Belgium: Belgacom has divided its network into 4 levels based on "economic concentration". The tariffs shown are for circuits within or between level 1 areas, "Very high economic concentration". Prices for 155 Mb/s shown here are adjusted from prices for 140 Mb/s circuits. Local circuits within an exchange area are priced as a regular circuit of the given distance.

Czech Republic: Telefonica O2 defines prices for all bitrates based on the price of a 64 kb/s circuit. Coefficients are given for each bitrate available (up to 2 Mb/s), and the price is the product of the 64 kb/s price and the coefficient.Local circuits are defined as a 0 km circuit. 10 distance zones are defined for circuits with more than 0 km between serving exchanges. There are no incremental charges (i.e. per km).

Denmark: TDC divides the leased lines into two categories: Local circuits based on distance bands and whether the two ends are connected to the same exchange or neighboring exchanges. Long distance circuits connected to different exchanges, divided into 4 distance bands. There are no incremental charges (e.g. per km). Prices for 155 Mb/s shown here are adjusted from prices for 140 Mb/s circuits.

Germany: Deutsche Telekom offers different types of circuits. In this analysis the "Standard Festverbindungen" is used. Tariffs are divided into: a) Local 1 (same exchange); b) Local 2, up to or above 15 km; c) Long Distance, < 15km, 15 – 50 km, 50 – 150 km, > 150 km. Local 2 and Long distance use incremental (per km) charges. At 34Mb/s and 155 Mb/s access circuit charges apply, with a distance (per km) element.

Estonia: Elion divides the leased lines into distance bands of 0 – 6 km, 6 – 10 km, 10 – 20 km, >20 km. Trunk circuits above 20 km use incremental (per km) charges. Local circuits are priced as a regular circuit of the given length.

Greece: OTE divides the leased lines into: a) Local circuits, b) Trunk circuits (< 35 km, 35 – 70 km, 70 – 150 km, > 150 km). Trunk circuits use incremental (per km) charges. 64 kb/s charges are for Hellascom service from 2003. Prices for 2004 are those OTE should apply according to the EETT decision of December 2003. Prices have since changed again.

Spain: Telefonica strictly divides leased lines according to distance: a) Distance bands: 0 – 4 km, 4 – 20 km, 20 – 70 km, 70 – 300 km, 300 – 500 km, > 500 km. All bands use incremental (per km) charges. Telefonica does not publish prices for 155 Mb/s circuits. Local circuits within an exchange area are priced as a regular circuit of the given distance.

France: France Telecom offers leased lines in the products Transfix and Transfix 2.0. Transfix is the basic service, and the one used in this analysis. The tariff is divided into distance bands: 0 – 10 km, 10 – 50 km, 50 – 300 km, > 300 km. 34 and 155 Mb/s divide at 30 km and 100 km instead of 50 km. Prices for 2 Mb/s relate to 2,048 kb/s bit rate. 1,920 and 1,984 have different prices. Prices for 34 and 155 Mb/s circuits relate to circuits with one end in a major city (zone A), as defined by France Telecom. Local circuits within an exchange area are priced as a circuit of the given distance. Additional definitions apply for higher speed circuits.

Ireland: EirCom defins the tariff for leased lines with a local end charge, and main link charges for circuits 0 – 30 km and > 30 km. Local circuits may be made up by 2 local ends, and no main link. Circuits equal to or above 1 Mb/s have a distance incremental charge for local ends over 1.5 km.

Italy: All circuits have an access charge per end, and a main link distance related charge per km. Distance bands are 0 – 60 km, 60 – 300 km, and > 300 km. Circuits from 2 Mb/s and above are available with various levels of reduced charges depending on contract period and overall spend. The most basic level is used in this analysis. Local circuits within an exchange area are priced as two access circuits only.

Cyprus: CYTA divides the leased lines into: a) Subscriber segment, for access. b) Network segment, between exchanges, at distance bands of 0 – 20 km, 20 – 80 km, > 80 km. Local circuits within an exchange area are priced as two subscriber segments.

Latvia: Lattelekom circuits have the same price regardless of distance. Prices are only provided for circuits up to 2 Mb/s.

Lithuania: Lietuvos Telekomas distinguish between circuits inside the local exchange area, and those beyond the local exchange area.

Luxembourg: P&T Luxembourg divide the leased lines tariff into 4 types of circuits: Same local network, contiguous local network of same nodal sector, same nodal sector or contiguous local networks of different nodal sectors, and non-contiguous local networks of different nodal sectors. This definition relates to the network hierarchy, and not to distance. Distances at 200 km are not possible. Local circuits within an exchange area are priced as a circuit in the same local network.

Hungary: Matav applies an access circuit charge for each end of the circuit, and a fixed basic charge and a per km charge for the trunk part. Matav does not publish prices for national circuits, so data have not been updated.

Malta: Maltacom has a flat charge regardless of distance, only dependent of bitrate.

Netherlands: KPN Telecom offer leased lines as Digital Standard and DigiStream services. Digital Standard is the basic service, and the one used in this analysis. Tariffs are divided into a charge per connecting point and a main link charge. The main link charge is divided into two zones: Up to 50 km with a fixed basic charge and an incremental per km charge, and over 50 km with a fixed basic charge. Prices are in effect capped above 50 km. Local circuits within an exchange area are priced as two access connections plus a short main link of the given distance. OPTA has found that the market for 2 Mb/s circuits is competitive, meaning that prices indicated by KPN are maximum prices, and will normally be used as a basis for negotiating a (lower) price.

Austria: Telecom Austria divides the "Digitaler Stromweg" circuits into 2 categories: City-tarif when both ends of the circuit are in category A cities (a defined list of 68 towns and cities), and Normal-tarif when the above does not apply. This analysis used the City-Tarif. The Normal-tarif would in most cases come out more expensive. For the years up to 2000 a different tariff scheme applied, with a different list of towns, and 3 instead of 2 categories. The tariff is based on a charge per local end, and a distance related charge per km. The distance bands vary with bit rate. Local circuits within an exchange area are priced as two access circuits only.

Poland: Polish Telecom has no recurring charges related to the access. A basic charge plus a per km charge is applied for the full length of the circuit. Distance bands are divided into 0 – 3 km, 3 – 20 km, 20 – 30 km, 30 – 50 km, 50 – 100 km, 100 – 200 km, over 200 km.

Portugal: Portugal Telecom divides the leased line tariff into local access circuit charge, and a main link with a fixed and an incremental charge per km. Distance bands are 0 – 10 km, 10 – 30 km, 30 – 50 km, 50 – 100 km, over 100 km. Local circuits connected to the same exchange will not incur main link charges. Local circuits within an exchange area are priced as two access circuits only.

Slovenia: Telekom Slovenije divides the leased line tariffs into 3 distance bands: 0 – 5 km, 5 – 50 km and over 50 km. Each of these bands have a basic price and a per km price. Distance is calculated between serving exchanges.

Slovakia: Slovak Telecom defines the leased line tariff in two parts: Local Access and Intercity. The Intercity part is divided into 3 distance bands: 0 – 50 km, 50 – 100 km and over 100 km. Prices are given for the 64 kb/s bitrate. Other bitrates between 9.6 kb/s and 2048 kb/s are calculated based on the 64 kb/s price using a multiplication factor. This factor is different for Local Access and Intercity circuit parts. For example 2048 kb/s has a factor of 4.4 for the Local Access and 5.6 for the Intercity part.

Finland: Sonera stopped publishing full 64 kb/s circuit prices in 1998, and has also stopped publishing 2 Mb/s circuit prices. Local circuit charges were divided into 3 categories: Urban area, Rural areas I and II. Definitions of these areas relate to individual locations in the Sonera coverage area. Long distance (main link) charges were also divided into 3 categories: Green, Red and Blue. Green covers the main 5 cities, red a further 28 towns, and Blue the rest of the countries. Distance bands are 0 – 50 km, 50 – 100 km, and > 100 km. Incremental charges per km applied.

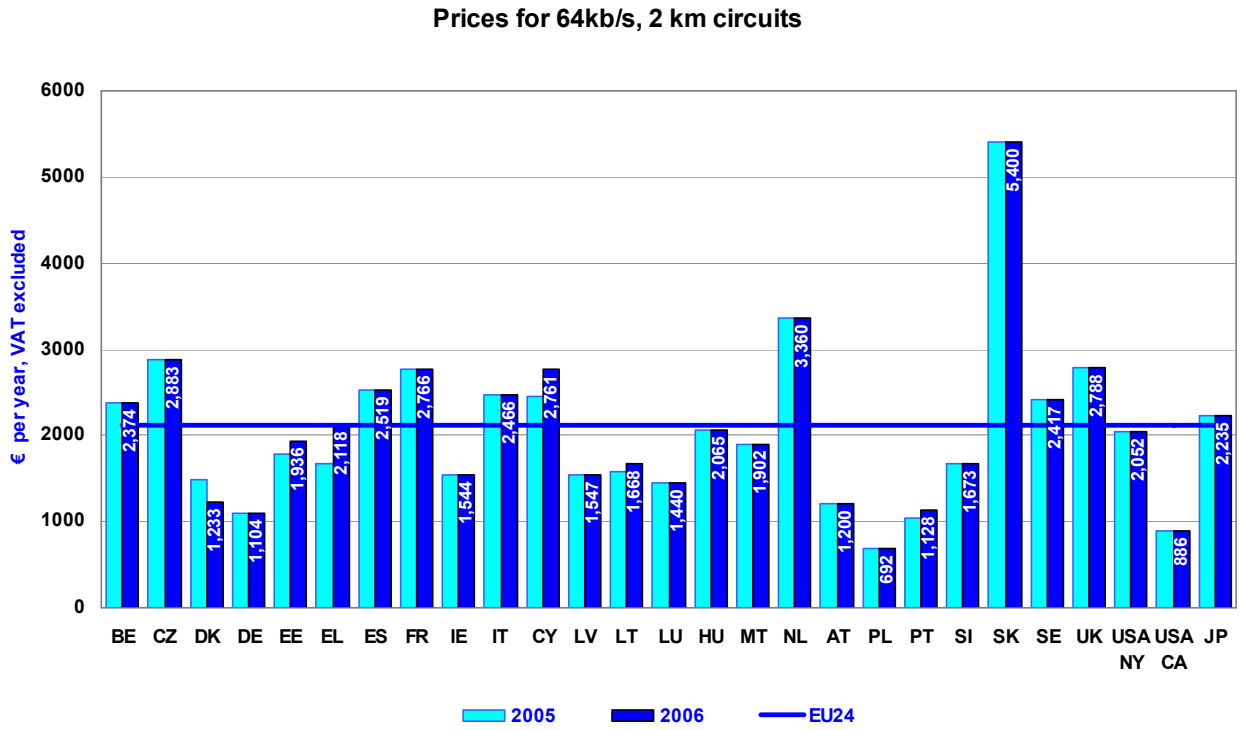
Sweden: Telia no longer publishes prices for national leased line. Prices below relate to the last published price list. Telia divides their network into 5 categories: Metropolitan green and green for the major cities and towns, red and blue for short distance network in smaller places,

and white for rural areas. Circuits are priced according to the portion of the circuit falling into any of these categories on its route. Here the green tariff is assumed, for a circuit between reasonably large towns. The tariff is divided into local circuits and long distance. Long distance circuits will have a separate access link charge per end, and a main link charge. Local circuits are priced in 2 distance bands: 0 – 0.5 km and 0.5 - 3 km. Long distance circuits are priced in the bands 0 – 20 km, 20 – 40 km, and > 40 km. The latter has an incremental per km charge.

United Kingdom: BT divides their Kilostream (64 kb/s) and Megastream (2, 34 and 155 Mb/s) tariffs into circuits wholly within City London Zone (0207-area), and circuits with one or both ends outside London. For local circuits within CLZ the main link does not apply since both ends are connected to the same exchange (according to the definition used). The price is calculated as the sum of two local access circuits. Distance bands outside London are < 15 km and > 15 km. Incremental charges per km applies.

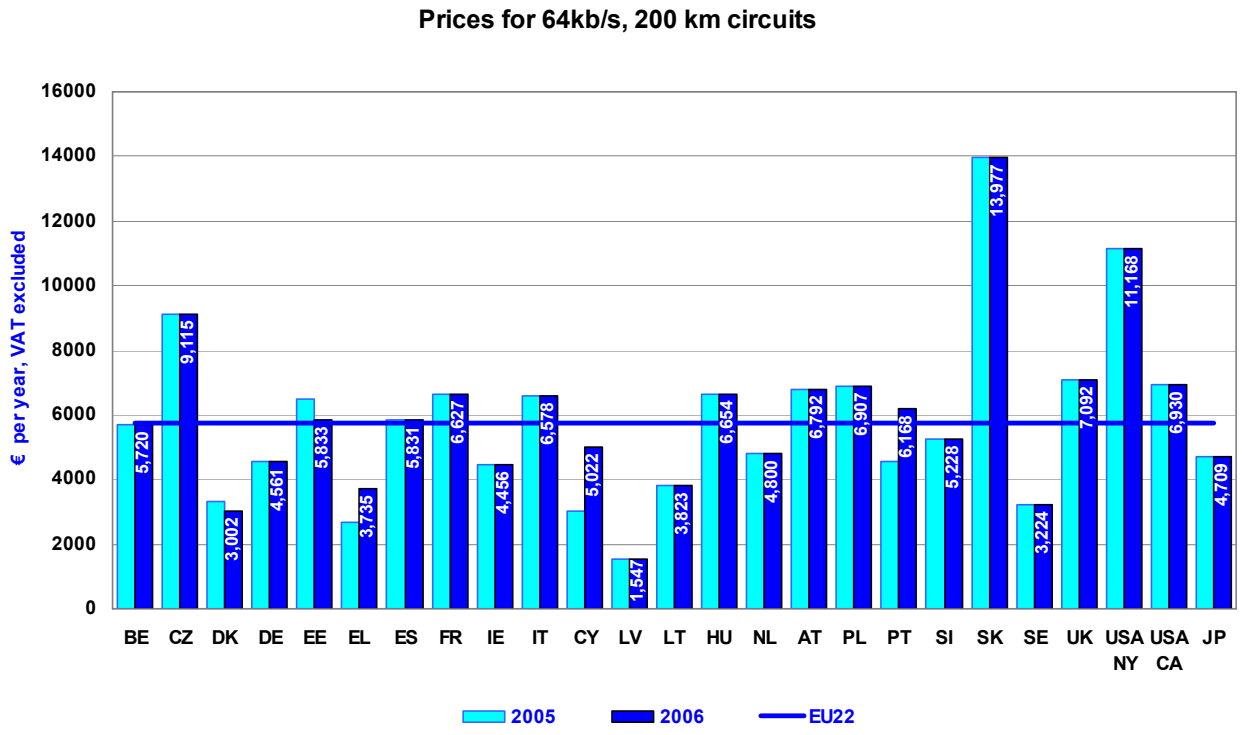
8.1.1. 64 Kbit/s

Figure 117



Blue line represents EU average=2124 €

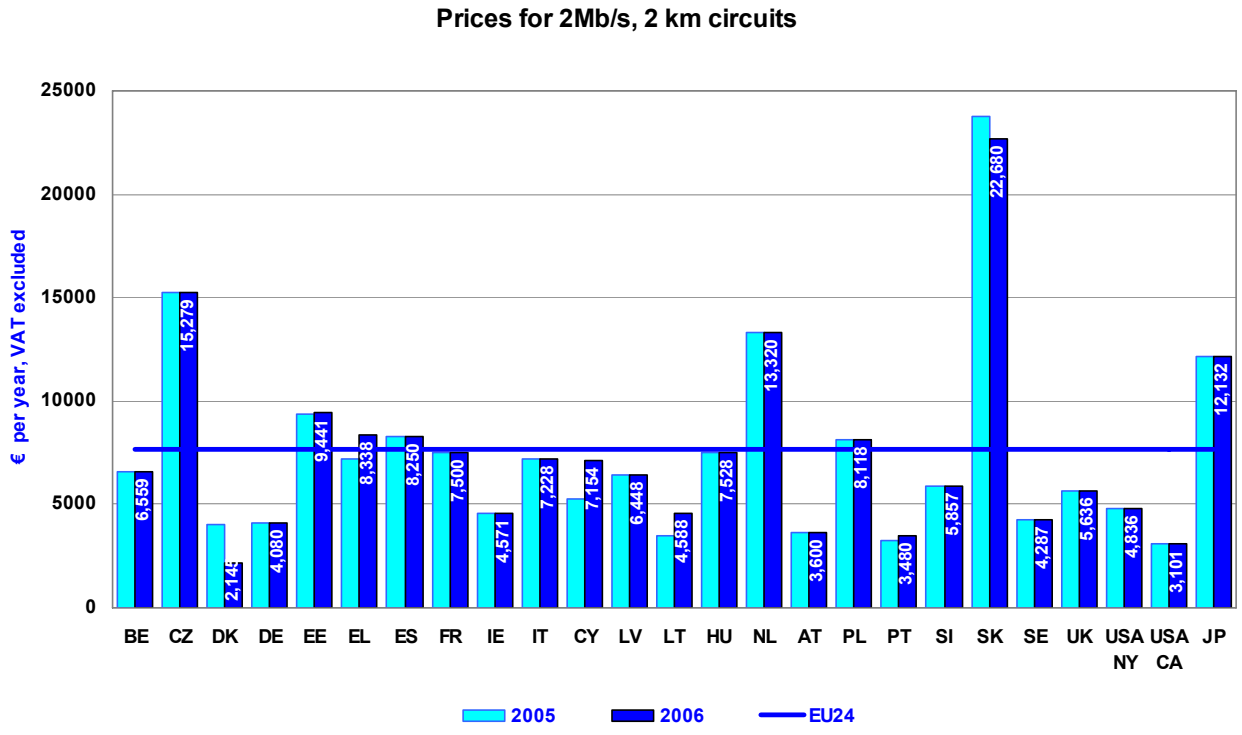
Figure 118



Blue line represents EU average=5759 €

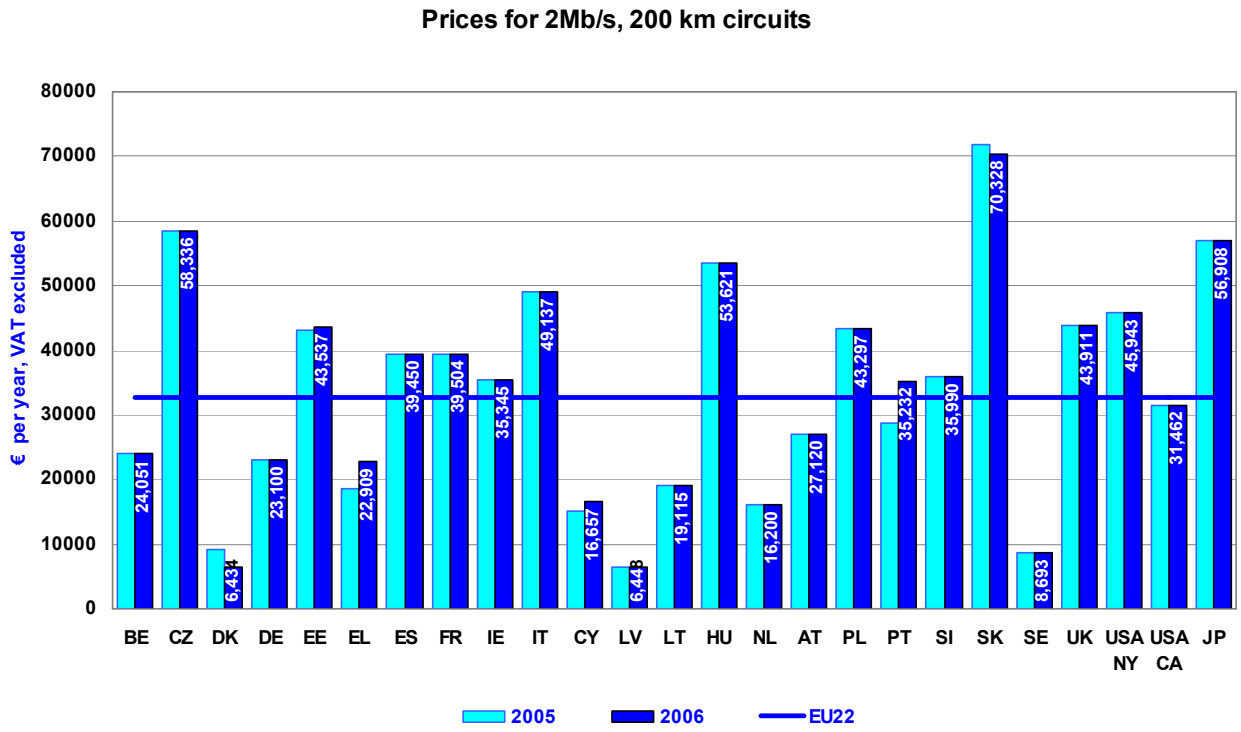
8.1.2. 2 MBit/sec

Figure 119



Blue line represents EU average=7683 €

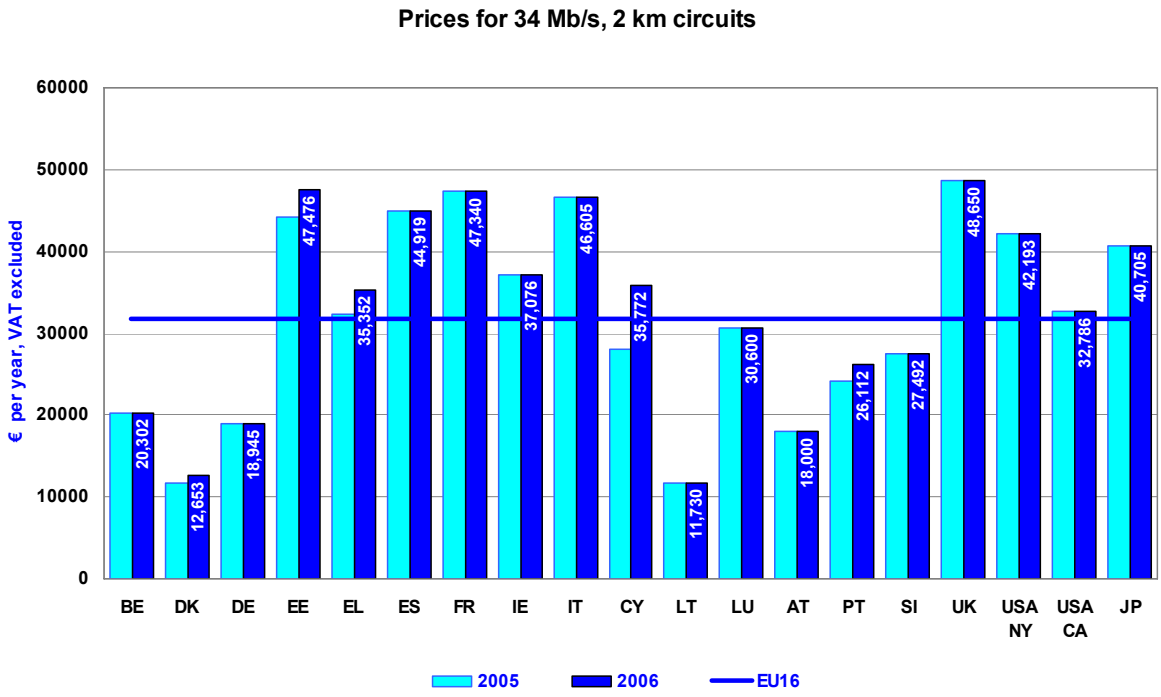
Figure 120



Blue line represents EU average=32655 €

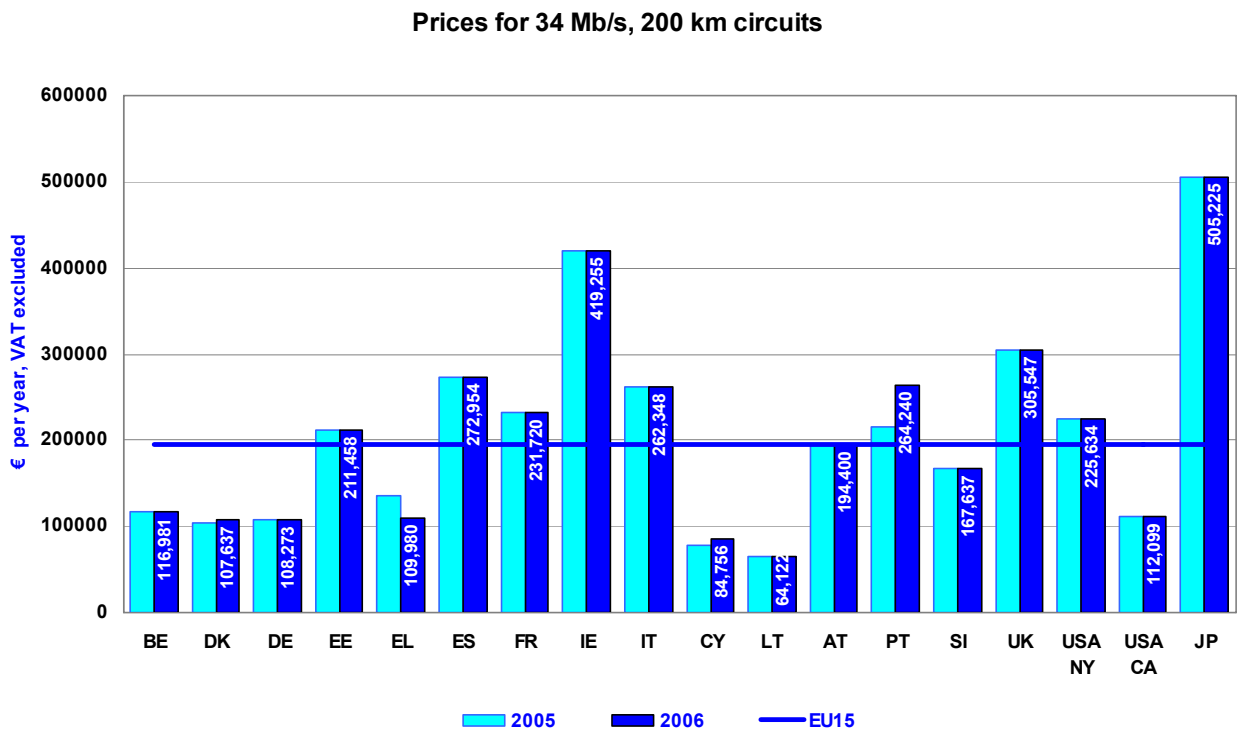
8.1.3. 34 Mbit/s

Figure 121



Blue line represents EU average=31814 €

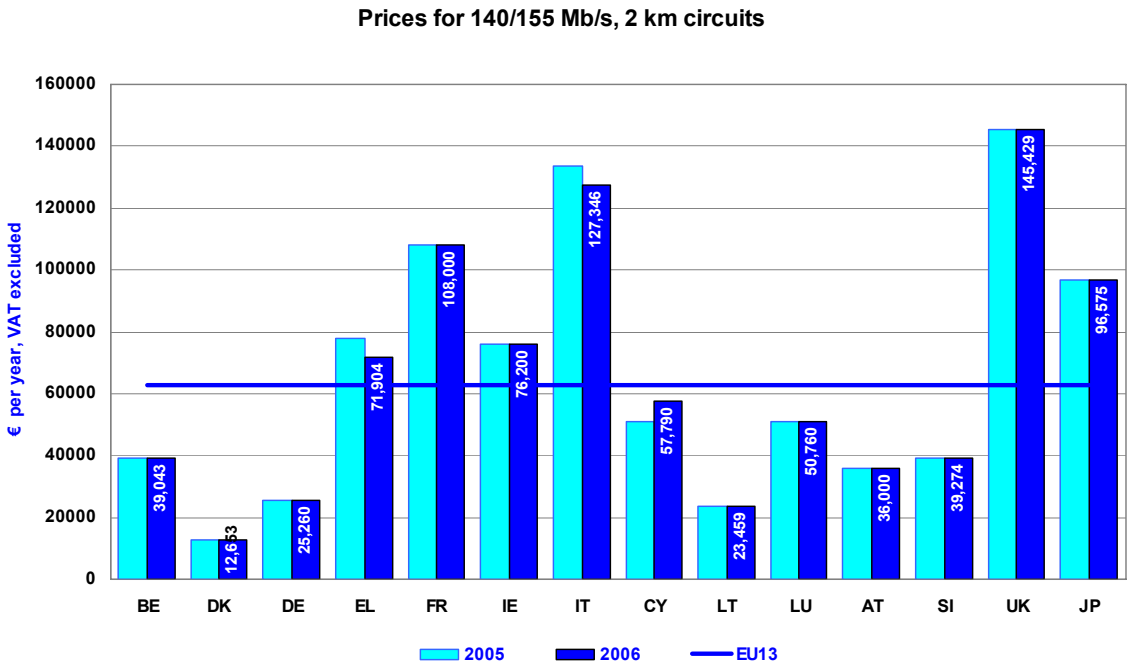
Figure 122



Blue line represents EU average=194754 €

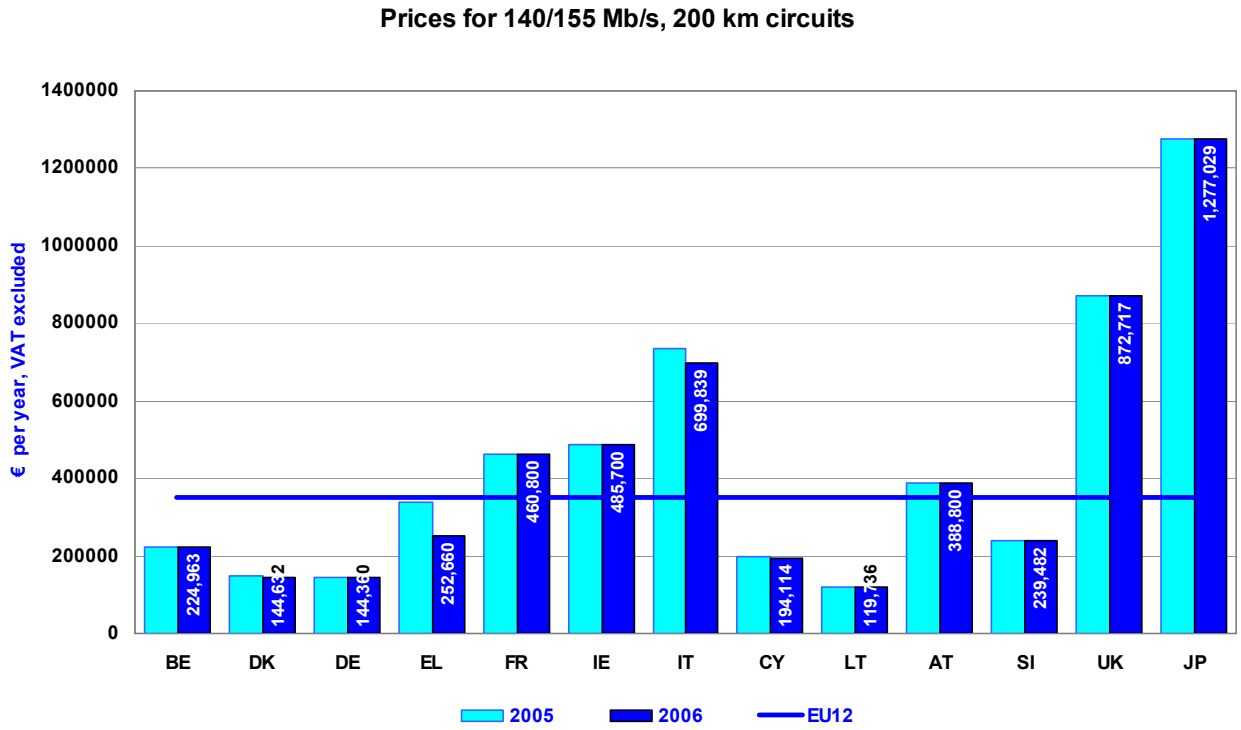
8.1.4 155 Mbit/s

Figure 123



Blue line represents EU average=62548 €

Figure 124



Blue line represents EU average=352317 €

8.2. National leased lines price trends (1 august 1998 - 1 september 2006)

Figure 125

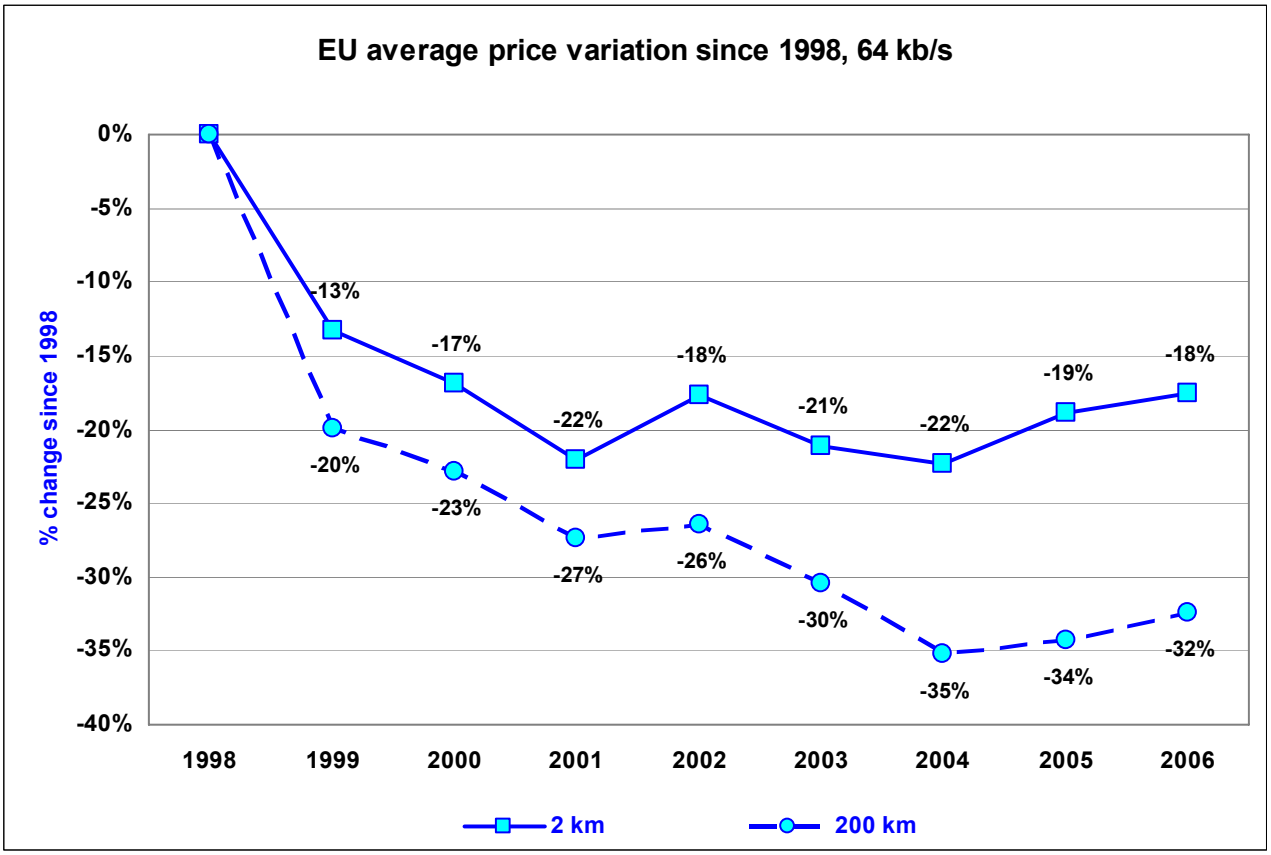


Figure 126

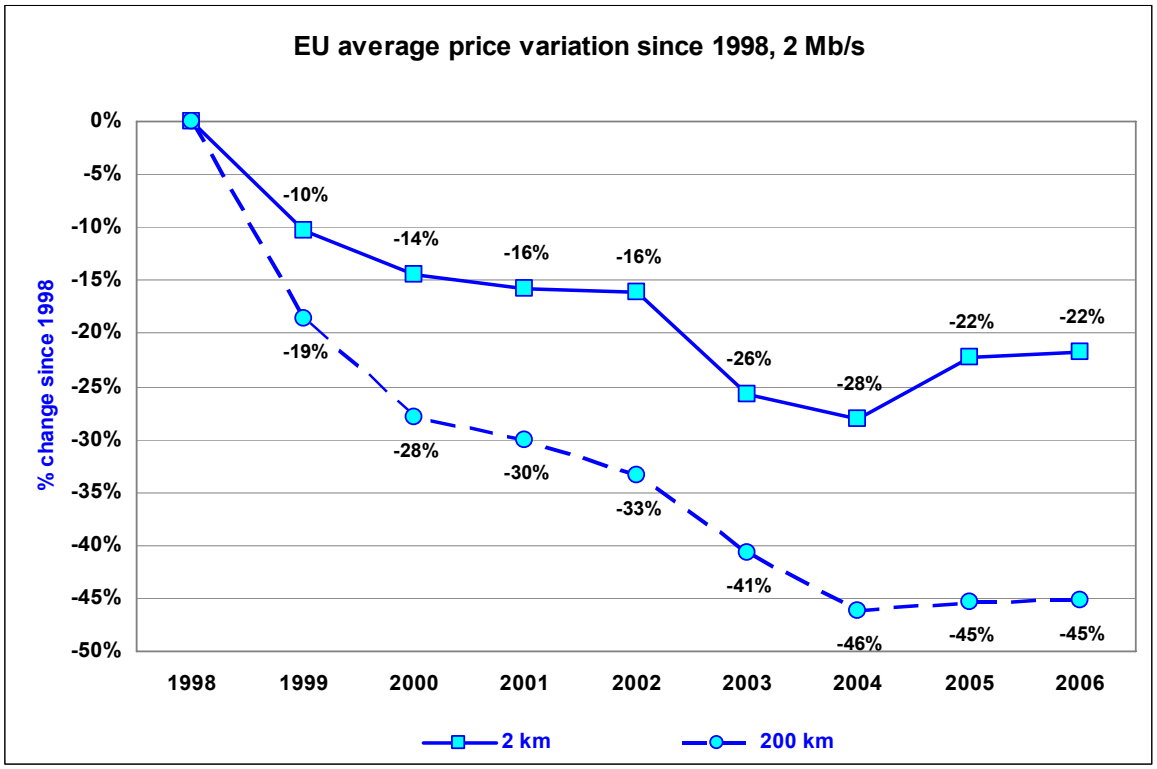
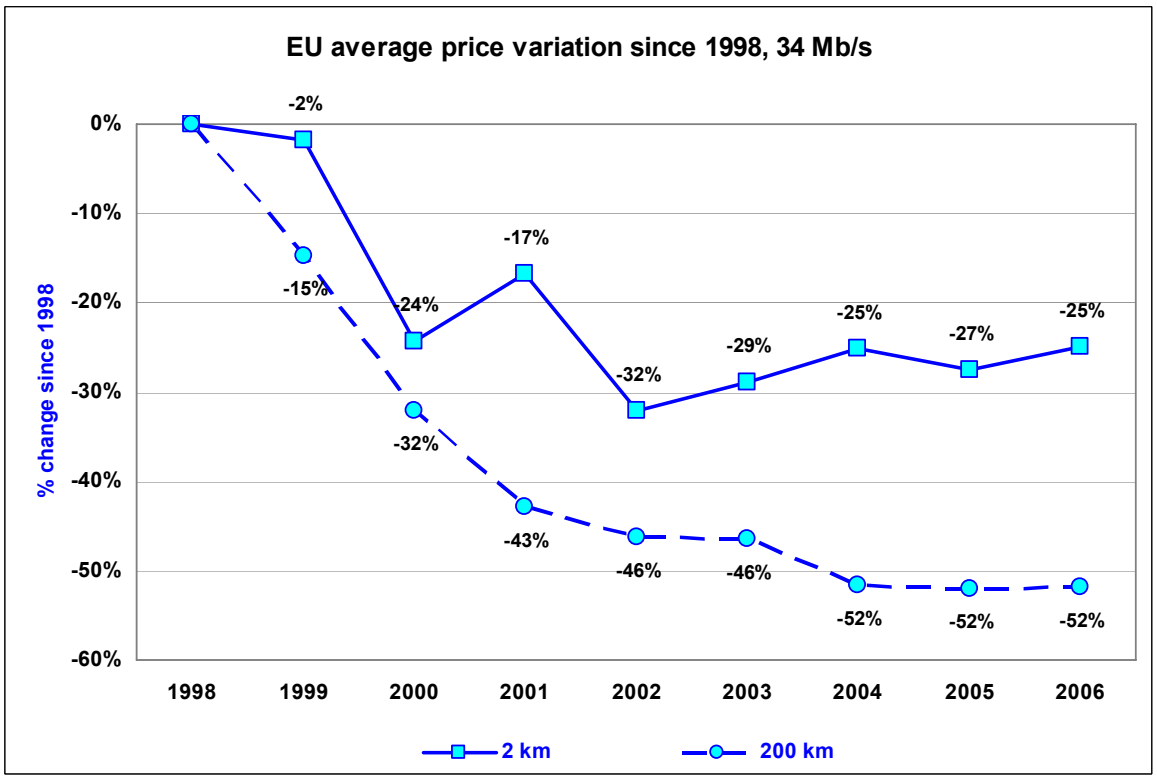


Figure 127



8.3. International leased lines prices

This section examines the standard retail prices (annual rental) for international leased line services (half-circuits in each country) charged by the incumbent operators in each Member State. An analysis of the price development over the period from August 1998 to September 2006 is also included.

Three destinations are covered: international half circuits to the nearest EU country (hereafter "near EU"), to the most distant EU country ("far EU") and to the USA.

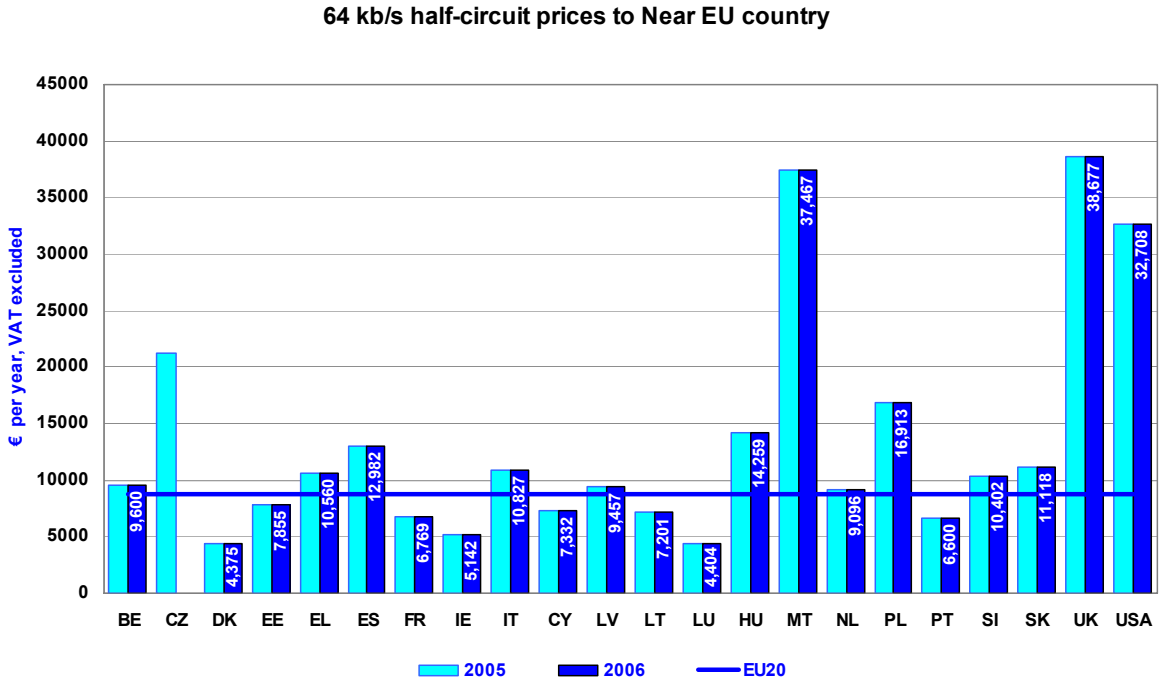
Three types of circuits are considered: digital 64 Kbit/s, 2 Mbit/s and 34 Mbit/s. Given that price information on 155 Mbit/s international lines is only available for a few Member States, the analysis of these circuits is omitted.

The data is presented with the following parameters:

- All charges in Euro per year
- Excluding VAT
- Variable / 1 year contract (shortest term available).
- AT&T prices are used for USA

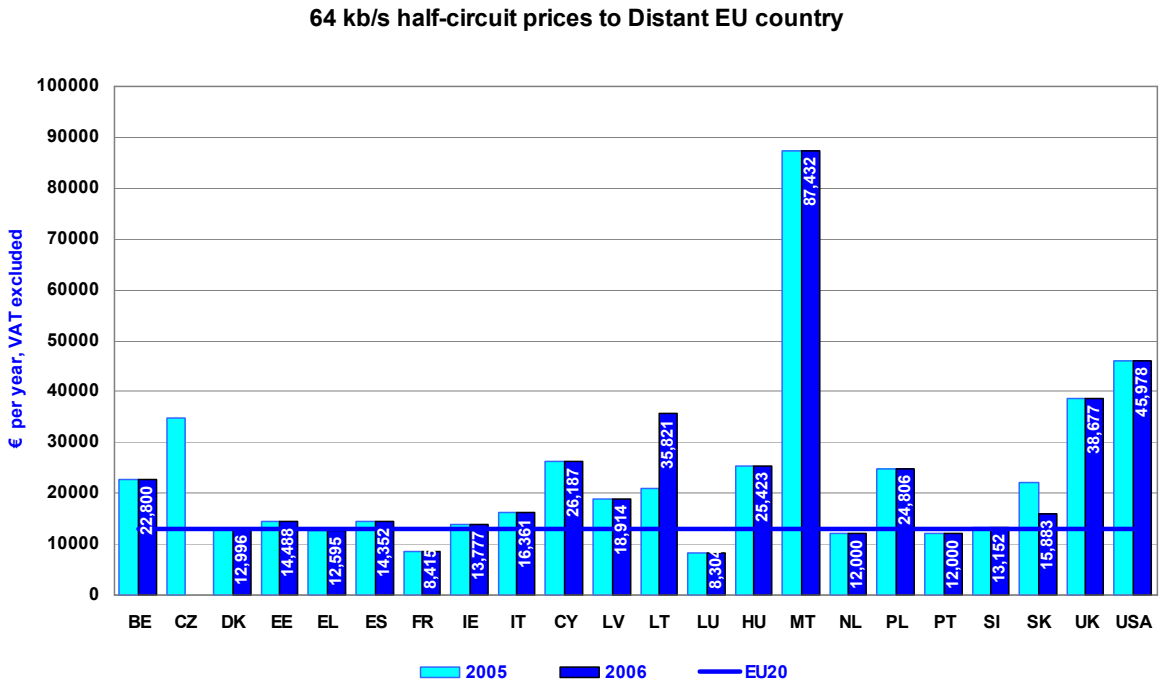
8.3.1. 64 Kbit/s

Figure 128



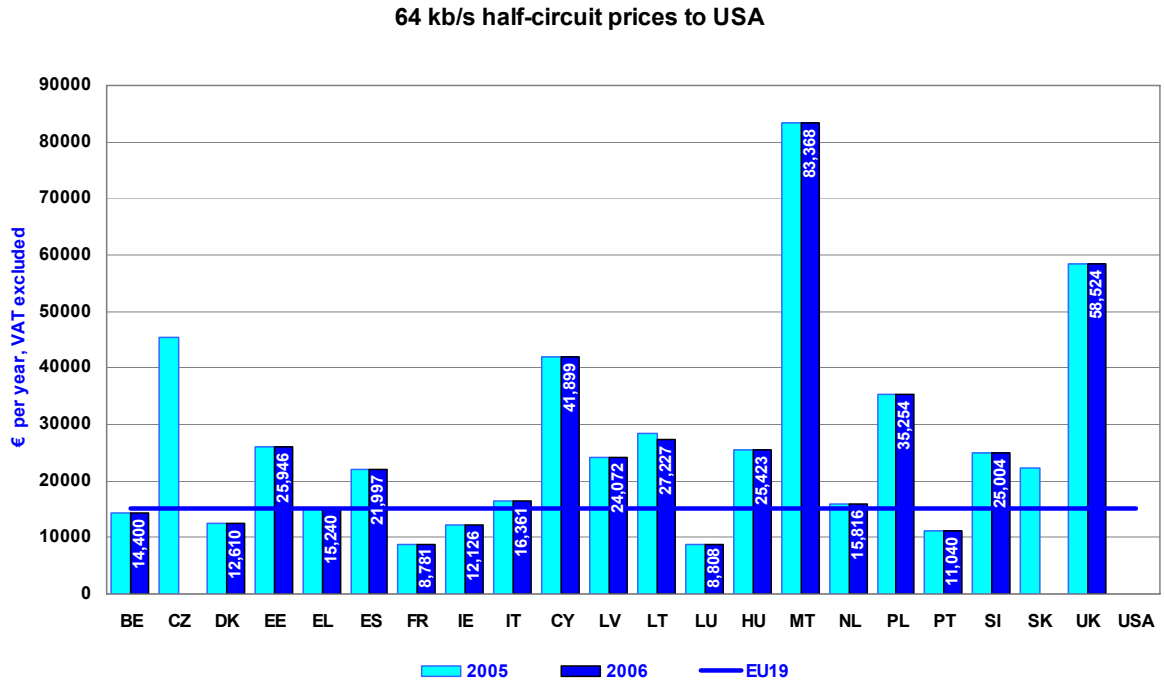
Blue line represents EU average=8793 €

Figure 129



Blue line represents EU average= 12960€

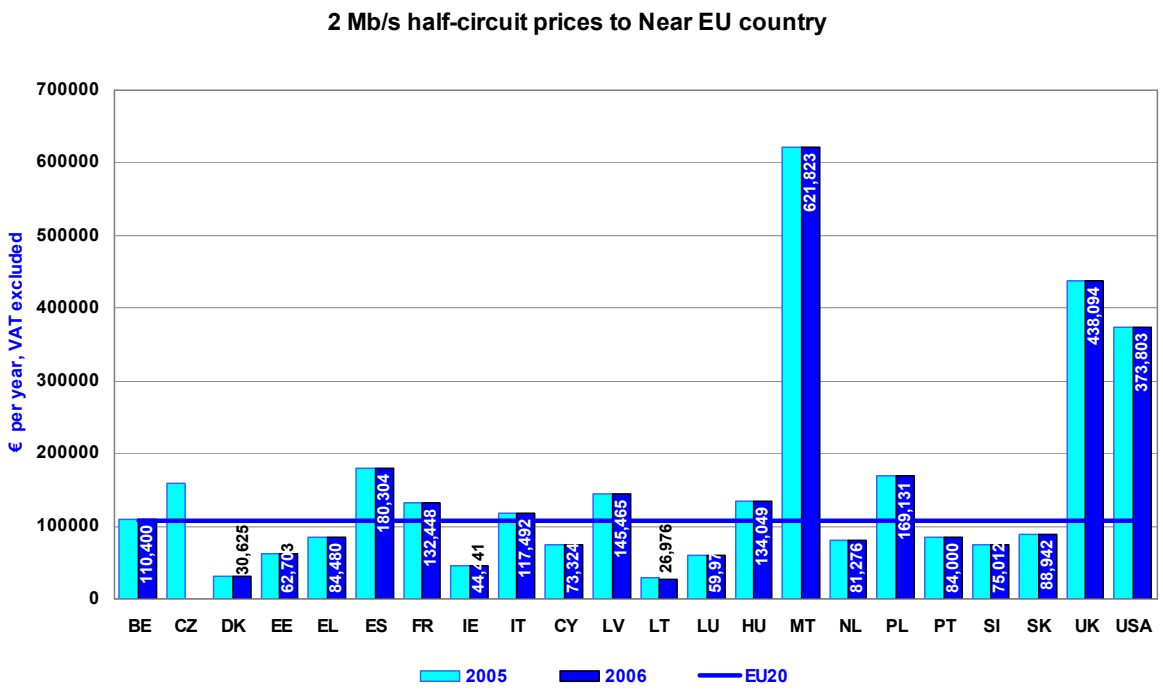
Figure 130



Blue line represents EU average=15166 €

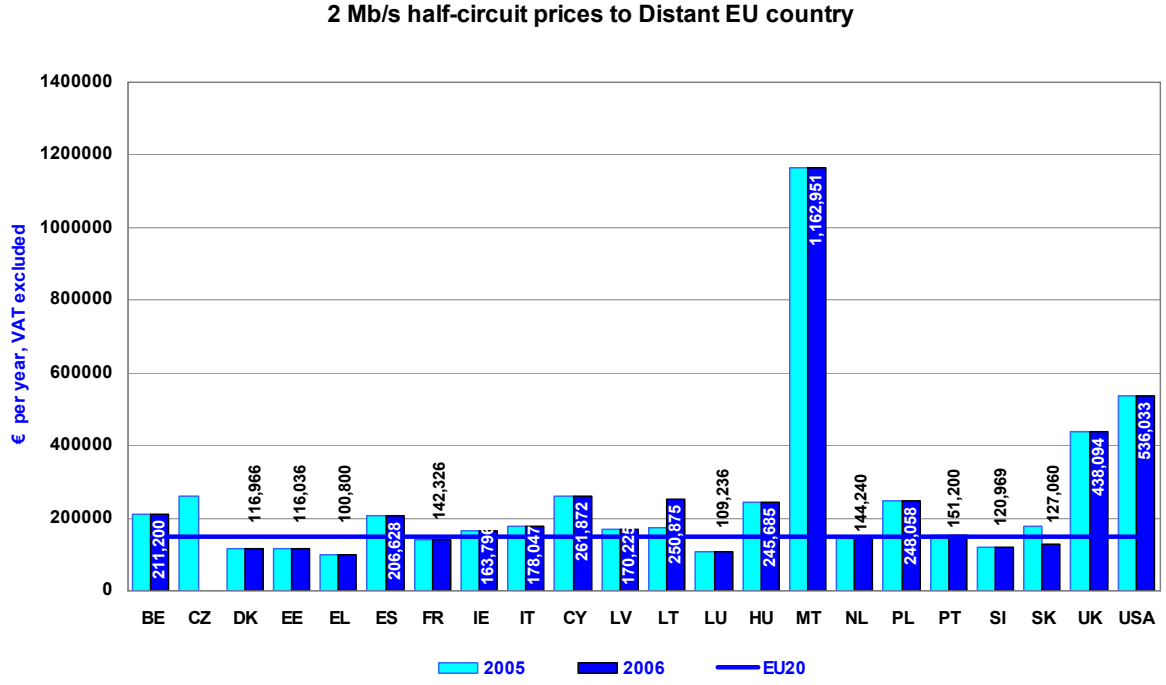
8.3.2. 2 Mbit/s

Figure 131



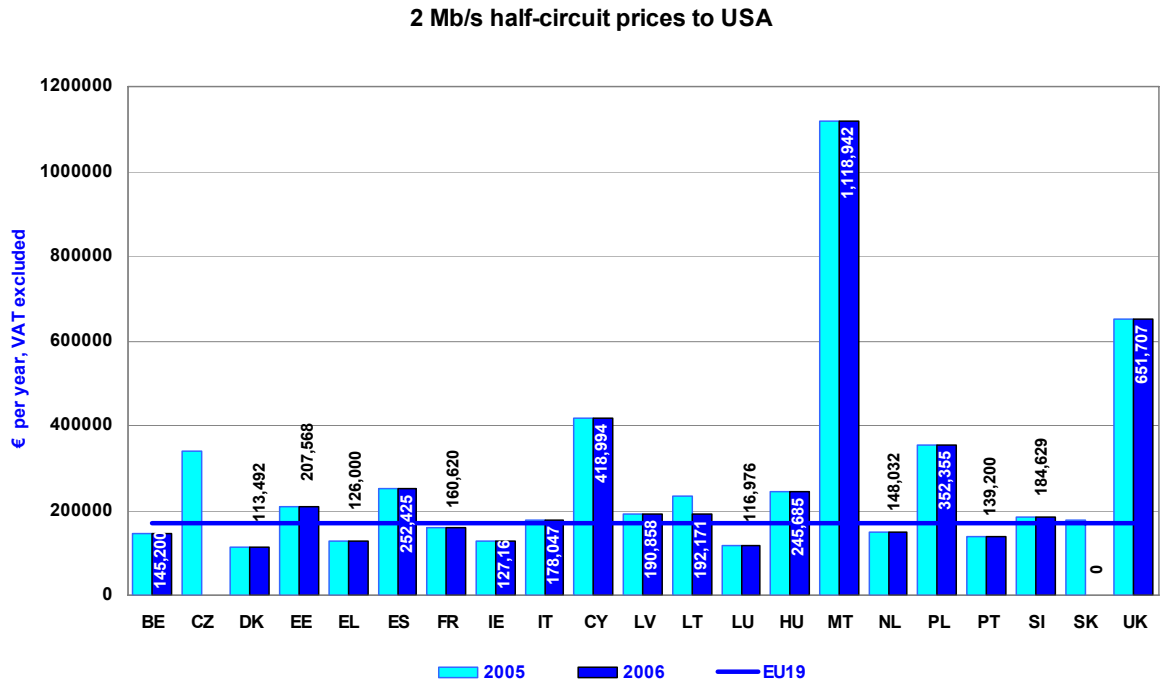
Blue line represents EU average=106379 €

Figure 132



Blue line represents EU average=149514 €

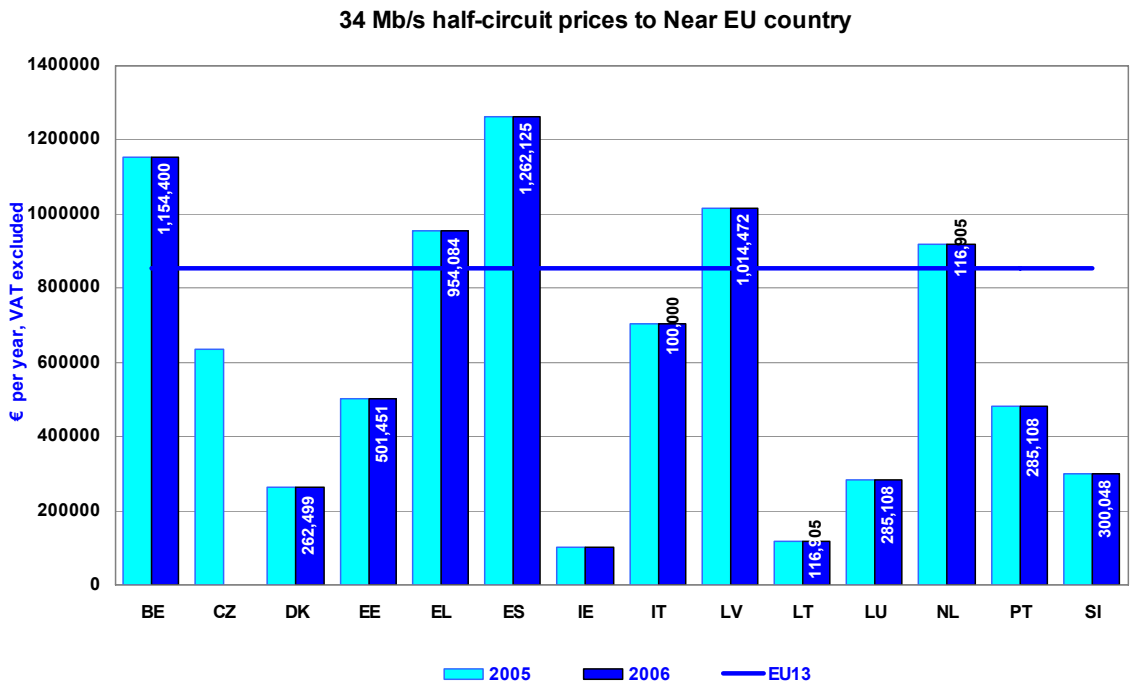
Figure 133



Blue line represents EU average=169384€

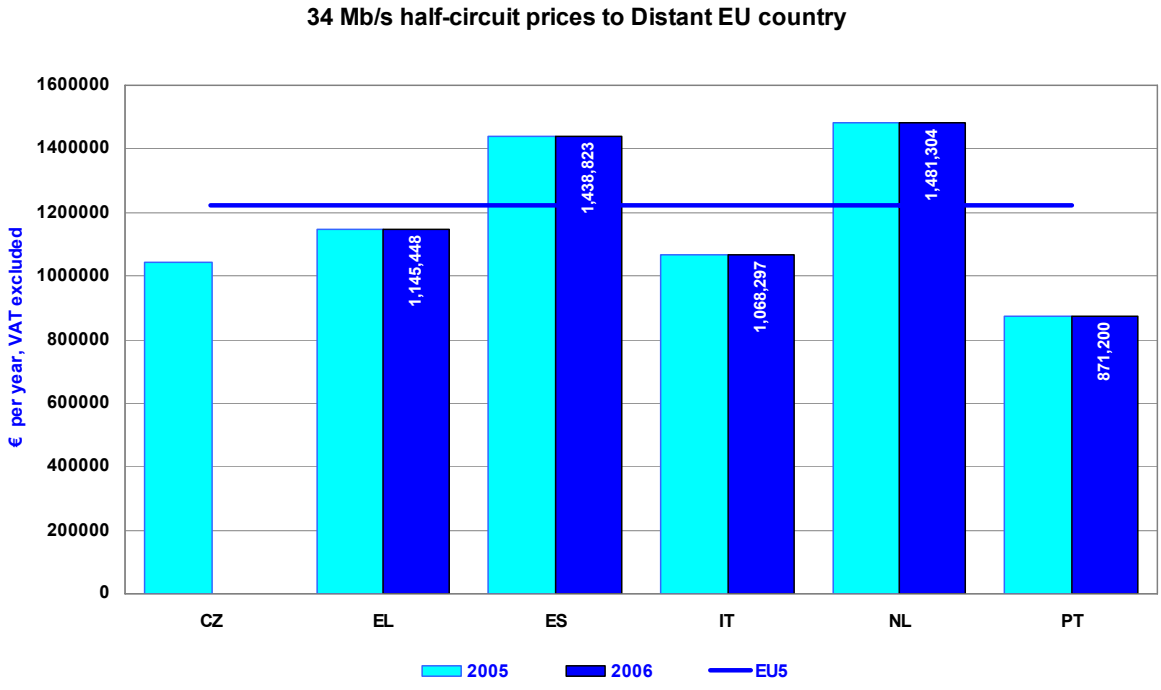
8.3.3. 34 Mbit/s

Figure 134



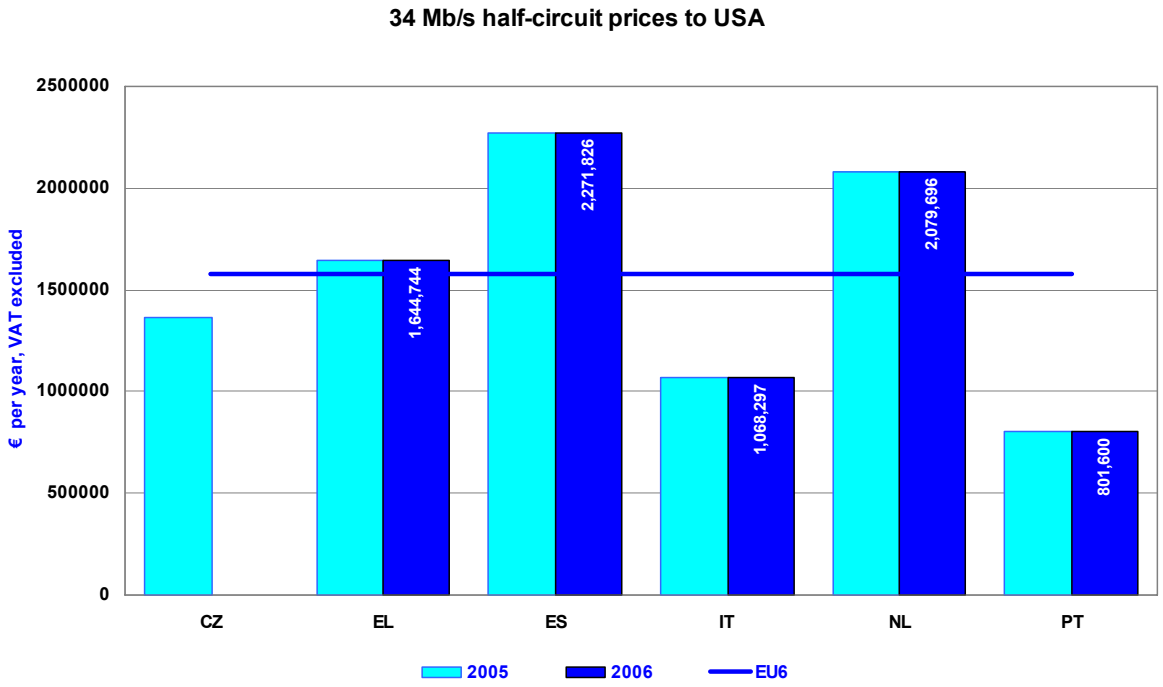
Blue line represents EU average=853599 €

Figure 135



Blue line represents EU average= 1222232 €

Figure 136



Blue line represents EU average= 1579538 €

8.4. International leased lines price trends (1 August 1998 - 1 September 2006)

Figure 137

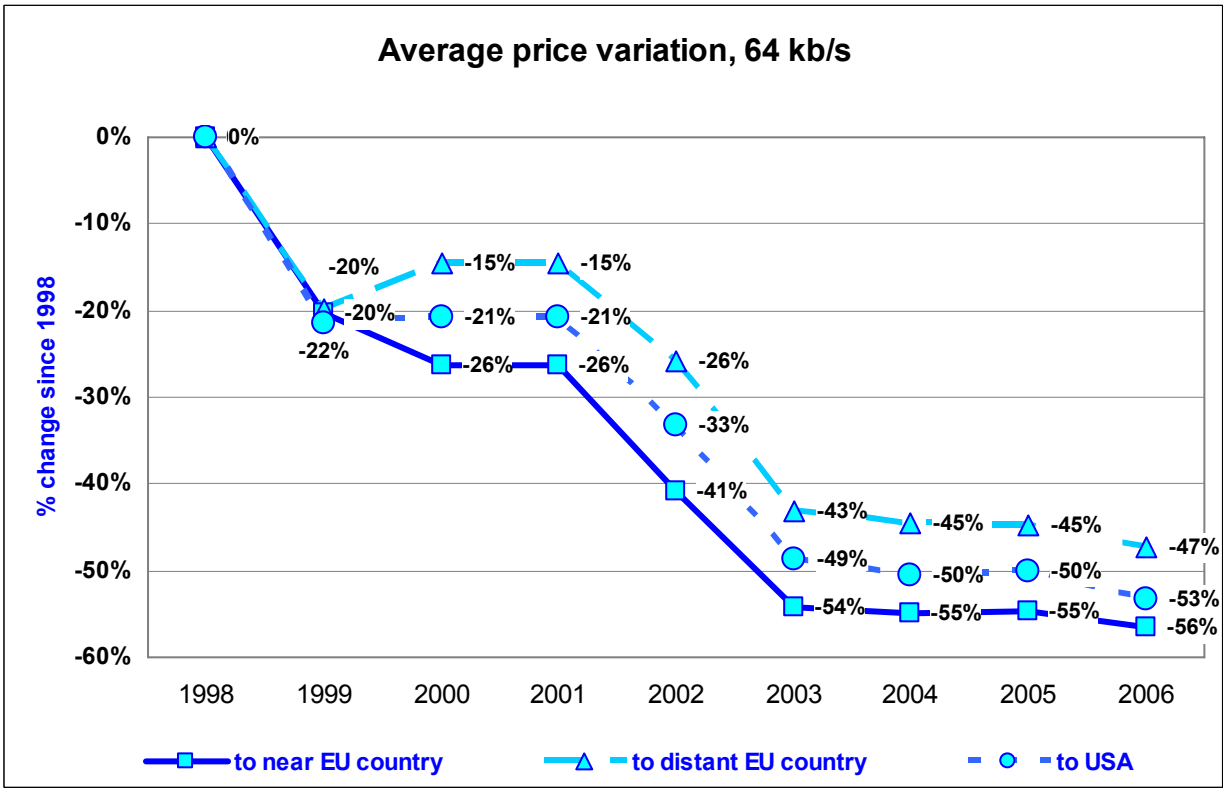
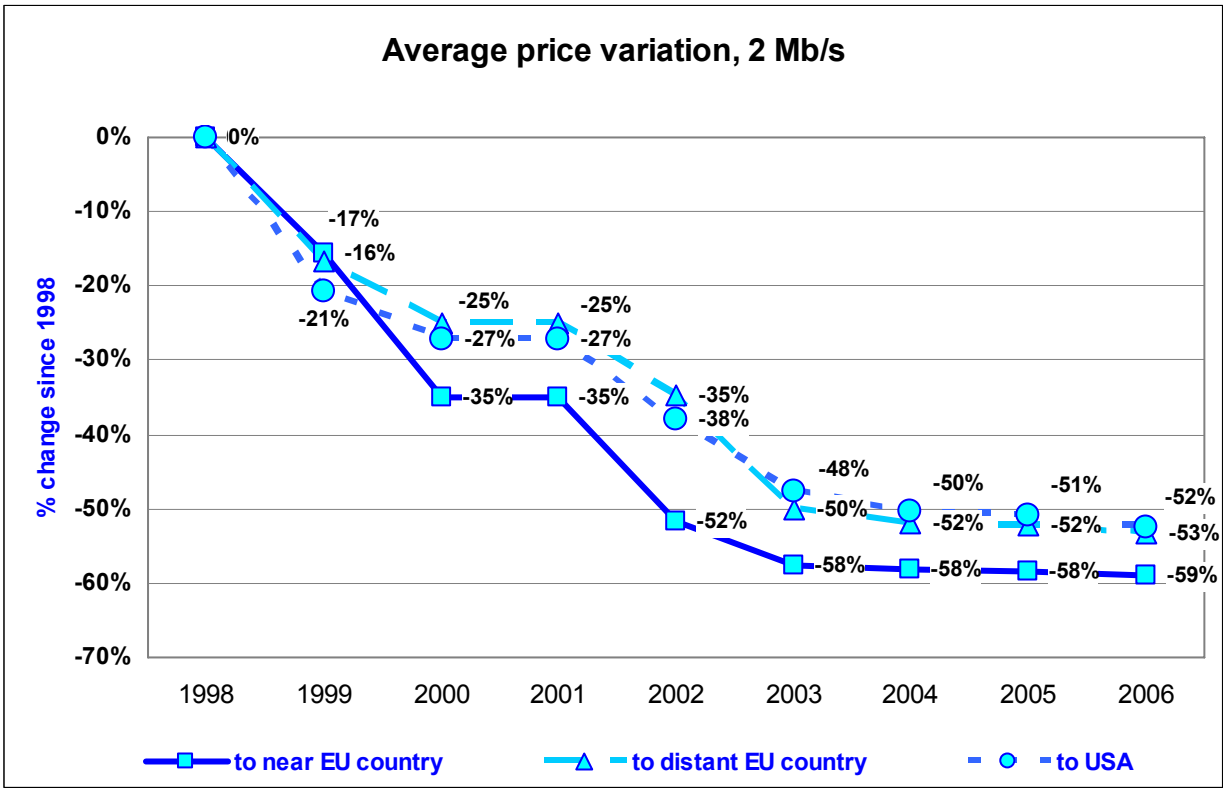


Figure 138


Average price variation, 2 Mb/s
% change since 1998
0%
-10%
-20%
-30%
-40%
-50%
-60%
-70%
1998
1999
2000
2001
2002
2003
2004
2005
2006
0%
-17%
-16%
-21%
-25%
-27%
-25%
-27%
-35%
-35%
-35%
-38%
-48%
-50%
-50%
-52%
-52%
-52%
-51%
-52%
-53%
-58%
-58%
-58%
-59%
to near EU country
to distant EU country
to USA

EXCHANGE RATES AND POPULATION

8.5. Exchange rate used (except tariffs).

Belgium	1
Czech Republic	0,0353519
Denmark	0,1341094
Germany	1
Estonia	0,0639116
Greece	1
Spain	1
France	1
Ireland	1
Italy	1
Cyprus	1,7340038
Latvia	1,4365752
Lithuania	0,28962
Luxembourg	1
Hungary	0,0036248
Malta	2,329373
Netherlands	
Austria	1
Poland	0,2537685
Portugal	1
Slovenia	0,0041736
Slovakia	0,0268485
Finland	1
Sweden	0,1072674
UK	1,4830194
SOURCE: OJ C196/1 OF 4.10.2006	

8.6. Exchange rate used for tariff (on the mobile tariff - section 5, public voice telephony tariffs - section 8 and leased line tariffs - section 9).

Belgium	1
Czech Republic	0,03533

Denmark	0,13404
Germany	1
Estonia	0,06006
Greece	1
Spain	1
France	1
Ireland	1
Italy	1
Cyprus	1,74581
Latvia	1,43287
Lithuania	0,28962
Luxembourg	1
Hungary	0,00358
Malta	2,31965
Netherlands	1
Austria	1
Poland	0,25056
Portugal	1
Slovenia	0,00417
Slovakia	0,02647
Finland	1
Sweden	0,10695
UK	1,48324
Japan	0,00665
USA	0,77876

Euro rates as of 4 September 2006
PPP rates from Eurostat, 2005

8.7. Population

	2005	2006
BE	10445900	10 511 400
CZ	10220600	10 251 100
DK	5411400	5 427 500
DE	82500800	82 455 800
EE	1347000	1 344 700
EL	11073000	11 122 900
ES	43038000	43 758 300
FR	60561200	62 886 200
IE	4109200	4 209 000

IT	58462400	58 751 700
CY	749200	766 400
LV	2306400	2 294 600
LT	3425300	3 403 300
LU	455000	459 500
HU	10097500	10 076 600
MT	402700	404 400
NL	16305500	16 335 500
AT	8206500	8 265 900
PL	38173800	38 157 100
PT	10529300	10 569 600
SI	1997600	2 003 400
SK	5384800	5 389 200
FI	5236600	5 255 600
SE	9011400	9 047 800
UK	60034500	60 416 200
EU 15	385380700	389 472 900
EU 10	74104900	74 090 800
EU 25	459485600	463563700

Source: Eurostat web site as of 1.10.2006

9. OECD TELECOMMUNICATIONS BASKET DEFINITIONS

9.1. National PSTN basket

Business basket results exclude VAT. Residential basket results include VAT.

The non-recurring charge is calculated as an average between the charge for a new line installation, and the charge for "same day takeover", i.e. when there is a direct transfer from the previous to the new customer. Valid for both Business and Residential baskets.

Non-recurring charge calculation	Weight
New line connection charge	50%
Same day takeover connection charge	50%

The non-recurring charge is depreciated over 5 years. An exception is made for countries where the connection charge has a lifetime value (e.g. Japan, where the connection is a tradable asset). Valid for both Business and Residential baskets.

Non-recurring charge depreciation	Weight
With normal one-off charge	5
Where connection is a tradable asset	20

Annual rental for the service is included in the basket. Any additional recurring charges (per year) shall also be included (e.g. charges related to the use of specific calling plans).

Where the service (or tariff plan) includes a number of "free" calls or minutes, or any other call-related allowance, the value of this allowance is deducted from the usage. The value of the deducted allowance cannot be higher than the usage. Where the tariff clearly specifies that the allowance is related to specific types of calls (e.g. local, international), the usage in question shall only cover the defined type(s) of calls.

The number of calls to fixed line phones (i.e. excluding calls to mobile phones) is defined as:

Number of national fixed line calls	Calls per year
Business basket	3567
Residential basket	1215

The national usage will have a weighted distribution over 14 distances. Call charges relevant at each of these distances shall be used.

Km	**3**	**7**	**12**	**17**	**22**	**27**	**40**	**75**	**110**	**135**	**175**	**250**	**350**	**490**
Bus	53	11	7	4	2.5	3	3.5	3.5	2.5	2	1.5	1.5	1	4
Res	60	14	5	3	1.5	2.5	2.5	2.5	1.5	1.3	1	1	0.8	3.5

Bus = Business basket, Res = Residential basket. All weights in percent of total number of fixed line calls.

The national usage will have a weighted distribution over six time and day points. Call charges relevant at each of these time and day points shall be used.

Day/Time	We 11:00	We 15:00	We 20:00	We 03:00	Sa 11:00	Su 15:00
Bus	45.4	40.6	7	0.8	5.7	0.5
Res	26.3	22.1	25.6	3	10	13

Bus = Business basket, Res = Residential basket. All weights in percent of total number of fixed line calls.
We = Weekdays, Sa = Saturdays, Su = Sundays.

National call duration will vary with distance and time of day. The charge for each call shall reflect the actual charge for the duration in question, as defined by the tariff. Call setup and minimum charges shall be included.

Day/Time	**Weekday daytime**			**Weekday evenings, nights and weekends**		
Distance	3-12 Km	17-40 Km	40-490 km	3-12 km	17-40 Km	40-490 Km
Bus	2.5	3.5	4.5	2.5	3.5	4.5
Res	2.5	3.5	3.5	3.5	6	7

Bus = Business basket, Res = Residential basket. Duration in minutes per call.

9.2. International PSTN basket

The international PSTN basket, when used separately, shall reflect the cost of a single call, calculated according to the weighting method described below. No fixed charges are included.

Business basket results exclude VAT. Residential basket results include VAT.

Call charges for calls to all other OECD Member States shall be used. Peak and off-peak time call charges are used, defined as the highest (most expensive) charge and the lowest (least expensive) charge.

Call cost is based on average per minute charge. Call setup charges and/or different charges for first and additional minutes are included.

The charges to different destinations are weighted according to the ITU call volume statistics. An average over the latest 5 years of available traffic statistics is used. As there may be gaps in the ITU statistics for certain destinations from some countries, calls on such routes are excluded from the calculation.

Call charges are weighted between peak and off-peak:

	Peak time weight	**Off-peak time weight**
Business basket	75.0 %	25.0 %
Residential Basket	25.0 %	75.0 %

Call duration differ between peak and off-peak time:

	Peak time	**Off-peak time**
Business basket	3 minutes	5 minutes
Residential Basket	3 minutes	5 minutes

9.3. Composite national – international basket

This basket is based on a combination of the national and international baskets, as described above. The national basket remains unchanged, and the international basket is scaled using a fixed number of international calls.

Business basket results exclude VAT. Residential basket results include VAT.

The number of calls to fixed line phones (i.e. excluding calls to mobile phones) is defined as:

Number of national fixed line calls	Calls per year

Business basket	3600
Residential basket	1200

The international portion of the basket shall have a number of calls equal to 6% of the national fixed line calls, in addition to the calls defined in the national portion of the basket.

	International calls per year
Business basket	216
Residential basket	72

Calls to mobile phones are added to the basket. The number of calls shall be 10% of the number of national fixed line calls, in addition to the fixed line calls.

Calls to mobile phones	**Calls per year**	**Call duration**
Business basket	360	2
Residential basket	120	2

Call duration in minutes per call.

A weighted distribution over six time and day points is used. Call charges relevant at each of these time and day points shall be used.

Day/Time	We 11:00	We 15:00	We 20:00	We 03:00	Sa 11:00	Su 15:00
Bus	45.4	40.6	7	0.8	5.7	0.5
Res	14.3	22.1	31.6	3	13	16

Bus = Business basket, Res = Residential basket. All weights in percent of total number of fixed line calls.
We = Weekdays, Sa = Saturdays, Su = Sundays.

Call duration will vary with distance and time of day. The charge for each call shall reflect the actual charge for the duration in question, as defined by the tariff. Call setup and minimum charges shall be included.

Day/Time	**Weekday daytime**			**Weekday evenings, nights and weekends**		
Distance	3-12 Km	17-40 Km	40-490 km	3-12 km	17-40 Km	40-490 Km
Bus	3.5	3.5	3.5	3.5	3.5	3.5
Res	2.5	3.5	3.5	3.5	6	7

Bus = Business basket, Res = Residential basket. Duration in minutes per call.

9.4. New OECD baskets for PSTN 2006

Number of calls per year

Number of calls per year	National calls	Calls to mobile	International calls	Total calls
OECD Residential basket, Low Usage	456	114	30	600
OECD Residential basket, Medium Usage	900	276	24	1200
OECD Residential basket, High Usage	1560	744	96	2400
OECD Business basket, SOHO	1206	522	72	1800
OECD Business basket, SME	2016	560	224	2800

The SME basket shall also reflect 30 lines and users.

Distribution over time

Fixed call distribution over time	We 11.00	We 15.00	We 20.00	We 03.00	Sa 11.00	Su 15.00
OECD Residential basket, Low Usage	30.2%	28.1%	23.6%	0.9%	8.2%	9.0%
OECD Residential basket, Medium Usage	27.5%	28.0%	23.0%	2.0%	8.0%	11.5%
OECD Residential basket, High Usage	30.0%	30.4%	20.0%	0.6%	8.5%	10.5%
OECD Business basket, SOHO	39.5%	39.3%	7.5%	3.6%	5.5%	4.6%
OECD Business basket, SME	40.2%	40.5%	6.5%	3.4%	4.7%	4.7%
Mobile call distribution over time	We 11.00	We 15.00	We 20.00	We 03.00	Sa 11.00	Su 15.00
OECD Residential basket, Low Usage	28.6%	28.6%	20.5%	0.6%	10.1%	11.6%
OECD Residential basket, Medium Usage	29.1%	30.5%	20.5%	0.7%	8.5%	10.7%
OECD Residential basket, High Usage	30.0%	30.4%	20.0%	0.6%	8.5%	10.5%
OECD Business basket, SOHO	39.5%	39.5%	4.5%	0.3%	9.0%	7.2%
OECD Business basket, SME	44.0%	42.0%	1.2%	0.1%	6.3%	6.4%

Distribution over distance

Fixed call distribution over distance	3 km	7 km	12 km	17 km	22 km	27 km	40 km
OECD Residential basket, Low Usage	62.0%	14.5%	5.2%	3.1%	1.6%	2.1%	2.1%
OECD Residential basket, Medium Usage	56.7%	13.3%	4.7%	2.8%	1.4%	3.2%	3.2%
OECD Residential basket, High Usage	63.0%	14.7%	5.2%	3.1%	1.6%	1.9%	1.9%
OECD Business basket, SOHO	55.5%	13.0%	4.6%	2.9%	1.5%	3.3%	3.3%
OECD Business basket, SME	57.2%	13.4%	4.9%	3.0%	1.5%	3.0%	3.0%
Fixed call distribution over distance	75 km	110 km	135 km	175 km	250 km	350 km	490 km
OECD Residential basket, Low Usage	2.1%	1.2%	1.0%	0.8%	0.8%	0.6%	2.9%
OECD Residential basket, Medium Usage	3.2%	1.9%	1.6%	1.3%	1.3%	1.0%	4.4%
OECD Residential basket, High Usage	1.9%	1.1%	0.9%	0.7%	0.7%	0.6%	2.7%
OECD Business basket, SOHO	3.3%	2.0%	1.7%	1.4%	1.4%	1.1%	5.0%
OECD Business basket, SME	3.0%	1.8%	1.5%	1.2%	1.2%	0.9%	4.4%

Call durations in minutes

Call durations 3-22 km	We 11.00	We 15.00	We 20.00	We 03.00	Sa 11.00	Su 15.00
OECD Residential basket, Low Usage	3.7	3.7	4.7	4.7	4.5	4.5
OECD Residential basket, Medium Usa	3.7	3.7	4.7	4.7	4.5	4.5
OECD Residential basket, High Usage	3.7	3.7	4.7	4.7	4.5	4.5
OECD Business basket, SOHO	1.9	1.9	2.1	2.1	2.3	2.3
OECD Business basket, SME	1.9	1.9	2.1	2.1	2.3	2.3
Call durations >22 km	We 11.00	We 15.00	We 20.00	We 03.00	Sa 11.00	Su 15.00
OECD Residential basket, Low Usage	4.4	4.4	7	7	6.6	6.6
OECD Residential basket, Medium Usa	4.4	4.4	7	7	6.6	6.6
OECD Residential basket, High Usage	4.4	4.4	7	7	6.6	6.6
OECD Business basket, SOHO	2.2	2.2	3	3	3.1	3.1
OECD Business basket, SME	2.2	2.2	3	3	3.1	3.1
Call durations to mobile	We 11.00	We 15.00	We 20.00	We 03.00	Sa 11.00	Su 15.00
OECD Business basket, SME	1.8	1.8	2.1	2.1	1.9	1.9
OECD Business basket, SME	1.8	1.8	2.1	2.1	1.9	1.9
OECD Business basket, SME	1.8	1.8	2.1	2.1	1.9	1.9
OECD Residential basket, Low Usage	1.6	1.6	1.7	1.7	1.7	1.7
OECD Residential basket, Medium Usa	1.6	1.6	1.7	1.7	1.7	1.7

International calls

International calls	Distribution		Call duration (minutes)	
	Peak	Off-peak	Peak	Off-peak
OECD Residential basket, Low Usage	33%	67%	5.5	7.2
OECD Residential basket, Medium Usa	33%	67%	5.5	7.2
OECD Residential basket, High Usage	33%	67%	5.5	7.2
OECD Business basket, SOHO	80%	20%	2.9	3.9
OECD Business basket, SME	80%	20%	2.9	3.9

9.5. OECD mobile baskets 2002

All baskets will include:

Registration or installation charges with 1/3 of the charges, *i.e.* distributed over 3 years.

Monthly rental charges, and any option charges that may apply to the package, or package combination.

The three new baskets are:

Low user basket. The usage level of this basket is low, with a call volume less than half of that in the Medium user basket.

Medium user basket. This basket will have 75 outgoing calls per month.

High user basket. The usage level is about twice the Medium user basket.

The usage profiles will also include a number of SMS messages per month.

Call and message volumes for each basket are:

	Outgoing calls /month	SMS per month
Low user	25	30
Medium user	75	35
High user	150	42

The information received showed that there is little difference between the average pre-paid usage and the low user post-paid usage. The low user basket can therefore be used for both pre- and post-paid tariffs, allowing a simple comparison also between the two types.

Only national calls are included in the profiles, with 4 different destinations:

Local area fixed line calls. This is used to accommodate the tariffs that have separate charges for the local area. When such charges are not available, this proportion of calls is included in the National.

National fixed line calls. This covers all fixed line calls outside the local area, except in cases as noted above.

Same network mobile calls (On-net). This includes all calls made to mobiles in the same mobile network as the caller.

Other network mobile calls (Off-net). This includes calls to all other mobile networks in the caller's country. When the charges are different depending on destination network, the market shares based on subscriber numbers are used for weighting the charges. Up to 3 other networks will be considered in each country.

Distributions per destination for each basket are:

% of total number of calls	Fixed Local area	Fixed National area	On-net mobile	Off-net mobile
Low user	28.0%	14.0%	40.0%	18.0%

Medium user	24.0%	12.0%	43.0%	21.0%
High user	26.0%	14.0%	42.0%	18.0%

As the information received produced little evidence on the split between local and national fixed line calls, the assumption has been used that the ratio would be 2:1 for local:national, i.e. 67% local and 33% national. This assumption is taken from the averages in fixed baskets, and the scarce information received.

Instead of splitting time and day into distinct times and days the following approach will be used:

Peak time calls at weekdays, most expensive time during daytime.

Off-peak time calls at weekdays, cheapest time before midnight.

Weekend time calls, at daytime Sundays.

Distributions over time and day for each basket are:

% of total number of calls	ToD Peak	ToD Off-peak	ToD Weekend
Low user	38.0%	35.0%	27.0%
Medium user	47.0%	30.0%	23.0%
High user	63.0%	22.0%	15.0%

There will be 3 separate call durations:

Local and national fixed line calls

Same network mobile calls (On-net)

Other network mobile calls (Off-net)

Call durations for each basket are:

Minutes per call	Dur Fixed National	Dur Mobile On-net	Dur Mobile Off-net
Low user	1.6	1.4	1.4
Medium user	2.1	1.9	1.9
High user	2.2	2.0	2.1

Any call allowance value included in the monthly rental will be deducted from the usage value once the basket is calculated. The deduction cannot be larger than the actual usage value, i.e. negative usage is not allowed. No transfer of unused value to next month is taken into account.

Any inclusive minutes will be deducted from the basket usage before starting the calculation of usage cost. The inclusive minutes are assumed to be used up with the same calling pattern that is described in the basket, i.e. the same peak/off-peak ratio and the same distribution across destinations. Where the inclusive minutes are clearly limited to specific destinations or times of day this will be taken into account. No transfer of unused minutes is taken into account.

Any inclusive SMS-messages will be deducted from the basket before starting the calculation of the SMS message cost, up to the number of messages in the basket.

For each of the operators covered a set of packages shall be included so that the cheapest package offered by that operator can be calculated for each of the 3 baskets.

Multiple operators in each country shall be included, with at least the two operators with highest number of subscribers in each country. The operators included shall have a total market share of at least 50% based on subscriber numbers.

Basket results are calculated for a period of one year.

9.6. New OECD mobile baskets 2006

The basket structure remains the same as with the 2002 version of the baskets, with a few new additions. All baskets will include:

Registration or installation charges with 1/3 of the charges, i.e. distributed over 3 years.
Monthly rental charges, and any option charges that may apply to the package, or package combination.
Usage charges for voice calls and SMS and MMS message, as defined by the usage profile.

The three baskets are:

Low user basket. The usage level of this basket is low, with a call volume less than half of that in the Medium user basket.

Medium user basket. This basket will have 65 outgoing calls per month.

High user basket. The usage level is about twice the Medium user basket.

The usage profiles will also include a number of SMS and MMS messages per month. The number of MMS is low, reflecting a new service with still little use.

Call and message volumes for each basket are:

	Outgoing calls /month	SMS per month	MMS per month
Low user	30	33	0.67
Medium user	65	50	0.67
High user	140	55	1

The information received showed that there is little difference between the average pre-paid usage and the low user post-paid usage. The low user basket can therefore be used for both pre- and post-paid tariffs, allowing a simple comparison also between the two types.

Only national calls are included in the profiles, with 5 different destinations:

Local area fixed line calls. This is used to accommodate the tariffs that have separate charges for the local area. When such charges are not available, this proportion of calls is included in the National.

National fixed line calls. This covers all fixed line calls outside the local area, except in cases as noted above.

Same network mobile calls (On-net). This includes all calls made to mobiles in the same mobile network as the caller.

Other network mobile calls (Off-net). This includes calls to all other mobile networks in the caller's country. When the charges are different depending on destination network, the market shares based on subscriber numbers are used for weighting the charges. Up to 3 other networks will be considered in each country.

Voicemail calls. This reflects calls made to retrieve voicemail messages from the on-net voicemail service.

Distributions per destination for each basket are:

% of total number of calls	Fixed Local	Fixed National	On-net mobile	Off-net mobile	Voicemail
Low user	15%	7%	48%	22%	8%
Medium user	14%	7%	48%	24%	7%
High user	13%	7%	47%	26%	7%

As the information received produced little evidence on the split between local and national fixed line calls, the assumption has been used that the ratio would be 2:1 for local:national, i.e. 67% local and 33% national. This assumption is taken from the averages in fixed baskets, and the scarce information received.

Instead of splitting time and day into distinct times and days the following approach will be used:

Peak time calls at weekdays, most expensive time during daytime.
Off-peak time calls at weekdays, cheapest time before midnight.
Weekend time calls, at daytime Sundays.

Distributions over time and day for each basket are:

% of total number of calls	ToD Peak	ToD Off-peak	ToD Weekend
Low user	48%	25%	27%
Medium user	50%	24%	26%
High user	60%	19%	21%

There will be 4 separate call durations:

Local and national fixed line calls
Same network mobile calls (On-net)
Other network mobile calls (Off-net)
Voicemail calls

Call durations for each basket are:

Minutes per call	Dur Fixed National	Dur Mobile On-net	Dur Mobile Off-net	Dur Voicemail
Low user	1.5	1.6	1.4	0.8
Medium user	1.8	1.9	1.7	0.8
High user	1.7	1.9	1.8	0.8

Any call allowance value included in the monthly rental will be deducted from the usage value once the basket is calculated. The deduction cannot be larger than the actual usage value, i.e. negative usage is not allowed. No transfer of unused value to next month is taken into account.

Any inclusive minutes will be deducted from the basket usage before starting the calculation of usage cost. The inclusive minutes are assumed to be used up with the same calling pattern that is described in the basket, i.e. the same peak/off-peak ratio and the same distribution across destinations. Where the inclusive minutes are clearly limited to specific destinations or times of day this will be taken into account. No transfer of unused minutes is taken into account.

Any inclusive SMS- and MMS-messages will be deducted from the basket before starting the calculation of the SMS and MMS message cost, up to the number of messages in the basket.

For each of the operators covered a set of packages shall be included so that the cheapest package offered by that operator can be calculated for each of the 3 baskets.

Multiple operators in each country shall be included, with at least the two operators with highest number of subscribers in each country. The operators included shall have a total market share of at least 50% based on subscriber numbers.

Basket results are calculated for a period of one year.