RTR Telecom Monitor

Annual Review 2010

Table of contents

Preface

Dear readers,

RTR's Telecom Monitor, which has been published on a quarterly basis for several years now, presents and discusses the most recent data available on developments in the Austrian telecommunications markets. With this special edition of the Telecom Monitor, the Austrian Regulatory Authority for Broadcasting and Telecommunications (RTR) aims to expand the existing report and to provide a more in-depth view of statistics on the telecommunications sector. In addition to the regularly published quarterly data comparisons, this report also includes a more detailed discussion of developments over the entire year.
In addition, the Austrian market is placed within a larger context by way of international comparisons, and the explanations of specific data from the field of ICT (especially data surveyed on the customer side) reveal a new dimension which has not been covered by the Telecom Monitor in the past. This enhances the report's information content for the interested public.

Subject areas and structure

In the form published up to now, the Telecom Monitor is essentially included (with some adaptations) in Sections 1 to 6 of this report, which present and explain statistics on individual sectors of the market: fixed networks, mobile networks, broadband, leased lines and business indicators as well as a number of comparisons across these sectors.
Section 7 contains various international comparisons of data from the areas listed above. The data used in those comparisons were largely derived from the European Commission's Progress Report on the Single European Electronic Communications Market.
In Section 8, we present the RTR Telecom Index, which serves as a barometer for price developments on Austria's telecommunications markets. In addition, that section includes explanations of statistics from the field of ICTs, in particular customer-based surveys and the Networked Readiness Index.

Data sources and statistical analyses

Under the Communications Survey Ordinance (KEV, Federal Law Gazette II No. 365/2004), which went into effect on October 1, 2004, RTR is required to conduct statistical surveys among the providers of telecommunications services on a quarterly basis and to publish the results of the corresponding data analyses. The data collected are to be made available to the public in such a way that information on specific companies cannot be deduced. In order to minimise the organisational effort involved, the data are collected on the basis of a sample which includes the largest providers in each individual segment (fixed networks, mobile networks, leased lines and broadband). On this basis, it is possible to apply special statistical procedures and make statements about the market as a whole.

In addition to its own surveys, RTR also relies on data from other institutions, including Statistics Austria, Eurostat, the European Commission, etc., in order to provide a uniform picture of the telecommunications sector and to enable international comparisons. In such cases, the data definitions and collection methods are aligned with those of the relevant institutions and organisations.

Due to occasional post-hoc data corrections, the values in the charts presented here may differ slightly from the information provided in earlier issues of the RTR Telecom Monitor. Where major deviations (> 5%) arise in individual data values, a comment to this effect is provided for the figure in question. Where percentage values which add up to 100% are presented, slight differences may arise due to the rounding of figures.

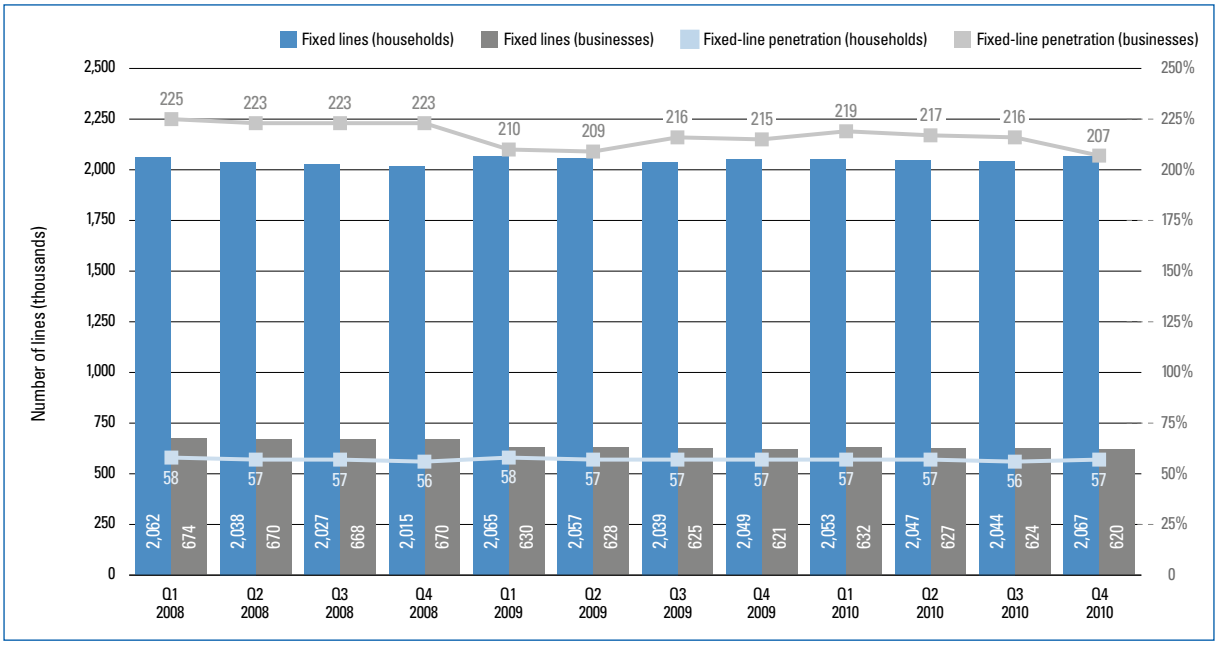
We sincerely hope that this publication provides you with interesting and informative reading.

Georg Serentschy
CEO Telecommunications and Postal Services, RTR

Section 1 | Fixed network

Fixed lines and penetration

➡ CHANGES BARELY NOTICEABLE OVER TIME



Source: RTR, Statistics Austria (number of households and businesses)

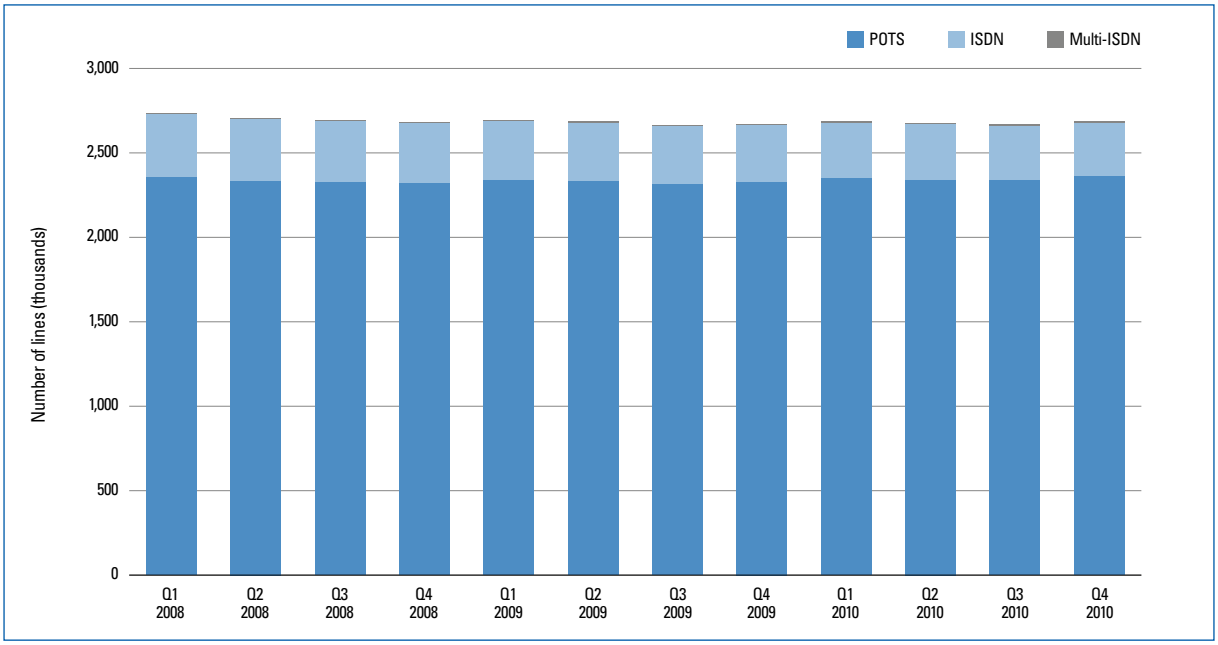
The chart above shows the total number of fixed telephone lines in households and businesses, regardless of the infrastructure on which those lines are based (e.g. copper-wire pairs, coaxial cable, optical fibre).

In addition, the chart shows fixed-link penetration rates among households and businesses. The higher penetration rate among businesses is explained by the fact that companies each generally have a larger number of fixed lines, meaning that this figure is not directly comparable to the penetration rate for households. For further information on penetration rates, please refer to the Glossary in the Appendix (page 88).

- At the end of 2010, households in Austria had a total of 2,067,000 fixed lines, while businesses had a total of 620,000 lines. These figures have fluctuated only very little over time. For example, the number of fixed lines in households grew by 0.9% in the course of the year 2010 (compared to Q4 2009). Over the same period, the number of lines in businesses saw a barely perceptible decline of 0.2%.
- Accordingly, no major changes in penetration rates were observed in the period under review. Among households, the fixed penetration rate came to 57% in Q4 2010, the same rate observed at the end of the year 2009. In contrast, there was a slight change in the fixed penetration rate among businesses in Austria. In the course of the year 2010, this value dropped from 215% (at the end of Q4 2009) to 207%; however, this development can largely be attributed to an update of the number of businesses in Austria. In any case, Austrian businesses have an average of two fixed lines each.

Development of fixed lines

➡ POTS INCREASES SLIGHTLY, ISDN DECLINES IN 2010



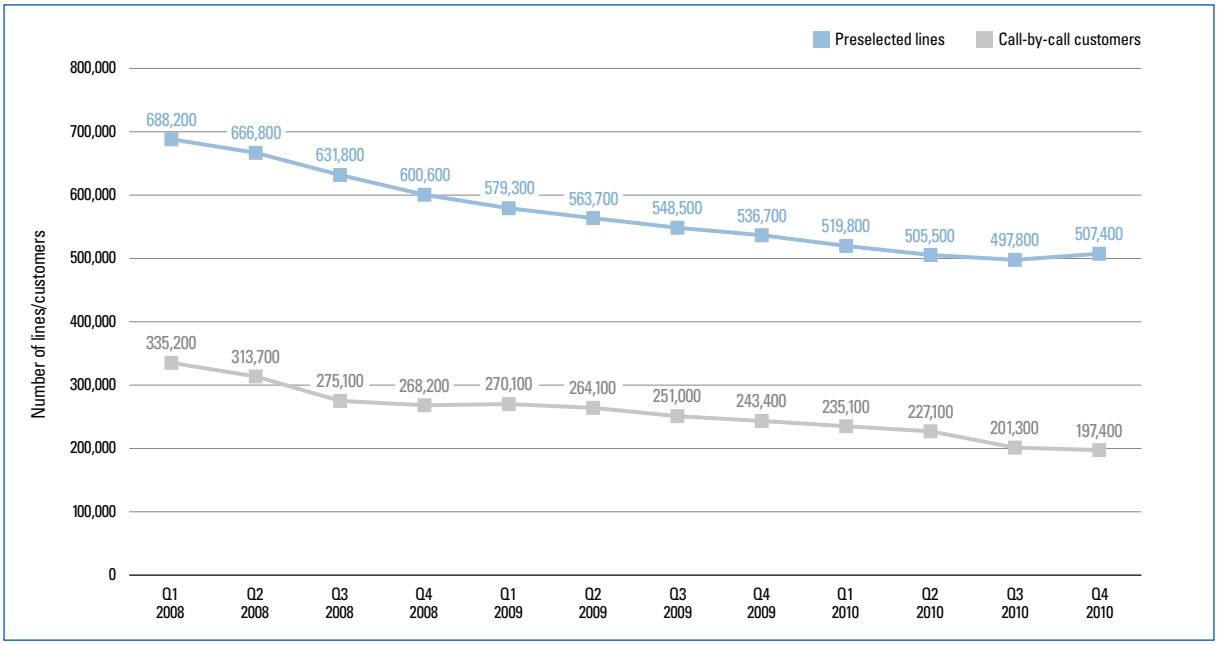
The chart above shows the number of fixed lines in Austria broken down by type (POTS, ISDN and multi-ISDN lines). A POTS ("plain old telephone service") line is a conventional telephone line as found in most households. An ISDN line makes two channels available, thus allowing subscribers e.g. to carry on two telephone calls at once. In the case of multi-ISDN lines, which are almost exclusively used by businesses, more than two channels are available at the same time.

The data underlying this chart can be found in the Appendix (see page 91).

- Taken together, the total number of fixed lines (of all types) in Austria came to 2.69 million at the end of the year 2010. A vast majority (88%, or 2.36 million lines) of those lines are conventional telephone lines (POTS), followed by some 320,000 ISDN lines, which account for 11.9% of the overall number. Multi-ISDN lines, of which there are approximately 9,000, only account for some 0.3% of all fixed lines in Austria.
- Over the year 2010, the number of POTS lines rose by 1.4% (compared to Q4 2009), while the number of ISDN lines declined by 4.8% over the same period.

Preselected lines and call-by-call customers

➡ USAGE DECLINING OVER TIME



The chart above shows the number of lines on which carrier pre-selection (CPS) is realised as well as the number of call-by-call (CbC) customers in Austria.

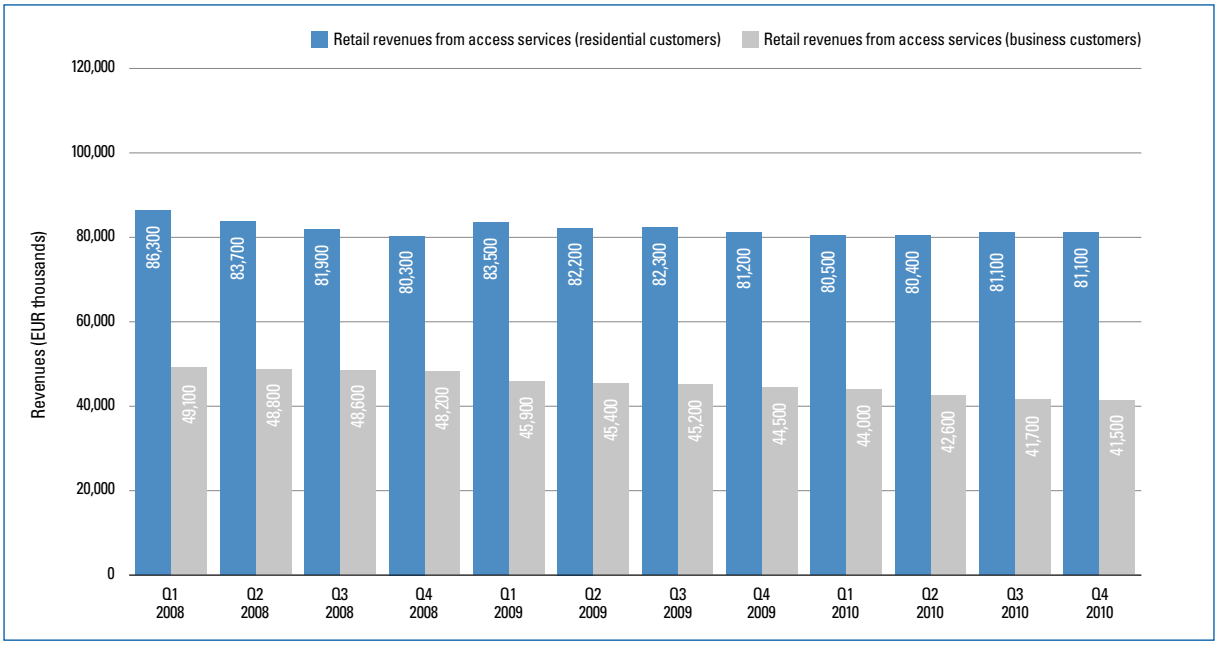
Carrier pre-selection refers to a pre-set carrier network code (10xx) which routes all of a subscriber's traffic (except for calls to value-added services and public service numbers) via the pre-selected carrier network.

In contrast, call-by-call carrier selection makes it possible to route individual telephone calls via a service provider other than the network which provides the subscriber line. In this case, the subscriber is required to enter the carrier network code (10xx) before each call. The chart above shows the number of customers who used CbC at least once in each respective quarter.

- The use of CPS and CbC as a means of routing calls via service providers other than the network which provides the subscriber line is becoming less popular among fixed subscribers in Austria. At the end of 2010, a total of 507,400 lines in Austria used carrier pre-selection. Although this represents a slight increase compared to the previous quarter (+1.9%), the figure declined by 5.5% over the year as a whole.
- This trend has manifested itself even more clearly among CbC customers: For the first time, the number of customers who used a CbC service fell below the 200,000 mark in Q4 2010. At 197,400, this figure dropped a full 18.9% compared to Q4 2009.

Retail revenues from access services

➡ RESIDENTIAL FIGURES STABLE; REVENUES FROM BUSINESSES DOWN IN 2010



Retail revenues from access services include periodic base fees and setup charges.

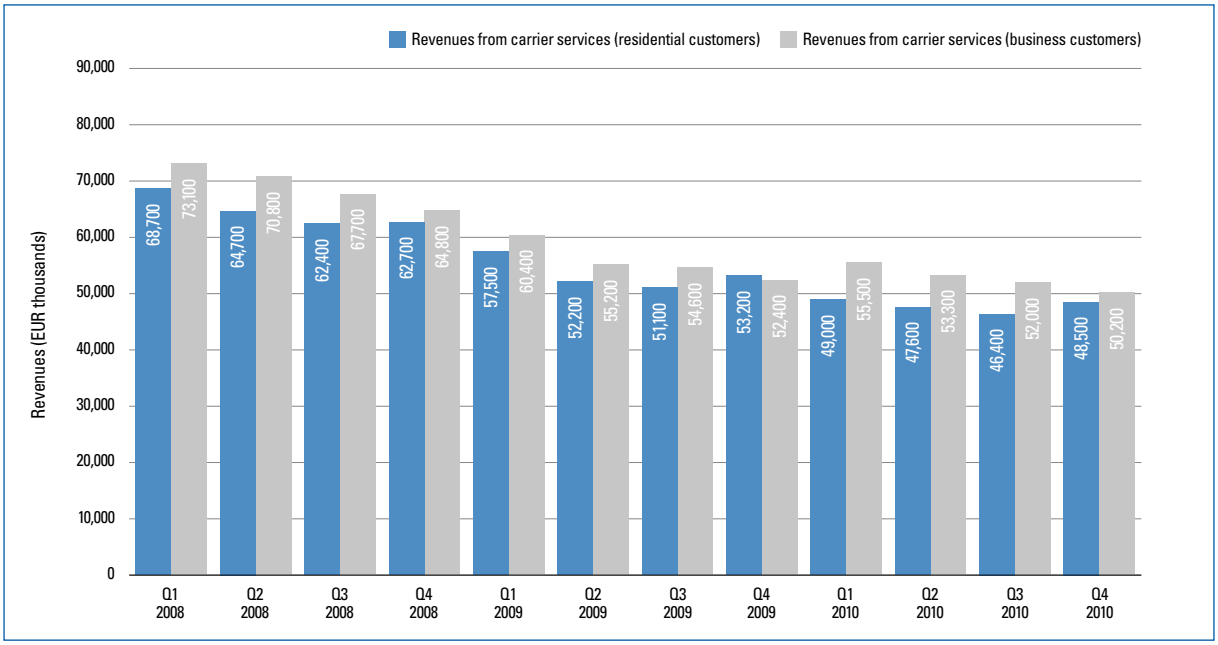
Base fees refer to revenues which are earned periodically and do not depend on the actual use of the subscriber line. They also include revenues from monthly flat rates (e.g. packages which include a certain number of minutes), but such rates do not play a significant role in fixed telephone services.

Setup charges for subscriber lines include revenues generated by the setup, transfer and disconnection of fixed lines.

- As the number of fixed lines has not changed markedly in the last three years (see page 8), there were also no significant changes in revenues from access services, which do not depend on call traffic volumes. Overall, revenues from base fees and setup charges for households and businesses came to EUR 122.6 million in Q4 2010. Two-thirds of those revenues came from households, while the remaining third can be attributed to businesses.
- Compared to the end of 2009, retail revenues from residential customers did not change substantially (-0.1%). In contrast, revenues from business customers saw a significant decrease (-6.7%).

Retail revenues from carrier services 1/2

➡ STEADY DECLINE OVER TIME



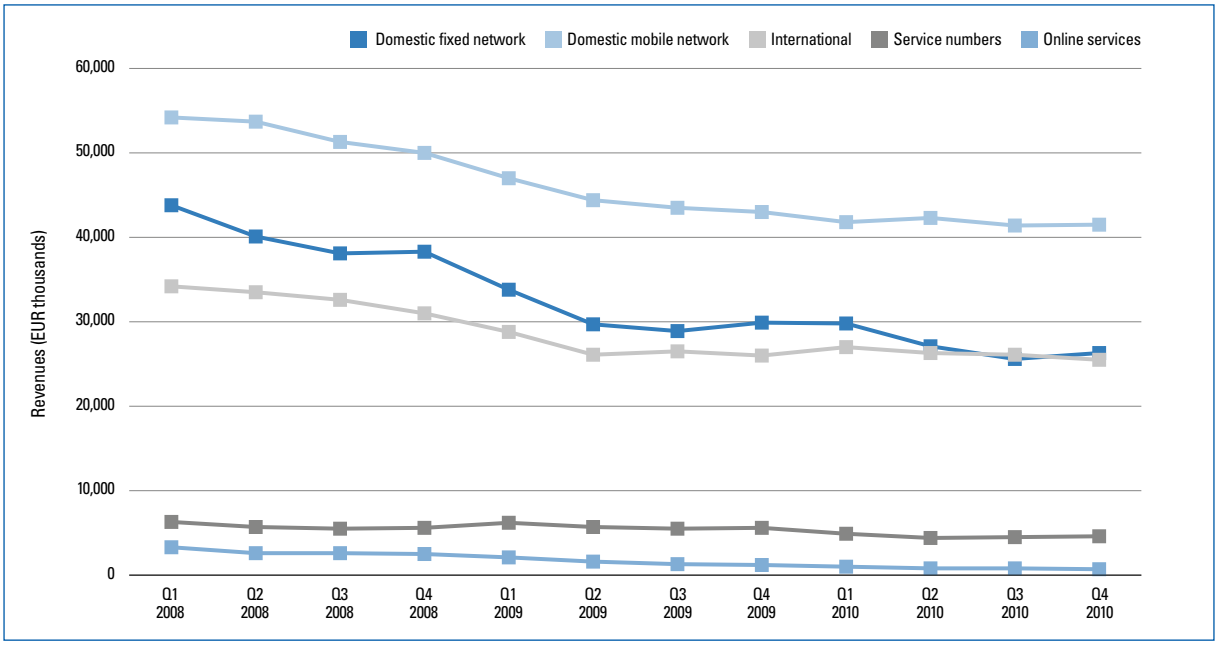
Retail revenues from carrier services are based on the number of call minutes, meaning that the more minutes a fixed subscriber uses, the higher that subscriber's monthly bill will be.

The revenues shown above include the retail fees charged by operators for calls to the domestic fixed-link network, domestic mobile networks, international destinations, online services and service numbers. Revenues from fixed monthly flat rates (e.g. packages including a certain number of minutes) are not included in the figures above.

- The (variable) revenues from carrier services reveal a very different picture compared to the (fixed) revenues from base fees and setup charges. The former revenues declined among both residential and business customers in the course of the year 2010 (compared to Q4 2009). Although revenues from residential customers rose between Q3 and Q4 2010 (+4.5%), the total revenues of EUR 48.5 million still point to a decline of 8.8% compared to Q4 2009. Revenues from business customers fell 4.2% (year on year) to EUR 50.2 million in Q4 2010.
- This is not a particularly new development; in fact, revenues from carrier services have declined steadily in recent years. By the end of 2010, these revenues had dropped to a mere 70% of the initial values recorded at the start of the time period depicted above (for both residential and business customers).

Retail revenues from carrier services 2/2

➡ DECLINING REVENUES FOR ALL CALL DESTINATIONS



Retail revenues from carrier services are based on the number of call minutes, meaning that the more minutes a fixed subscriber uses, the higher that subscriber's monthly bill will be.

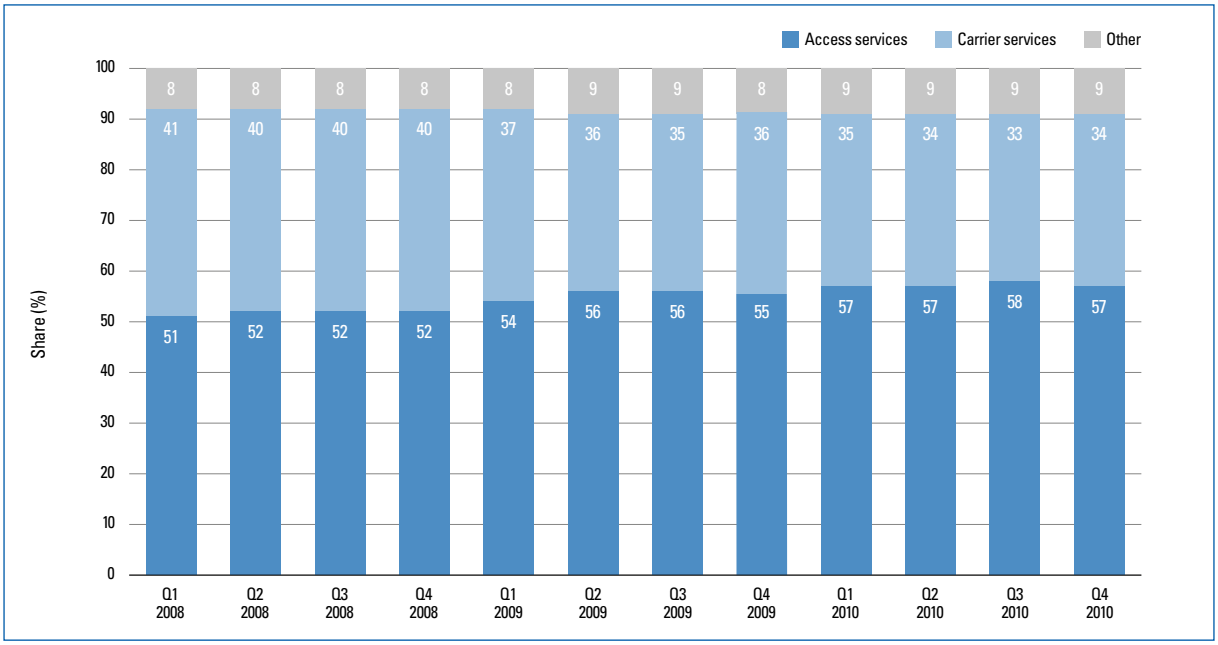
The chart above shows the revenues earned by operators from calls from the fixed network to various destinations (national fixed network, national mobile networks, international destinations, online services and service numbers). Revenues from fixed monthly flat rates (e.g. packages including a certain number of minutes) are not included in the figures above.

The data underlying this chart can be found in the Appendix (see page 91).

- The chart above breaks revenues from carrier services down by destination, that is, by the type of numbers called from the fixed network. Over 40% of these revenues – some EUR 41.5 million – were generated by calls to mobile networks in Q4 2010. Calls to the fixed network accounted for EUR 26.3 million, or 26.7%, followed closely by international calls (EUR 25.5 million, or 25.9%). Calls to service numbers (4.7%) and online services (0.7%) play only a secondary role in this context.
- A general downward trend (albeit to various degrees) can be identified in the revenues for all call destinations. In the year 2010, revenues from international calls dropped by 1.9% compared to Q4 2009, while the revenues generated by calls to mobile networks fell by 3.5%. The decline was somewhat sharper in the case of calls to the fixed network, where revenues dropped 12%. Revenues from calls to service numbers shrank by 17.9%, and those arising from calls to online services plummeted by 41.7%. Narrowband Internet dialup services have thus declined sharply in significance over time.

Breakdown of retail revenues (residential customers)

➡ SHARE OF REVENUES FROM ACCESS SERVICES CLIMBING STEADILY



Retail revenues from residential customers include the following service categories:

Access services: Revenues from periodic base fees and setup charges

Carrier services: Revenues from carrier service charges

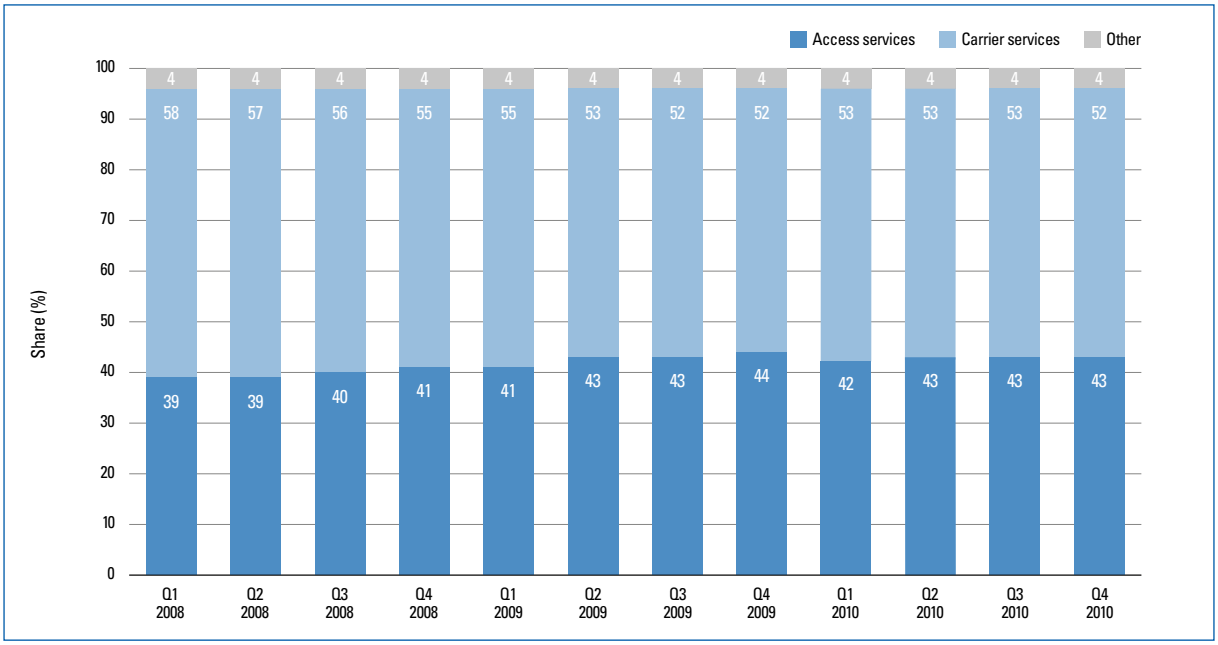
Other services: Revenues from calling cards, remuneration pursuant to the Telecommunications Fee Subsidies Act and miscellaneous charges such as billing, additional services, etc.

The data underlying this chart (absolute values) can be found in the Appendix (see page 92).

- The total revenues from residential customers in Austria came to approximately EUR 574 million in 2010. Of those revenues, 57% (EUR 323 million) can be attributed to access services, 34% (EUR 192 million) to carrier services, and 9% (EUR 49 million) to other services. This breakdown has fluctuated only minimally over time.
- The distribution of revenues was not markedly different one year earlier (Q4 2009). Over the entire observation period, the share of revenues from carrier services has shown a slightly declining trend.

Breakdown of retail revenues (business customers)

➡ CARRIER SERVICES GENERATE OVER HALF OF REVENUES



Retail revenues from business customers include the following service categories:

Access services: Revenues from periodic base fees and setup charges

Carrier services: Revenues from carrier service charges

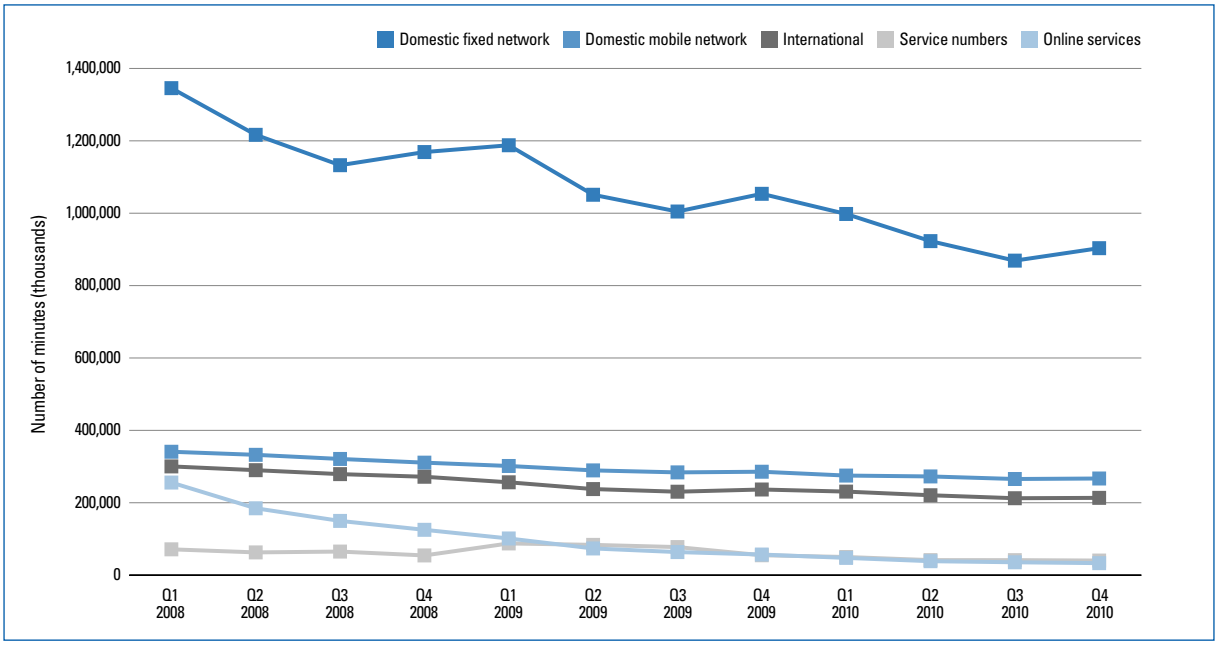
Other services: Revenues from calling cards, remuneration pursuant to the Telecommunications Fee Subsidies Act and miscellaneous charges such as billing, additional services, etc.

The data underlying this chart (absolute values) can be found in the Appendix (see page 92).

- The distribution of revenues in the business segment is rather different from that of the residential segment. The total fixed voice telephony revenues from businesses amounted to EUR 397.4 million in Q4 2010, of which 43% (EUR 169.8 million) can be attributed to access services, 52% (EUR 211 million) to carrier services, and 4% (EUR 16.6 million) to other services. In contrast to the situation in the residential segment, carrier services account for the largest share of retail revenues from business customers.
- In the business segment, the breakdown of revenues across service categories has likewise remained relatively stable over time, with a slight shift away from carrier services.

Call minutes on the retail market

➡ GRADUAL DECLINE ACROSS ALL DISTANCES



The chart above shows the number of call minutes (technical measurement) in the fixed network broken down by destination. These minutes refer to the actual duration of calls made by retail customers from the fixed network.

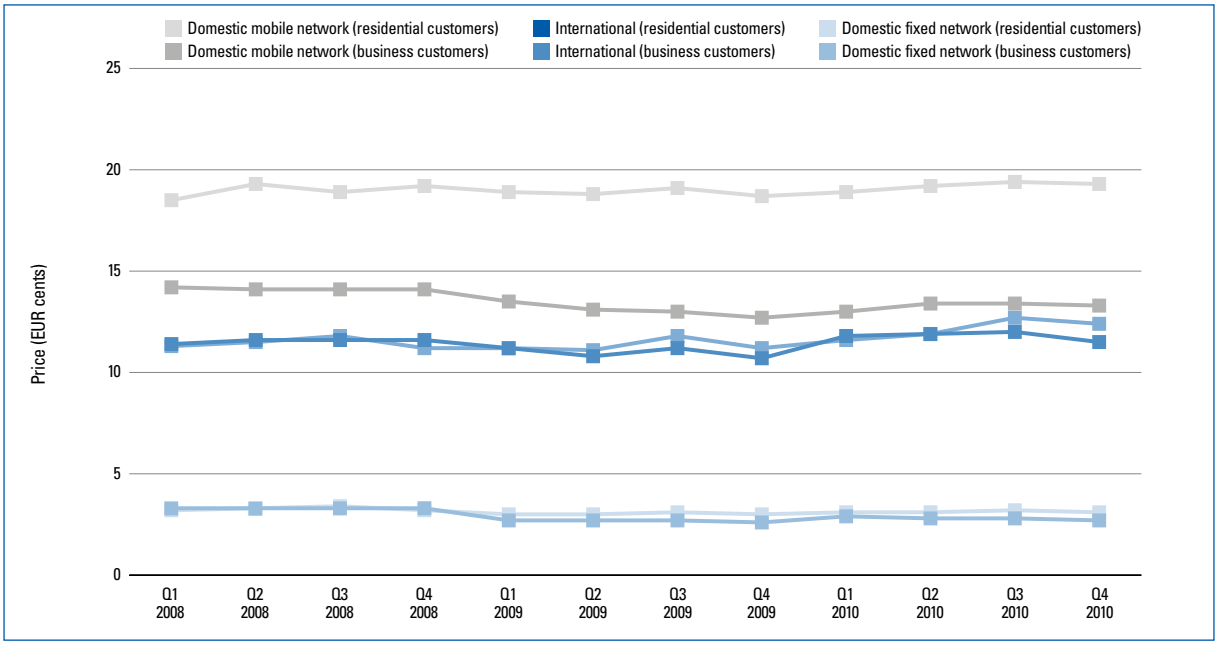
In contrast, billed call minutes (not shown) indicate the number of minutes actually charged to those customers. The main factors accounting for the difference between these two figures are the number of free minutes included in the periodic base fee (which is not as significant in fixed networks as it is in mobile networks; see also page 11) and the pulse rate used for calls.

The data underlying this chart can be found in the Appendix (see page 92).

- In the year 2010, a total of 5.98 billion outgoing call minutes from the fixed network were registered in Austria. Compared to 2009 (7 billion), this signifies a sharp decline (14.8%). This change is comparable to the decrease in call minutes to numbers in the domestic fixed network, where a total of 3.7 billion minutes were recorded in 2010, down 14.1% compared to 2009.
- In the year under review, a total of 1.08 billion outgoing call minutes from fixed networks can be attributed to mobile networks, which represents a decrease of 6.9% compared to the previous year. A total of 877.5 million call minutes went to international destinations, down 8.7% from 2009. The number of call minutes to service numbers (173.3 million) and to online services (154.7 million) each dropped by more than 40% in 2010.

Implicit price per call minute

➡ BUSINESS CUSTOMERS PAY LESS FOR CALLS TO MOBILE NETWORKS



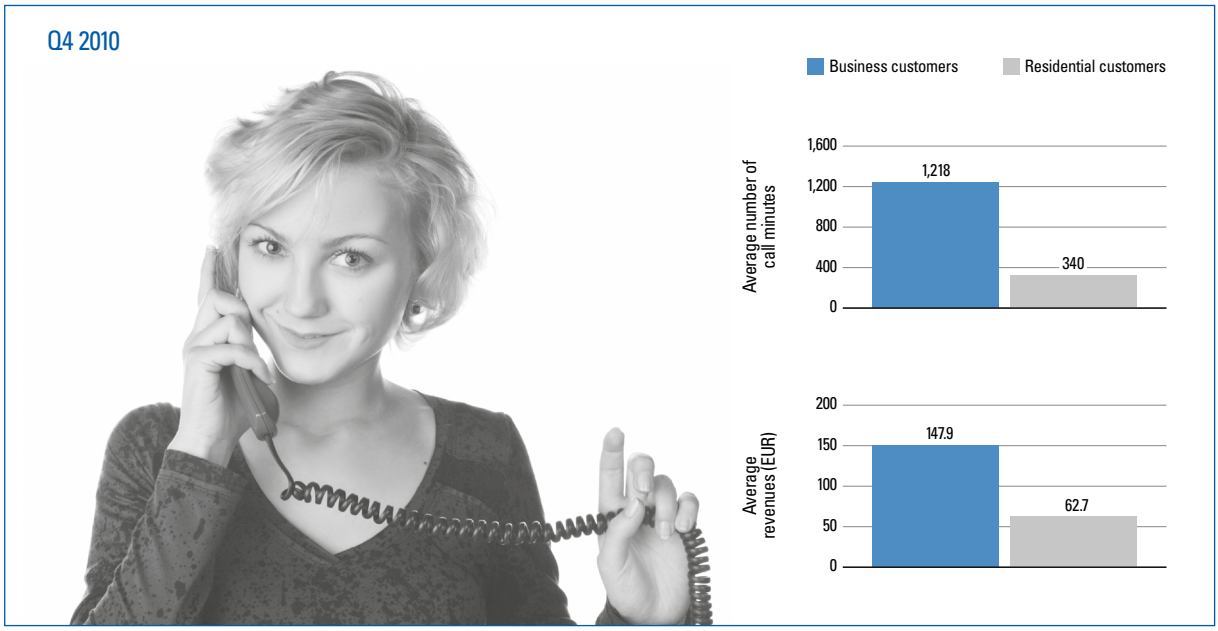
The chart above shows the implicit prices per minute for telephone calls from the fixed network to various destinations, broken down into residential and business prices. The implicit price is a notional price per minute, based on retail revenues from carrier services (see page 12) divided by the number of call minutes (see page 16).

The data underlying this chart can be found in the Appendix (see page 93).

- Calls to Austrian mobile networks were the most expensive for residential fixed network subscribers in Q4 2010. The average cost of those calls came to 19.3 euro cents per minute. At the same time, the average cost of international calls from the fixed network came to approximately 12.4 euro cents per minute. At 3.1 euro cents per minute, calls to the domestic fixed network were far less expensive.
- In the business segment, the figures are largely similar to those observed in the residential segment, with one major exception: Compared to residential customers, business customers paid substantially less for calls to domestic mobile networks. In Q4 2010, the average amount charged to business customers for these calls was 13.3 euro cents per minute, approximately 31% less than the average cost to residential customers over the same period.
- Over time, the implicit prices for calls from the fixed network have remained fairly stable for all destinations.

The average fixed network subscriber (Q4 2010)

➡ HOUSEHOLDS MADE CALLS TOTALLING 5 HOURS, 40 MINUTES



The chart above shows the average number of outgoing call minutes from the fixed network for residential and business customers as well as the average revenues generated by fixed network operators from residential and business customers in the relevant quarter. These values were calculated on the basis of the total revenues from access and carrier services and the total number of call minutes, each divided by the corresponding overall number of fixed lines.

- In Q4 2010, the average residential fixed network subscriber made outgoing calls totalling 340 minutes (5 hours, 40 minutes) and paid a total of EUR 62.70 for this service.
- As expected, the average business subscriber consumed far more outgoing call minutes (1,218 minutes, or 20 hours, 18 minutes) and paid EUR 147.90 for this service.

The average fixed network subscriber (year-on-year comparison)

➡ MINUTES AND REVENUES DOWN YEAR ON YEAR

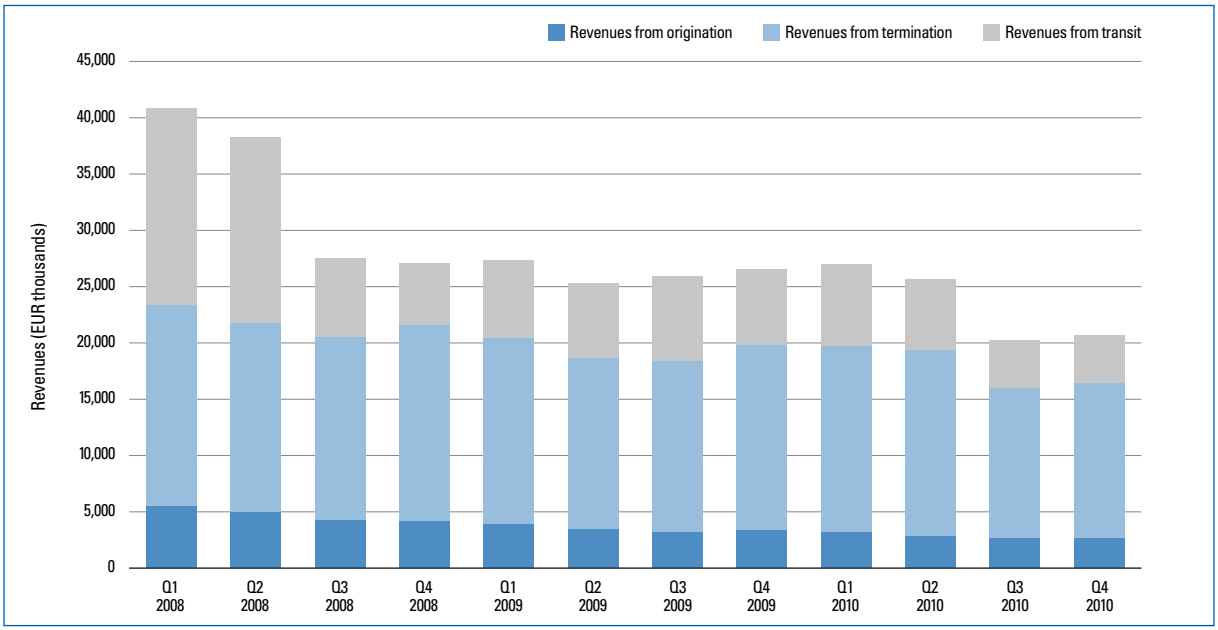
Year	Revenues (EUR) Residential customers	Minutes Residential customers	Revenues (EUR) Business customers	Minutes Business customers
2008	290.2	2,083.1	702.8	6,021.6
2009	264.6	1,637.1	644.5	5,838.7
2010	250.6	1,368.4	608.5	5,064.6

The table above provides a year-on-year comparison of the average number of call minutes as well as the average revenues generated per fixed residential and business customer in Austria. These values were calculated on the basis of the total annual revenues from access and carrier services and the total annual number of call minutes, each divided by the corresponding overall number of fixed lines.

- A year-on-year comparison of the average fixed subscriber in the residential segment shows that the number of call minutes as well as revenues have declined. In 2010, the average residential customer used 16.4% fewer call minutes than in 2009 (34.3% fewer compared to 2008). The average revenues per residential customer saw a less pronounced decrease (-5.3% compared to 2009; -13.6% compared to 2008). This can be attributed to the fact that more than half of fixed network revenues were generated by base fees and setup charges (cf. page 14).
- Declines were also observed in the business segment: The average fixed subscriber in this segment used 13.3% fewer call minutes than in 2009 (-15.9% compared to 2008), and the average revenues per business customer dropped by 5.6% compared to 2009 (-13.4% compared to 2008).

Wholesale revenues

➡ A1 TELEKOM MERGER TRIGGERS DECLINE IN REVENUES IN 2010



The fixed wholesale market can be subdivided into three parts: origination, termination and transit services.

Revenues from **origination** services arise when a network operator routes one of its own subscriber's calls to an interconnected carrier network operator (which itself has no directly connected subscribers) or routes a call to a service number subject to destination network charges.

Revenues from **termination** services are generated when a network operator routes a call from an external network to a subscriber connected to its own (fixed) network.

Revenues from **transit** services arise when a call is routed between two networks by a third operator.

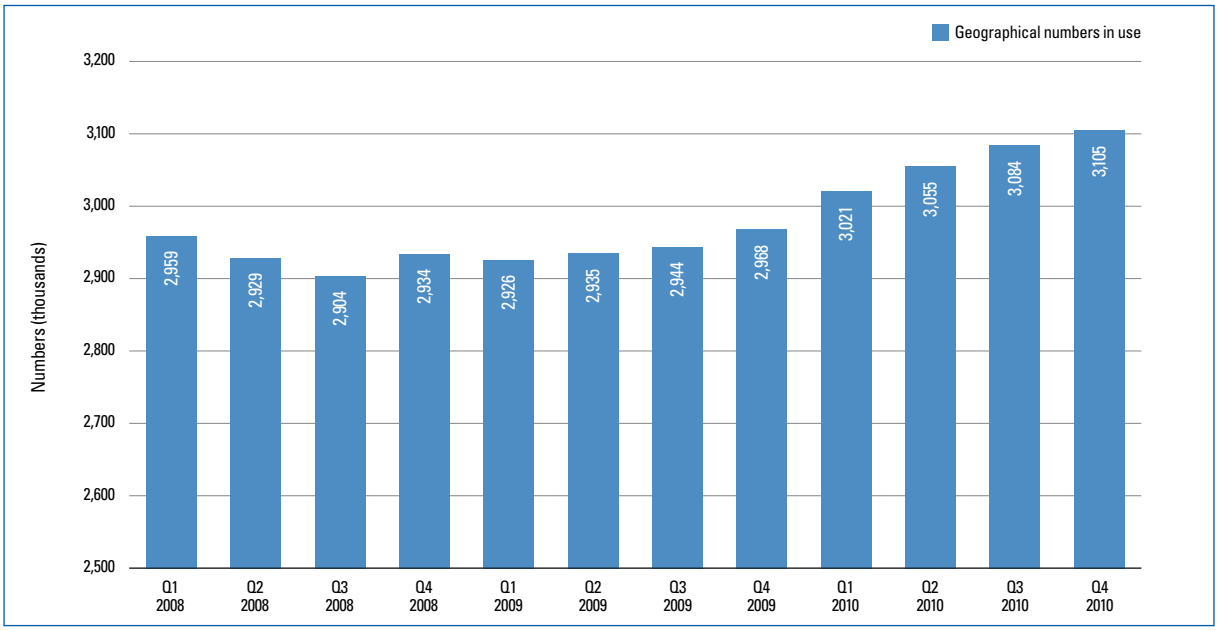
Origination, termination and transit services are not charged to the customer directly, but to other network operators at the wholesale level.

The data underlying this chart can be found in the Appendix (see page 93).

- In 2010, wholesale revenues in Austria's fixed network came to EUR 93.6 million. Of that amount, 64.3% (EUR 60.2 million) can be attributed to termination services, 23.6% (EUR 22.1 million) to transit services, and the remaining 12.1% (EUR 11.3 million) to origination services.
- Although wholesale revenues in the fixed network rose slightly between Q3 and Q4 2010 (+2.2%), the long-term trend is still clearly declining. Over the year 2010 as a whole, these revenues dropped by 11% compared to 2009, and by a full 30% compared to 2008. One especially striking development is the sharp decrease between Q2 and Q3 2010 (-21.2%), which came about due to the merger of Telekom Austria and mobilkom austria on July 1, 2010.

Geographical numbers in use

➡ CONTINUED INCREASE IN 2010

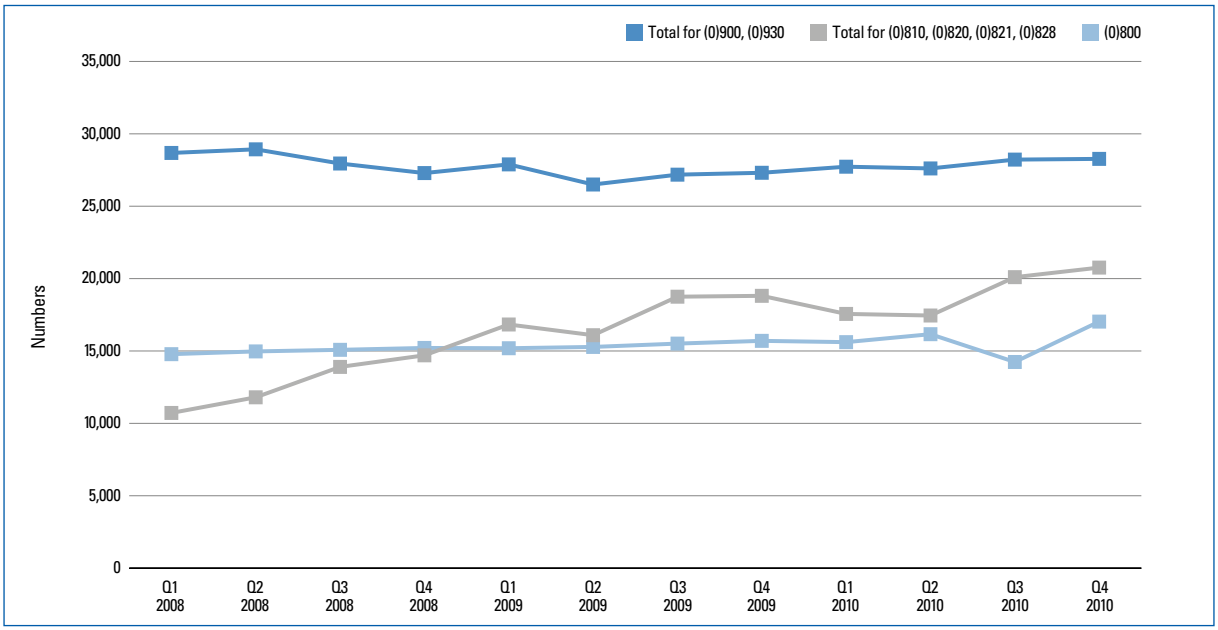


Geographical numbers are domestic telephone numbers with a local area code (e.g. 01 for Vienna).
As more than one number may be assigned to a single line, the number of geographical numbers is not identical to the number of fixed subscriber lines.

- At the end of Q4 2010, some 3.1 million geographical numbers were in use throughout Austria. Compared to one year earlier, this represents an increase of 4.6%.
- The number of geographical numbers in use has risen steadily since early 2009.

Service numbers in use: (0)800, (0)810, (0)820, (0)821, (0)828, (0)900, (0)930

➡ UPWARD TREND IN (0)810, (0)820, (0)821 AND (0)828 RANGES



The chart above shows the number of service numbers in use in the following ranges:

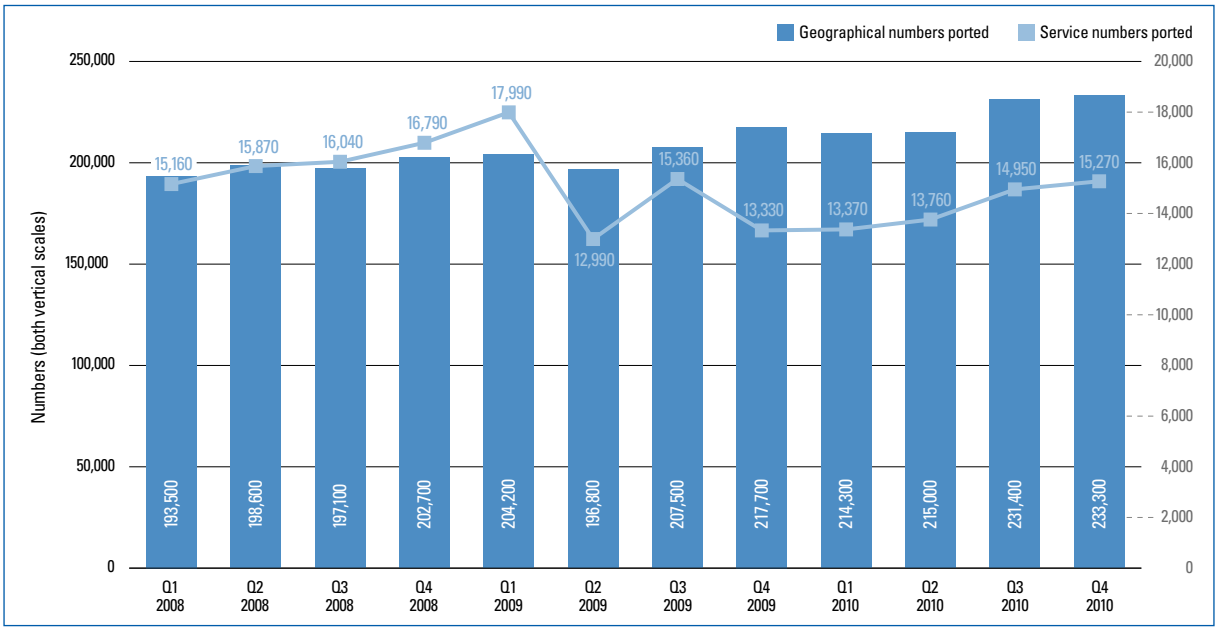
(0)800 range: toll-free services
(0)810 range: max. EUR 0.10 per minute or text message
(0)820 range: max. EUR 0.20 per minute or text message
(0)821 range: max. EUR 0.20 per call or text message
(0)828 range: text messages only; standard charges apply
(0)900 range: max. EUR 3.64 per minute or max. EUR 10.00 per text message
(0)930 range: max. EUR 3.64 per minute or max. EUR 10.00 per text message (erotic hotlines)

The data underlying this chart can be found in the Appendix (see page 93).

- The number of service numbers in use in the (0)810, (0)820, (0)821 and (0)828 ranges has risen steadily over time and totalled approximately 20,800 in Q4 2010.
- In contrast, the number of toll-free service numbers and numbers in the (0)900 and (0)930 ranges remained fairly stable over the time period depicted above.

Ported geographical numbers and service numbers

➡ NUMBER PORTING ON THE RISE



Number porting allows customers to retain their telephone numbers when they switch service providers. This means that customers can keep their original geographical telephone numbers (within the same local area code) when they switch to a new provider.

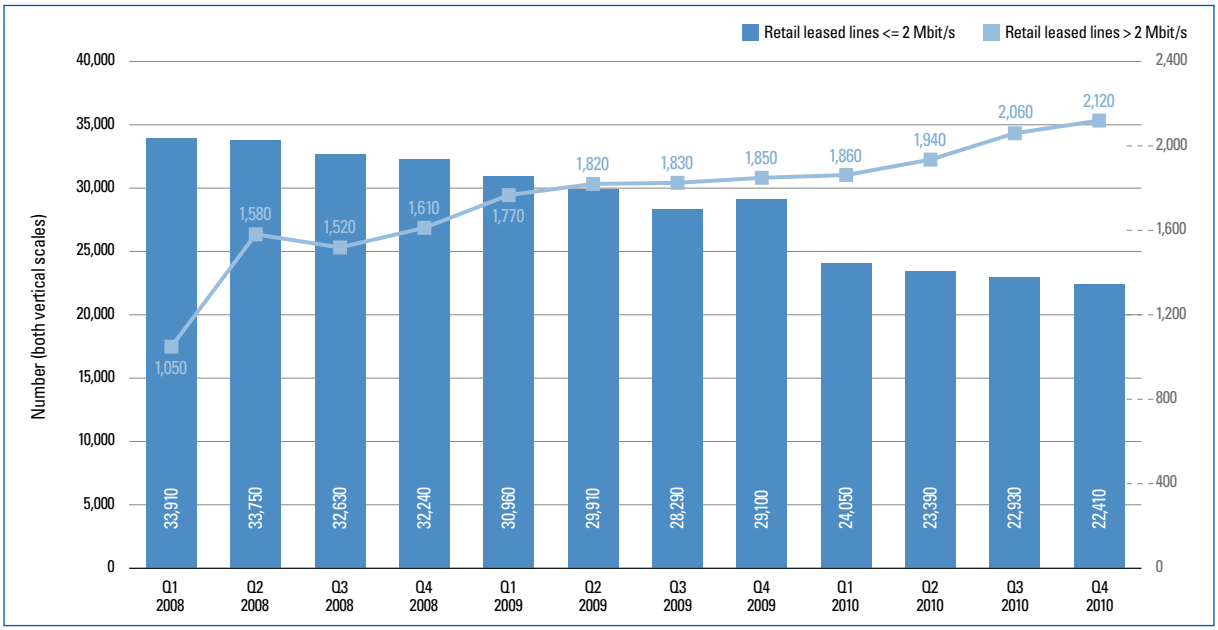
The chart above shows the total number of geographical telephone numbers and service numbers ported (which is not equal to the total number of porting procedures carried out, as a single number may be ported multiple times).

- In Q4 2010, the total number of geographical telephone numbers ported was approximately 233,000, and the total number of ported service numbers came to approximately 15,300.
- Compared to Q4 2009, this signifies an increase of 7.2% in ported geographical telephone numbers. Over the same period, the number of service numbers ported rose by 14.6%.

Section 2 | Leased lines

Number of retail leased lines in Austria

➡ STEADY OVERALL DECREASE IN 2010



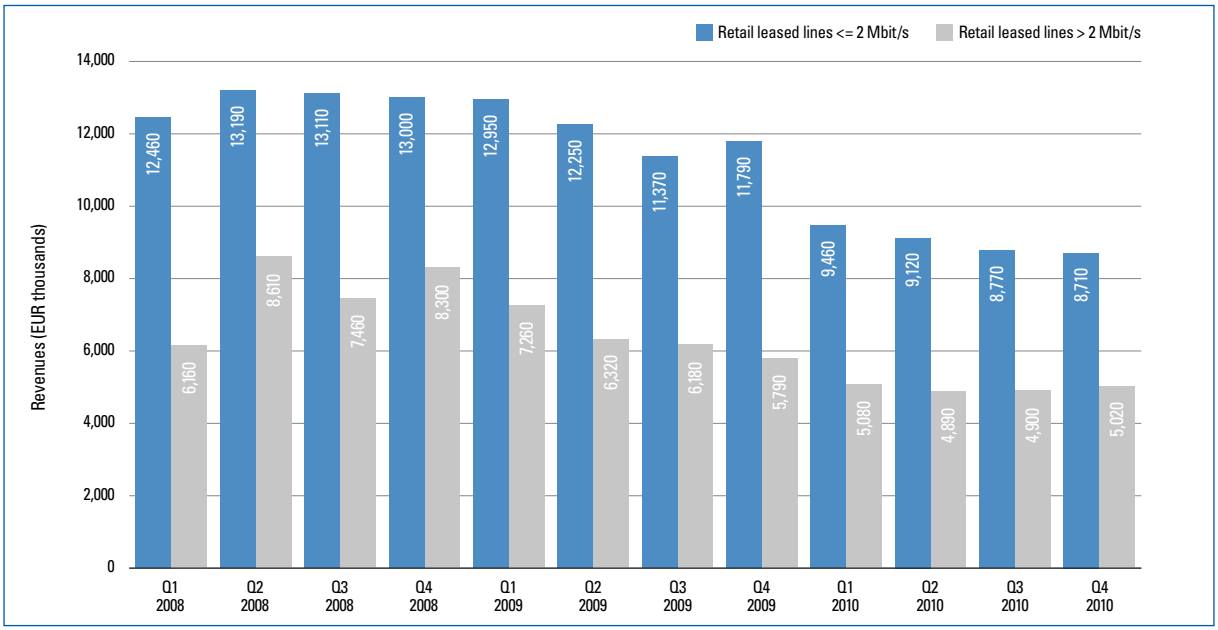
Retail leased lines refer to leased lines (see Glossary, page 88) which are not provided for operators or providers of communications networks or services (i.e. holders of general approvals from RTR), but for companies outside the telecommunications sector (e.g. banks, insurance companies, retail stores, etc.).

The chart above shows the number of retail leased lines broken down by data transmission rate (<= 2 Mbit/s vs. > 2 Mbit/s).

- The declining trend in the number of retail leased lines with a capacity of 2 Mbit/s or less continued in the year 2010. Specifically, this figure dropped 2.3% between Q3 and Q4 2010, while the number of leased lines with a capacity exceeding 2 Mbit/s gained ground over the same period (+2.9%).
- In absolute figures, nearly 6,700 leased lines with a capacity of 2 Mbit/s or less were relinquished in 2010, while 270 leased lines with a capacity exceeding 2 Mbit/s were added. Regardless of their bandwidth, the overall number of leased lines has continued to decrease over time. By Q4 2010, the number of leased lines had declined by 20.7% compared to Q4 2009 and by 27.5% compared to Q4 2008. As the chart clearly illustrates, this decrease was far more pronounced in the year 2010.

Revenues from retail leased lines in Austria

➡ REVENUES DECLINE STEADILY IN 2010



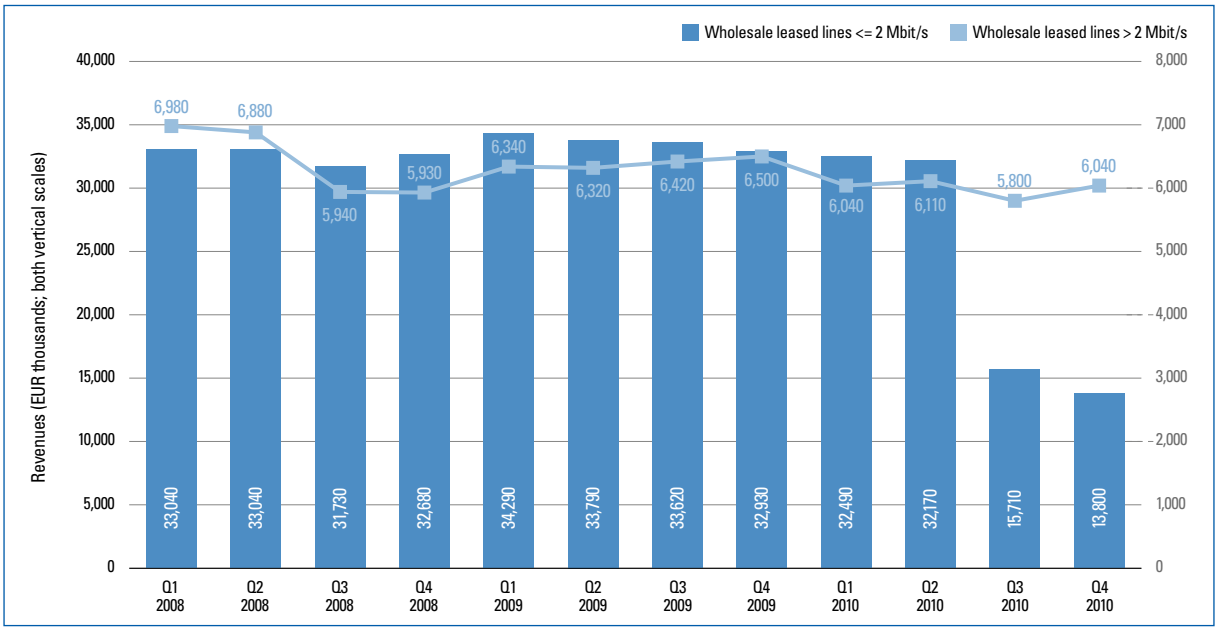
Retail leased lines refer to leased lines (see Glossary, page 88) which are not provided for operators or providers of communications networks or services (i.e. holders of general approvals from RTR), but for companies outside the telecommunications sector (e.g. banks, insurance companies, retail stores, etc.).

The chart above shows the revenues from retail leased lines in Austria broken down by data transmission rate (<= 2 Mbit/s vs. > 2 Mbit/s).

- Like the number of retail leased lines, revenues from these lines have also declined over time. Although the revenues from leased lines with a capacity exceeding 2 Mbit/s increased by 2.4% between Q3 and Q4 2010 (coupled with a decline of 0.7% in the case of leased lines with a capacity of 2 Mbit/s or less), these revenues clearly followed a declining trend over the year as a whole. In Q4 2010, the total revenues from retail leased lines in both bandwidth categories fell to 78.1% of the revenues reported for Q4 2009.

Revenues from wholesale leased lines in Austria

➡ 2010: DECLINE IN <= 2 MBIT/S CATEGORY, STAGNATION IN > 2 MBIT/S LINES



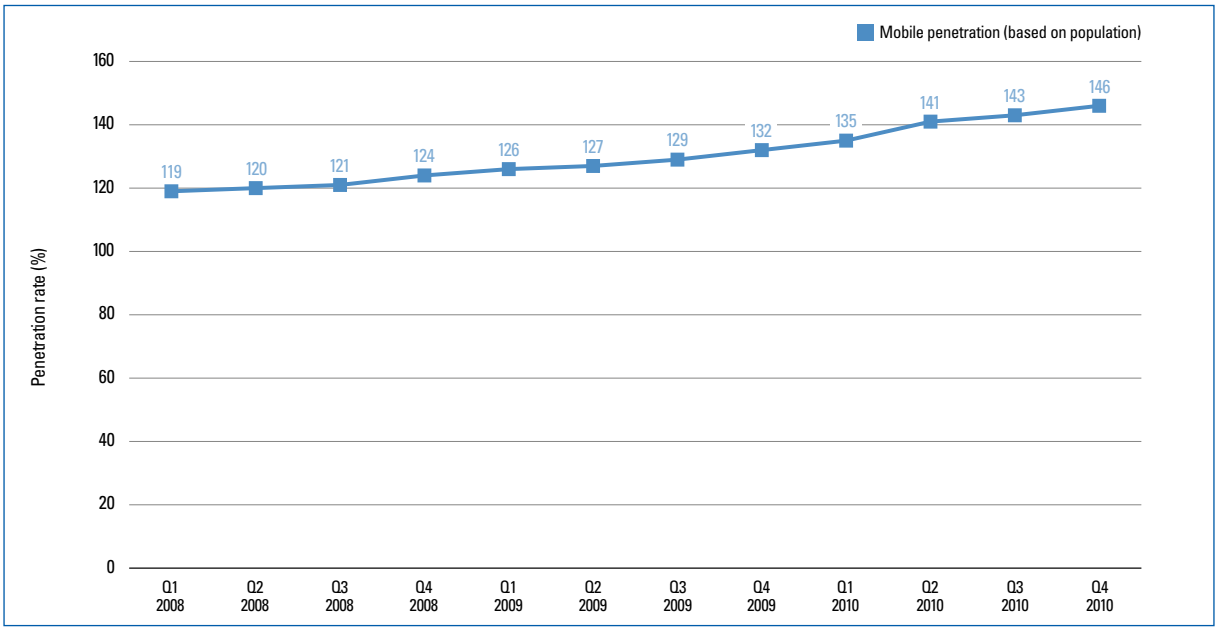
Wholesale leased lines are leased lines (see Glossary, page 88) which are only provided for other operators or providers of communications networks or services (i.e. holders of general approvals from RTR), e.g. for mobile network operators. The chart above shows the total revenues from wholesale leased lines broken down into lines with a capacity of 2 Mbit/s or less and lines with a capacity exceeding 2 Mbit/s.

- In the wholesale segment, revenues from leased lines with a capacity of 2 Mbit/s or less dropped by 12.1% between Q3 and Q4 2010. Over the course of the year, an even more striking development was the sharp decrease between Q2 and Q3 2010, in which revenues more than halved. Among other things, this decrease can be attributed to the merger of Telekom Austria and mobilkom austria and the resulting elimination of revenues generated by Telekom Austria.
- The revenues from leased lines with a capacity exceeding 2 Mbit/s rose by 4.1% between Q3 and Q4 2010. However, it is not possible to identify a clear overall trend for the year.

Section 3 | Mobile communications

Mobile penetration

➡ MOBILE PENETRATION INCREASES AGAIN IN 2010



Source: RTR, Statistics Austria (population figures)

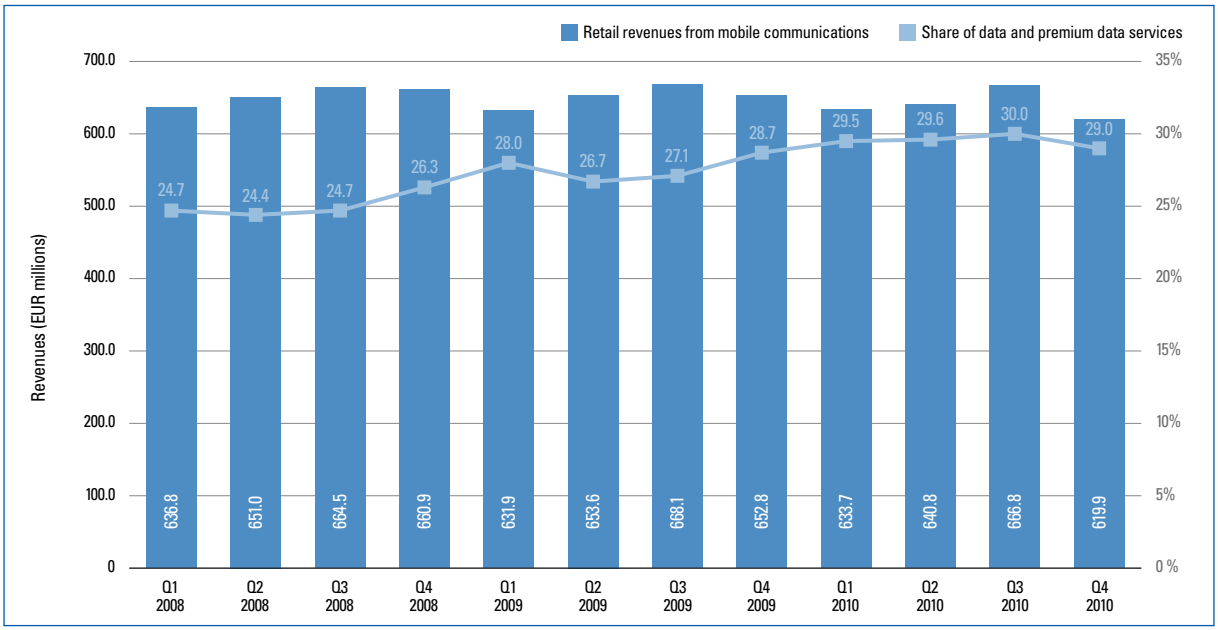
The mobile penetration rate is calculated as the number of activated SIM cards divided by the country's population. Therefore, this indicator shows the (notional) average number of SIM cards used by each resident of Austria; however, these figures also include SIM cards used by businesses (for further information on penetration rates, please refer to the Glossary, page 88).

An international comparison of mobile penetration rates can be found in Section 7 (page 63).

- At the end of Q4 2010, the mobile penetration rate in Austria came to 146%, which signifies an increase of three percentage points compared to the previous quarter.
- Over the year 2010, the mobile penetration rate climbed by 14 percentage points.

Retail revenues from mobile communications

➡ SLIGHT DECREASE IN REVENUES COMPARED TO 2009



The retail revenues from mobile communications shown above include the following categories:

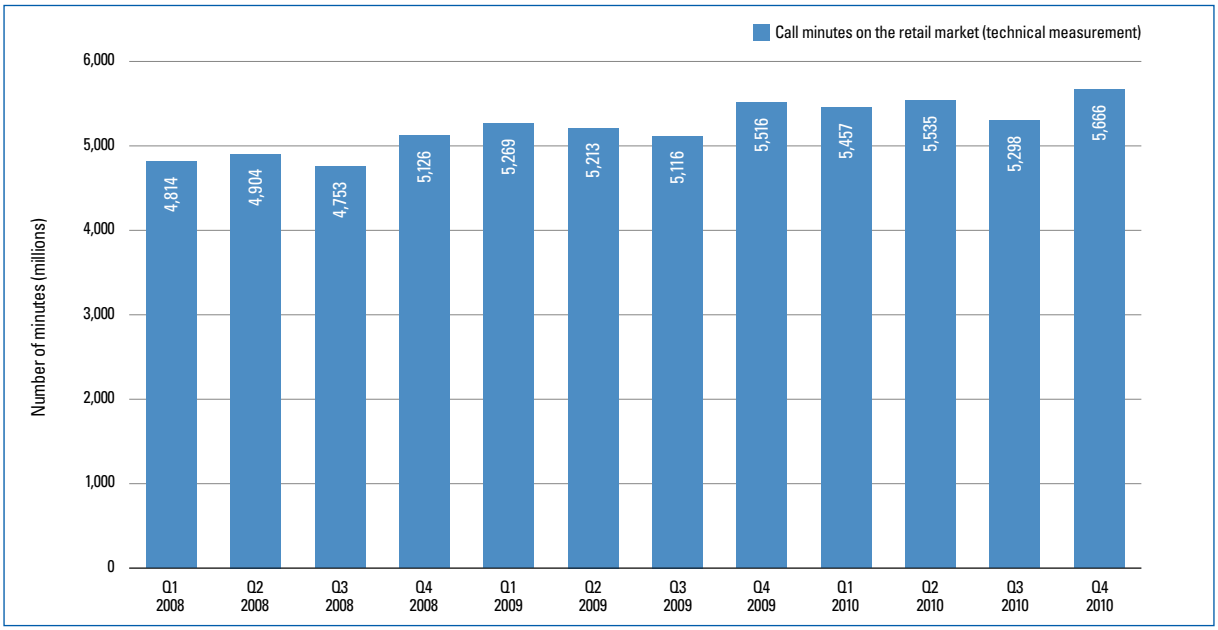
- Connection charges for voice calls
- Periodic base fees
- Activation fees
- Text messaging charges
- Fees for data services and value-added data services
- Remuneration for special coverage obligations and fees pursuant to the Telecommunications Fee Subsidies Act
- Other charges

The percentage of overall revenues attributable to data services and value-added data services (including text messaging and multimedia messaging) is shown separately above.

- In 2010, retail revenues from mobile communications totalled EUR 2.56 billion, which represents a decrease of 1.7% compared to 2009 and 2% compared to 2008.
- The percentage of overall revenues on the retail mobile communications market which can be attributed to data services and value-added data services came to 29% in Q4 2010, meaning that it dropped by one percentage point compared to the previous quarter. Over a longer period, however, a general upward trend has been observed in this revenue category.

Call minutes on the retail market

➡ RECORD NUMBER OF CALL MINUTES IN 2010



The chart above provides an overview of technically measured call minutes in mobile networks. These minutes refer to the actual duration of calls made by retail customers.

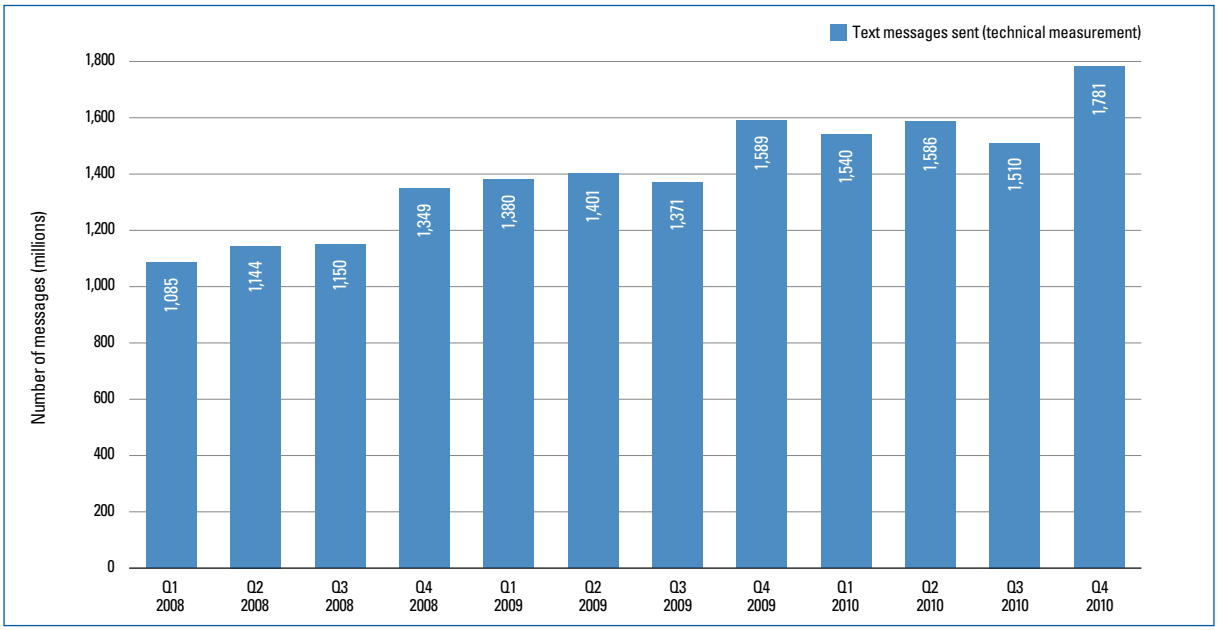
In contrast, billed call minutes (not shown) indicate the number of minutes actually charged to those customers. The main factors accounting for the difference between these two figures are the number of free minutes included in the periodic base fee and the pulse rate used for calls. This difference can be especially large in cases where flat rate packages are offered.

The chart above includes voice services only (i.e. without data services, video telephony, etc.).

- The number of call minutes from mobile networks in Austria reached a record level of 5.67 billion in Q4 2010. Due to the traditionally large volume of call traffic during the holiday season, the largest number of call minutes is consistently recorded in the last quarter of the year. As a result, a comparison with the previous quarter would not necessarily be meaningful. Compared to Q4 2009, however, this development represents an increase of 2.7%.
- One reason for the steady rise in the number of call minutes is the fact that more and more flat rate packages are being offered with a certain number of free minutes included in the periodic base fee or flat rate.

Text messages

➡ TEXT MESSAGES REACH RECORD LEVEL IN 2010



The values in the chart above include all text messages sent in each quarter, including value-added text messaging services (technical measurement).

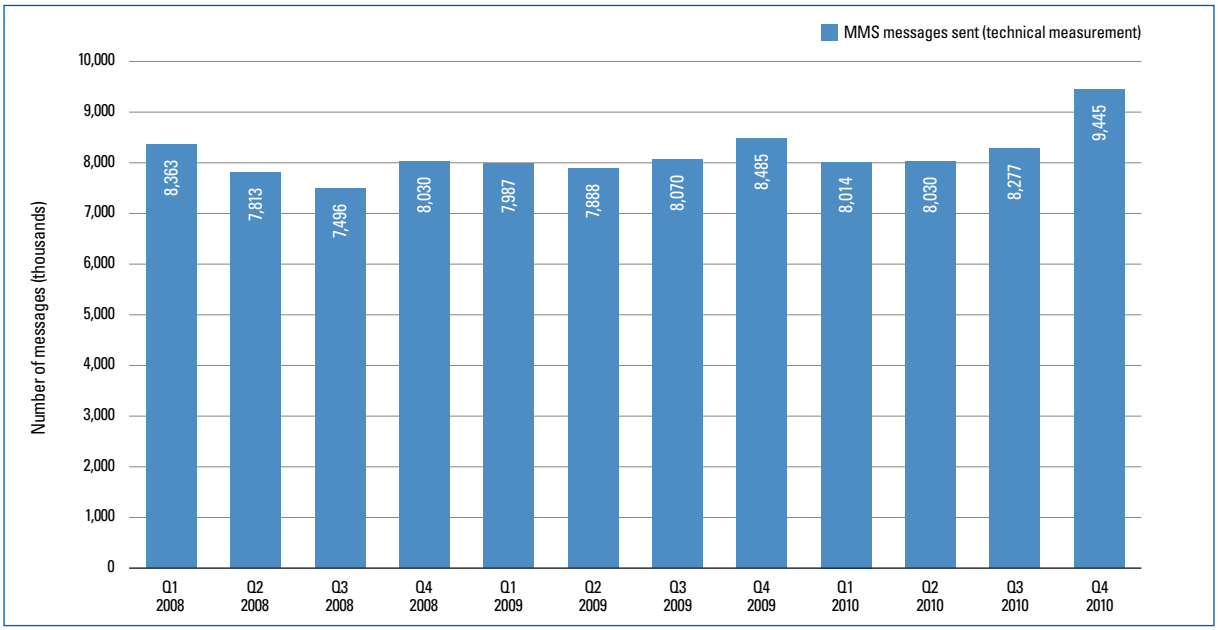
As in the case of call minutes, the term "technical measurement" means that the chart also includes text messages which are not charged individually to the retail customer (e.g. text messages included in the periodic base fee or flat rate).

Multimedia messages are not included in these figures.

- Text messaging showed a similar development to call minutes and likewise set a new record in Q4 2010. Specifically, the total number of text messages sent came to 1.78 billion, up 12.1% compared to one year earlier.
- Based on the number of mobile subscribers in Austria, this means that each subscriber sent an average of 146 text messages in Q4 2010 (see also page 38).

Multimedia messages

➡ TREND INCREASING SLIGHTLY OVER TIME



The values in the chart above include all multimedia messages sent in each quarter, including value-added multimedia messaging services (technical measurement).

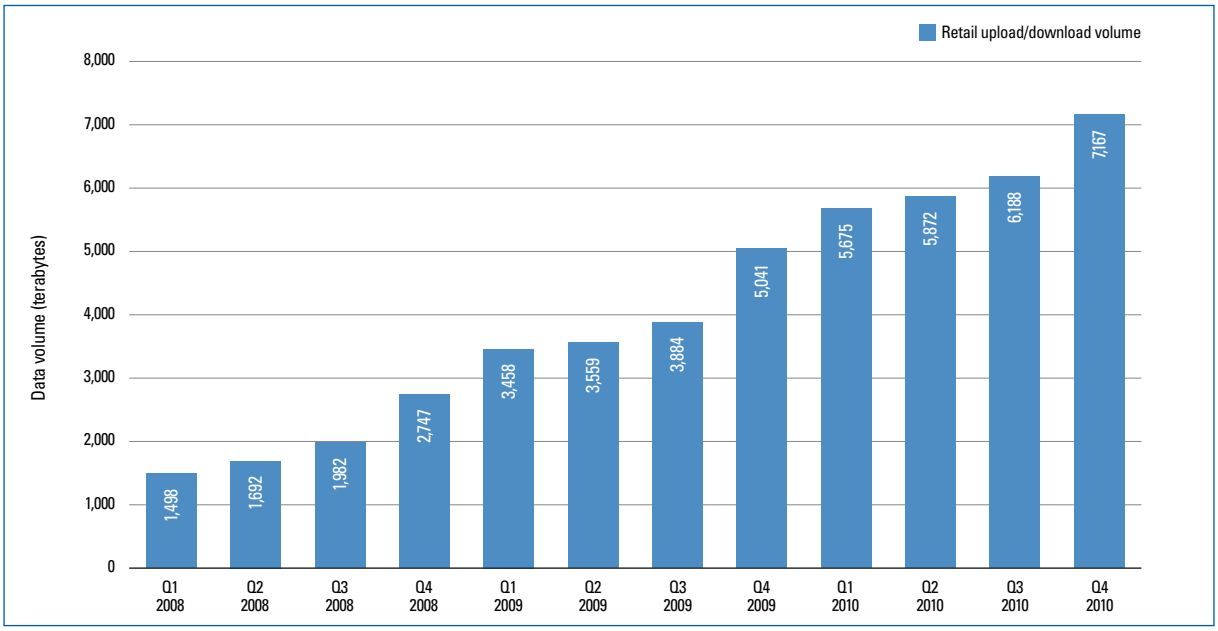
As in the case of call minutes, the term "technical measurement" means that the chart also includes multimedia messages which are not charged individually to the retail customer (e.g. messages included in the periodic base fee or flat rate).

Text messages are not included in these figures.

- In Q4 2010, a total of 9.45 million multimedia messages were sent. A comparison to the final quarter of each previous year reveals a slightly increasing trend in the number of multimedia messages sent, as this figure rose 11.3% compared to Q4 2009 and 17.6% compared to Q4 2008.

Data volume (retail market)

➡ ABRUPT INCREASES DURING HOLIDAY SEASON

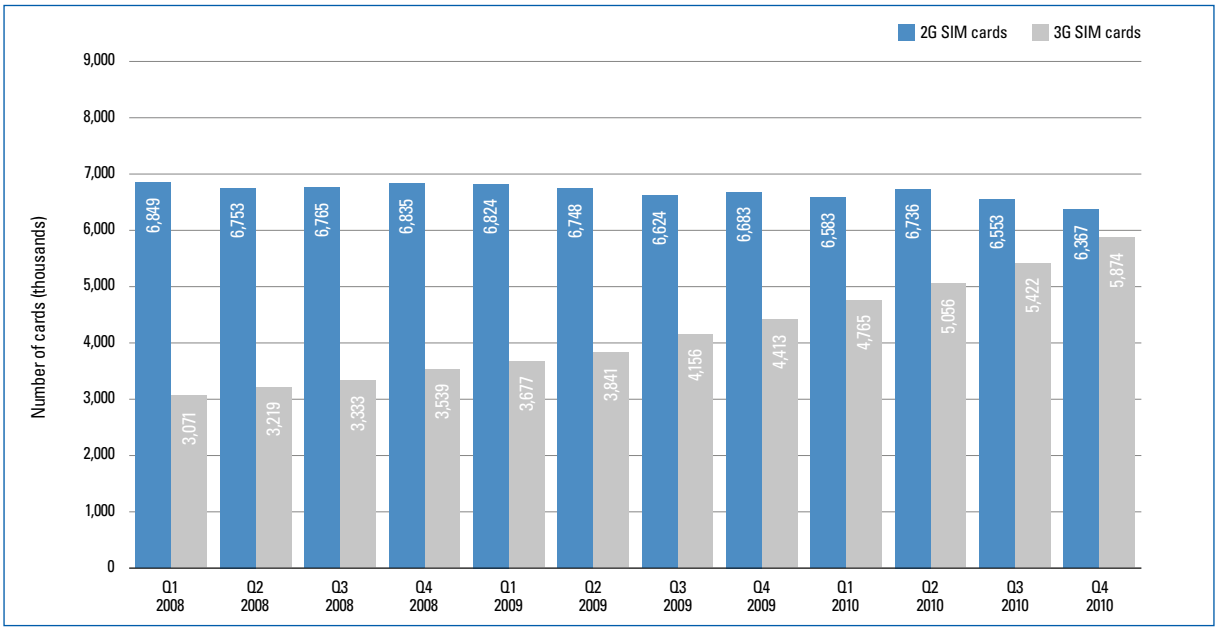


The chart above shows the data volume used for uplink and downlink transmissions on the retail mobile communications market in terabytes (1 terabyte = 1,024 gigabytes). These figures do not include text messages or multimedia messages.

- In contrast to the number of call minutes and the number of text messages and multimedia messages sent (which are highly cyclical), data transfer volumes have shown a steady upward trend over the last few years, with a sudden increase observed during the holiday season each year. Compared to the fourth quarter of the previous year, the data volume in Q4 2010 rose 42.2% to 7,167 terabytes. Calculated as an average, this figure represents more than 580 MB per subscriber (see also page 38). Compared to Q4 2008, the volume of data transferred increased 2.6 times in Q4 2010.
- The primary reason behind this development is the increased prevalence of Internet-ready mobile phones (smartphones).

SIM cards in use

➡ NUMBER OF 3G CARDS STILL RISING IN 2010

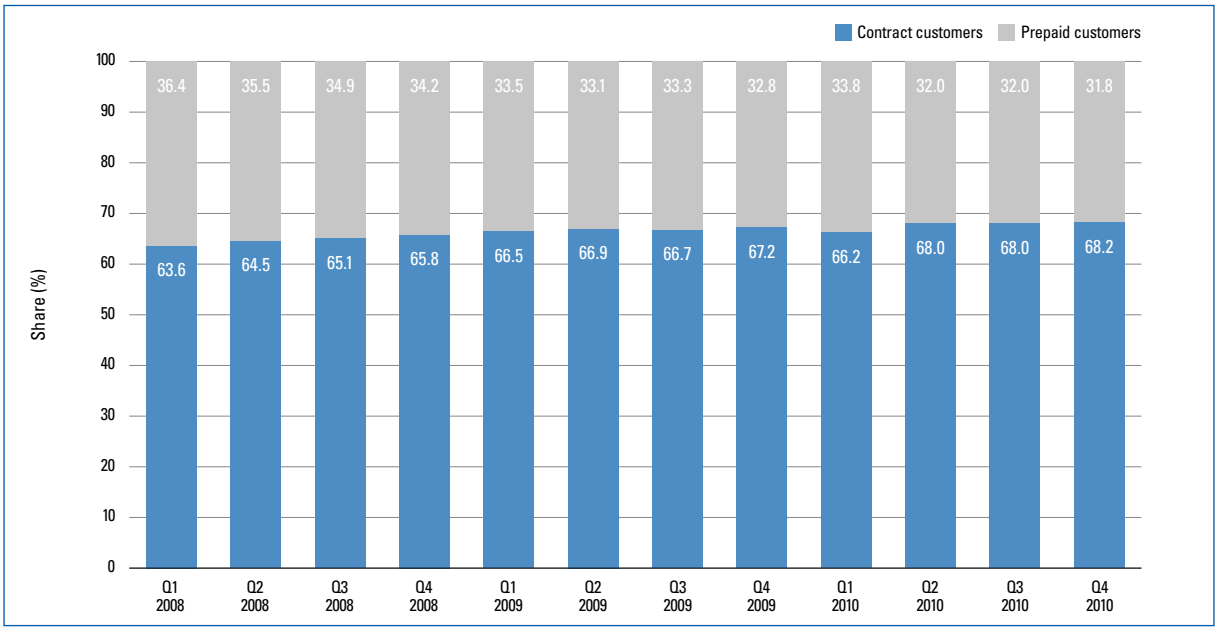


The chart above shows the number of SIM cards activated and in use, broken down into 2G (GSM) and 3G (UMTS) cards.

- At the end of 2010, a total of 12.24 million SIM cards were in use in Austria; 6.37 million were 2G cards, and the remaining 5.87 million were 3G cards. The chart reveals a gradually declining trend in the number of 2G cards, while the number of 3G SIM cards has increased markedly. At the end of Q4 2010, there were 4.7% fewer 2G SIM cards compared to one year earlier, but the number of 3G cards rose by 33% over the same period.
- In the course of the year 2011, the number of 3G cards in use is likely to overtake the number of 2G cards for the first time. This development reflects the increasing use of data services as well as the increased prevalence of smartphones.

Prepaid vs. postpaid SIM cards

➡ CONTINUED GROWTH IN NUMBER OF CONTRACT CUSTOMERS



The chart above shows the share of prepaid and contract customers in the mobile communications market. Prepaid customers use SIM cards on which a certain amount of credit (in the form of minutes, text messages, data volume or the like) is stored. Thus the customer pays for the service in advance. In the case of contract customers (also known as postpaid customers), a bill for the service is sent after it is used (usually on a monthly basis).

An international comparison of the share of prepaid and postpaid customers can be found in Section 7 (page 64).

The data underlying this chart (absolute values) can be found in the Appendix (see page 94).

- With regard to the percentages of contract and prepaid customers in mobile communications, the situation in Austria has been very clear for quite some time now: Since the beginning of the time period depicted above, the share of prepaid customers has come to approximately one-third, while the remaining two-thirds are contract customers. This ratio has gradually shifted in favour of contract customers in recent years.
- Specifically, the share of contract customers in Austria came to 68.2% at the end of the year 2010, while prepaid customers accounted for 31.8% of mobile customers.

The average mobile customer (Q4 2010)

➡ 464 CALL MINUTES, 146 TEXT MESSAGES, 587 MB OF DATA AND 1 MMS

Q4 2010

The average mobile customer

- EUR 51 in revenues
- 464 call minutes
- 146 text messages
- 1 multimedia message
- 587 MB data volume

The chart above shows the average number of call minutes, the average number of text and multimedia messages sent, as well as the average revenues generated and data volume used (in MB) per mobile customer each quarter. The values were calculated on the basis of retail revenues, call minutes, numbers of text and multimedia messages as well as the total data volume used, each divided by the current total number of mobile customers.

- The chart above summarises the data from the previous charts in a way that clearly shows the significance of these values at the individual level. For example, if the overall data transfer volume used by mobile customers in Austria came to 7,167 terabytes, then the average mobile customer used up a volume of 587 MB in Q4 2010.
- In addition, the average customer accounted for 464 outgoing call minutes, 146 text messages and 1 multimedia message during that quarter.
- Finally, mobile customers generated an average of about EUR 51.00 in revenues for their network operators in Q4 2010.

The average mobile customer (year-on-year comparison)

➡ MORE DATA VOLUME, FEWER CALL MINUTES IN 2010

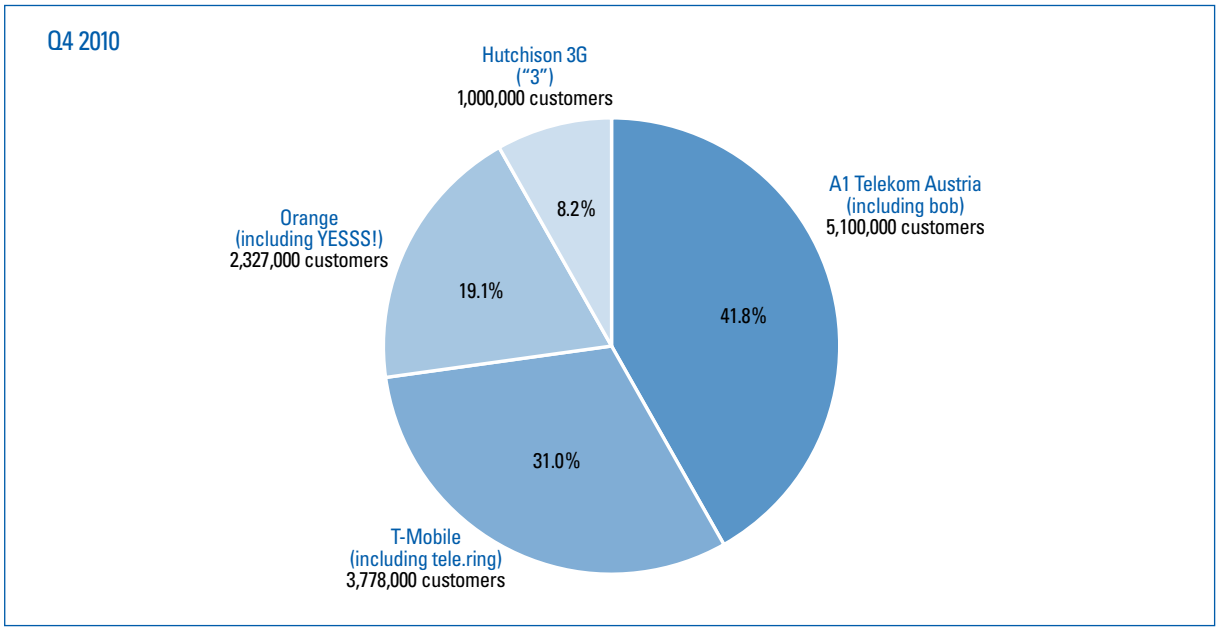
Year	Revenues (EUR)	Minutes	Text messages	Multimedia messages	Data volume (MB)
2008	254	1,903	458	3	765
2009	235	1,903	517	3	1,433
2010	215	1,843	538	3	2,087

The table above shows the average revenues generated, the average number of call minutes, the average number of text and multimedia messages sent, and the average data volume used (in MB) by each mobile customer in comparison to the previous years. The values were calculated on the basis of retail revenues, call minutes, numbers of text and multimedia messages as well as the total data volume used, each divided by the current total number of mobile customers.

- This table extends the information provided on page 38 by providing annual totals based on the quarterly figures as well as a comparison with the two previous years. Here it is clear that the use of data services has become increasingly popular. Over the year 2010, the average data volume used by each customer amounted to 2,090 MB, up 45.6% on the previous year (and 2.7 times the volume used in 2008). The reasons behind this rapid increase were already discussed above. This trend does not appear likely to come to an end in the foreseeable future.
- In contrast, the average customer used fewer outgoing call minutes in 2010 (approximately 3.2% fewer than in 2009 and 2008). The total of 1,843 minutes means that outgoing calls averaged 5 minutes per day or 2½ hours per month.
- The trend in text messaging has continued apace: The average mobile customer sent 538 text messages in 2010, and this figure has risen by 17% since 2008.
- In contrast, multimedia messaging remains less popular, as the average customer sends approximately three of these messages per year.

Market shares of mobile operators in Austria

➡ CONDITIONS STABLE ON THE MOBILE MARKET



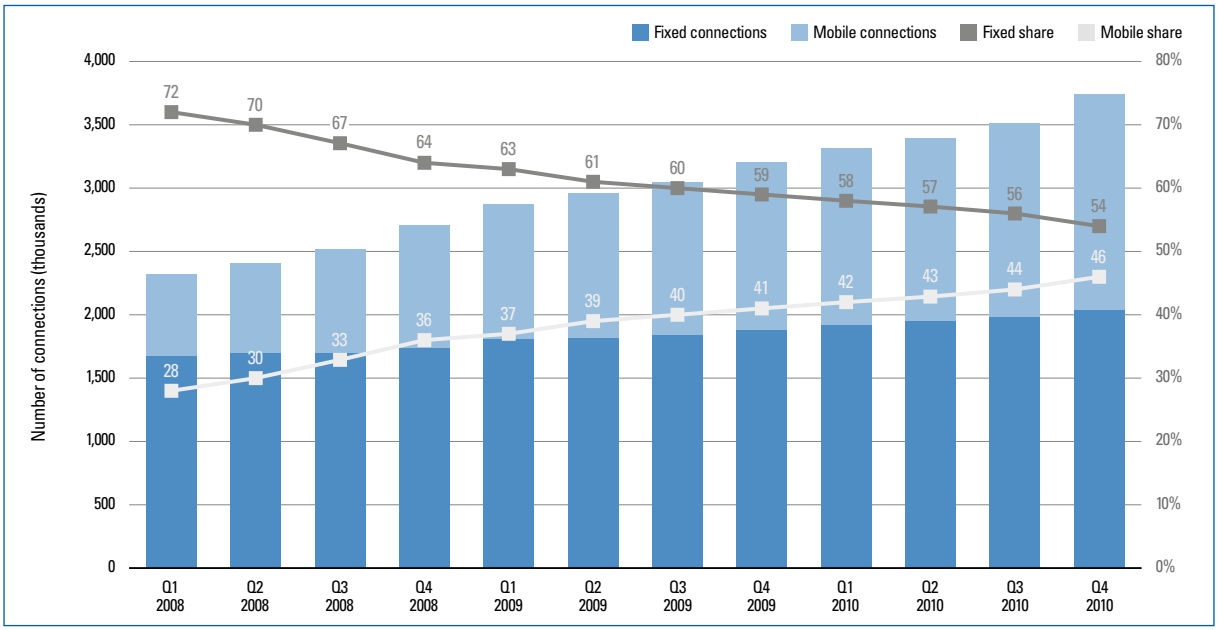
The chart above shows the market shares of mobile network operators in Austria based on their respective numbers of subscribers. Subscribers who use the services of resellers are included in the figures for the respective "home" network (e.g. YESSS! subscribers are included in the figures for Orange). The figures published above were made available by the operators especially for this chart or collected from the operators' web sites (Hutchison 3G data: as of September 2010). The chart above only includes data from mobile network operators, including resellers affiliated through legal ownership.

- The undisputed market leader among Austria's mobile network operators is A1 Telekom Austria, with some 5,100,000 customers in Q4 2010. This operator's market share comprises 41.8% of all mobile customers. However, A1 Telekom Austria's share of the market actually declined by 0.5 percentage points compared to Q4 2009.
- In second place is T-Mobile, which has 3,778,000 customers and a market share of 31% in Austria. This operator was able to increase its market share by 0.8 percentage points in the course of the year.
- Orange (including YESSS!) still has 2,327,000 subscribers and thus holds a market share of 19.1%. Compared to Q4 2009, this company's share of the market has declined by 0.8 percentage points.
- In contrast, Hutchison 3G managed to pass the 1,000,000 mark in the period under review and expanded its market share from 7.8% at the end of 2009 to 8.2% at the end of 2010.

Section 4 | Broadband

Fixed and mobile broadband connections

➡ MOBILE BROADBAND STILL ON THE RISE IN 2010



The chart above shows the total number of fixed and mobile broadband connections in Austria. In this context, fixed broadband connections include services with a download rate of at least 144 kbit/s and realised using:

- Copper-wire pairs in A1 Telekom Austria's network
- Unbundled lines (see Glossary, page 90)
- Coaxial cable
- FWA (fixed wireless access, e.g. WLAN, WiFi and WLL for "fixed" access, not via hot spots)
- Other infrastructure

Mobile broadband connections refer to the number of contracts for UMTS/HSDPA-based mobile services which include at least 250 MB in the monthly base fee as well as prepaid cards with which at least 750 MB were downloaded in the relevant quarter.

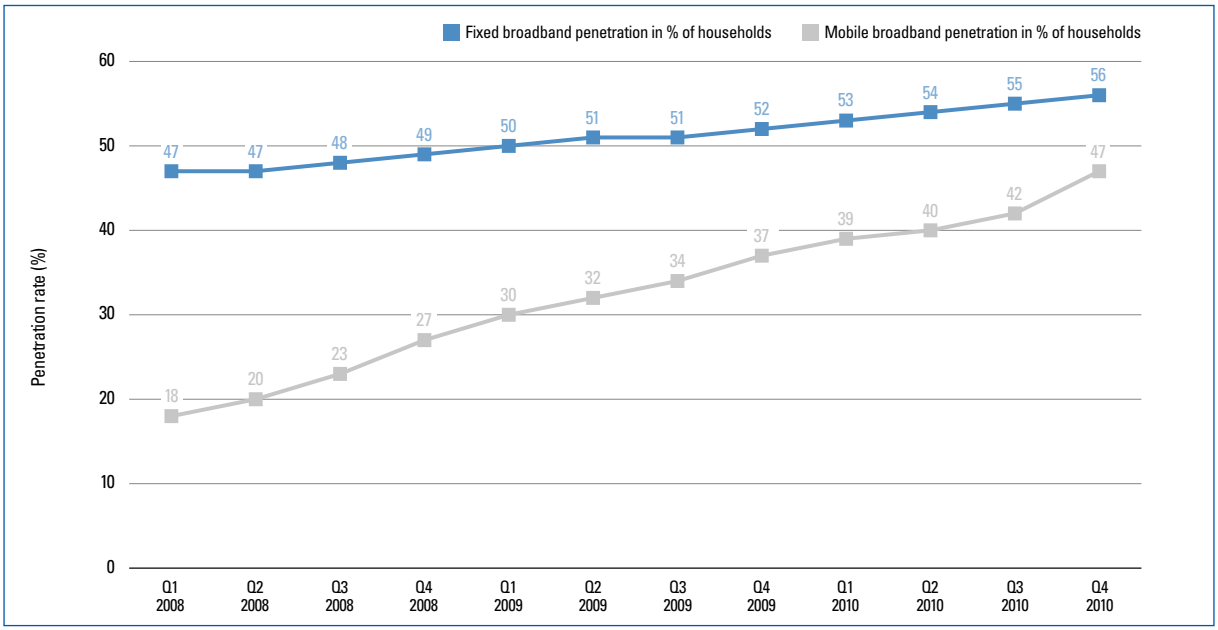
The chart also shows the percentage shares of fixed and mobile broadband connections.

The data underlying this chart (absolute values) can be found in the Appendix (see page 94).

- For the first time, there is now at least one broadband connection for every household in Austria (at least from a statistical standpoint): For 3.63 million households, the total number of broadband connections came to 3.75 million at the end of Q4 2010 (see also page 43). More than half of those connections (2.03 million) were based on fixed infrastructure, while the remaining 1.71 million were mobile broadband connections. Therefore, fixed broadband connections still outnumber their mobile counterparts in Austria.
- However, this situation could change very soon. The recent development of these two types of connections makes it clear that the share of fixed connections has been steadily losing ground to mobile broadband. At the beginning of 2010, mobile broadband accounted for 41% of all broadband connections; by the end of 2010, this figure had already risen to 46%.

Broadband penetration

➡ MOBILE BROADBAND CONTINUES TO SURGE IN 2010



Source: RTR, Statistics Austria (number of households)

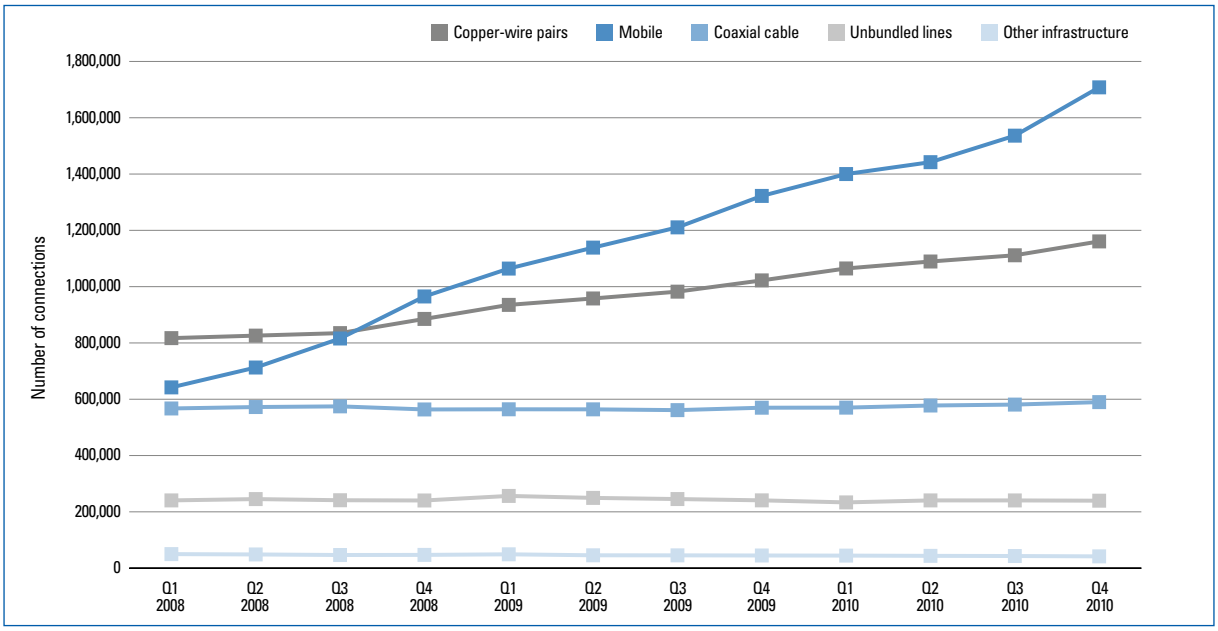
Broadband penetration refers to the ratio of the number of fixed and mobile broadband connections to the total number of households in Austria. The penetration rate calculated here also includes broadband connections used in businesses (for further information on penetration rates, please refer to the Glossary, page 88).

An international comparison of fixed and mobile broadband penetration rates can be found in Section 7 (pages 71 and 72).

- Austria's fixed and mobile broadband penetration rates have risen continuously in recent years. In the case of fixed connections, this development has been slow but steady.
- In contrast, growth in mobile broadband has been far more dynamic; for example, the mobile broadband penetration rose from 42% in Q3 to 47% in Q4 2010. This development has largely been driven by the smartphone boom.

Retail broadband connections by type of infrastructure

➡ MOBILE BROADBAND AND DSL CONTINUE RAPID GROWTH IN 2010



The number of retail broadband connections includes all connections which offer a download bandwidth of more than 144 kbit/s. The number of mobile broadband connections includes contracts for UMTS/HSDPA-based mobile broadband services which include at least 250 MB in the monthly base fee as well as prepaid cards with which at least 750 MB were downloaded in the relevant quarter.

The data in the chart is broken down by infrastructure:

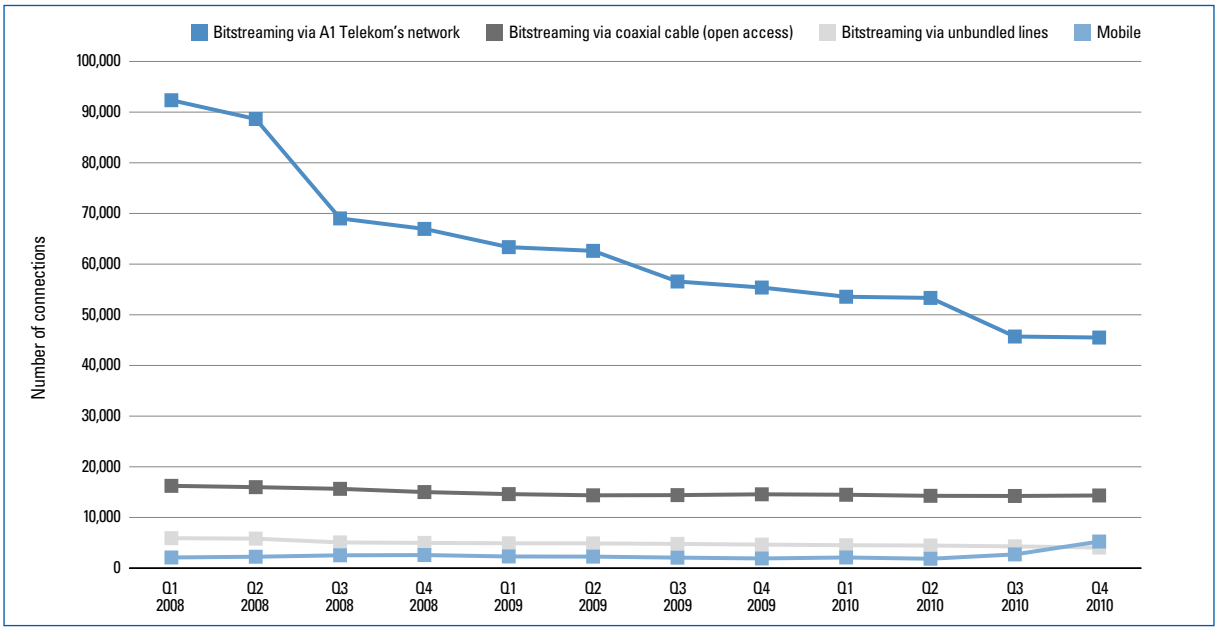
- Copper-wire pairs in the A1 Telekom Austria network (including Telekom Austria's retail broadband connections and broadband connections realised by means of bitstreaming)
- Unbundled lines (see Glossary, page 90)
- Coaxial cable
- Mobile broadband connections
- Connections realised using other infrastructure, including FWA (fixed wireless access, e.g. WLAN, WiFi and WLL for "fixed" access, not via hot spots), leased lines, FTTH (fibre to the home), PLC (powerline carrier broadband) and broadband connections via satellite.

The data underlying this chart can be found in the Appendix (see page 94).

- The rapid surge in the number of mobile broadband connections has already been discussed at length and does not warrant further attention here. The majority of fixed broadband connections in Austria (57.1%) are based on copper-wire pairs. In absolute terms, there were 1.16 million connections of this type in Q4 2010, meaning that the figure increased by 13.6% compared to Q4 2009.
- 29% of fixed broadband connections are coaxial cable connections, which saw an increase of 3.5% over the year 2010. The number of unbundled lines hardly changed at all in the year under review; this figure held steady at approximately 240,000 (11.8% of all fixed broadband connections). Connections based on other infrastructure play only a secondary role in Austria.

Wholesale broadband connections

➡ DECLINE IN FIXED INFRASTRUCTURE OVER TIME



The chart above shows the number of (wholesale) broadband connections made available to other communications service providers in wholesale offers.

In terms of infrastructure, the figures are subdivided as follows:

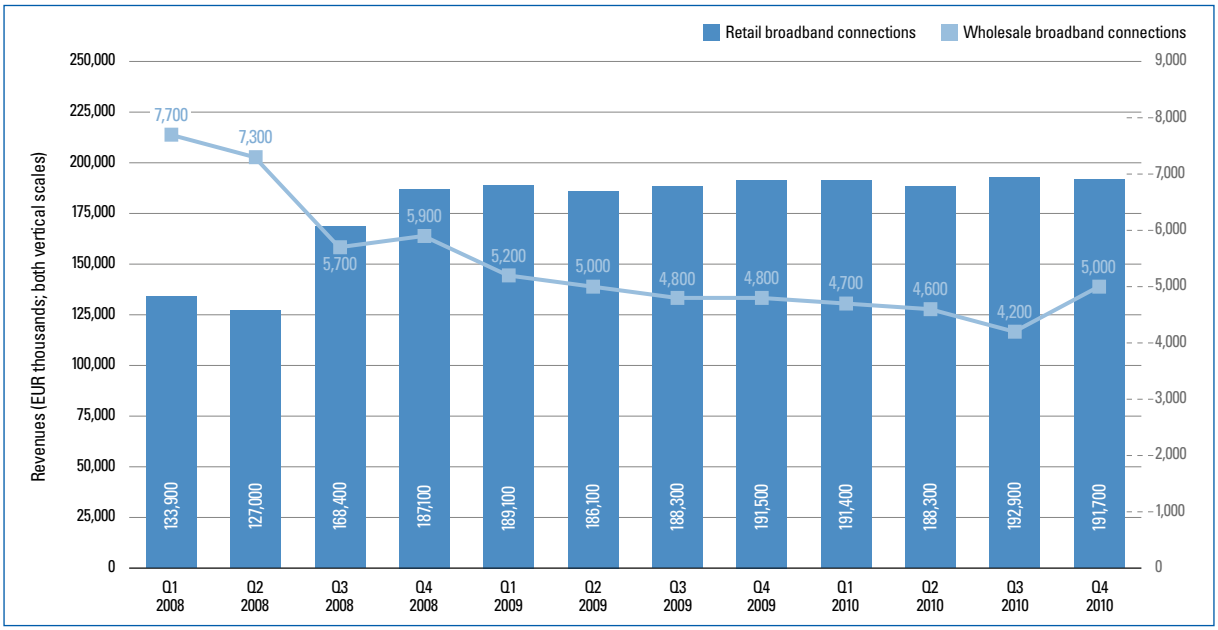
- Bitstreaming in A1 Telekom Austria's network
- Bitstreaming in unbundling partners' networks (see Glossary, page 90)
- Bitstreaming in coaxial cable networks (open access)
- Wholesale mobile broadband connections

The data underlying this chart can be found in the Appendix (see page 95).

- Wholesale connections realised using fixed (cable-based) infrastructure are on the decline in all categories: Bitstreaming connections in A1 Telekom Austria's network dropped 17.8% over the year 2010, while bitstreaming via unbundled lines fell 12.5%; bitstreaming via coaxial cable (open access) also declined, albeit only slightly (1.6%).
- Although it is hardly visible in the chart due to its low significance in absolute terms (5,250 connections), the number of wholesale mobile broadband connections increased by a full 175% in 2010. Between Q3 and Q4 2010 alone, this figure rose by 93.7%. By the end of 2010, therefore, wholesale mobile broadband connections had overtaken bitstreaming connections based on unbundled lines.

Revenues from broadband connections

➡ RETAIL FIGURES LARGELY STABLE IN 2010



The chart above shows revenues from retail and wholesale broadband connections in fixed and mobile networks (in contrast to the chart on page 48, where the "Broadband" category only includes fixed broadband).

Retail revenues represent the total of ongoing monthly charges, volume-based charges for data transfer volumes and miscellaneous revenues in the retail segment.

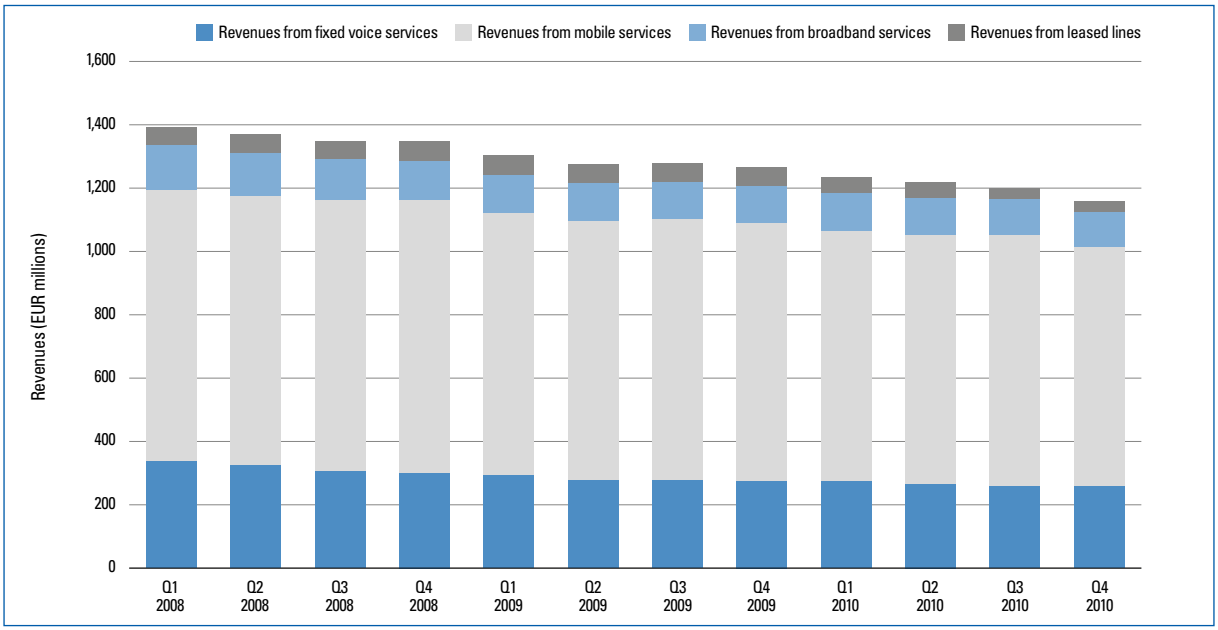
Wholesale broadband revenues refer to the total of one-off setup charges, ongoing monthly charges, ongoing monthly charges based on retail customers, data volume charges and other revenues generated in connection with wholesale offers.

- Despite the increasing use of fixed and mobile broadband connections in Austrian households, revenues in this segment have not increased substantially. In Q4 2010, 97.5% of revenues from broadband services (EUR 191.7 million) were generated by retail connections. This value remained largely unchanged in the course of the year.
- The remaining 2.5% of revenues (EUR 5 million) came from wholesale broadband connections in Q4 2010. Revenues in this category rose 4.2% compared to Q4 2009.

Section 5 | Comparisons across sectors

Revenues from fixed, mobile, broadband and leased line services

➡ DECLINING TREND IN ALL SECTORS



The chart above includes revenues from the following categories:

Fixed network (voice telephony): Revenues from residential and business customers as well as public pay telephones (phone booths), retail revenues from periodic base fees, setup charges and connection charges, wholesale revenues from origination, termination and transit services, revenues from additional services, other fees and remuneration pursuant to the Telecommunications Fee Subsidies Act or for special coverage obligations.

Mobile networks: Retail revenues from periodic base fees, activation fees, connection charges (voice and broadband) and data services, remuneration for special coverage obligations and remuneration pursuant to the Telecommunications Fee Subsidies Act; wholesale revenues from termination, origination, international roaming (see Glossary, page 88), national roaming, and the sale of airtime to resellers (see Glossary, page 88).

Broadband (fixed): Retail revenues from periodic base fees, setup charges and volume-based charges; wholesale revenues from setup charges, ongoing charges and volume-based charges.

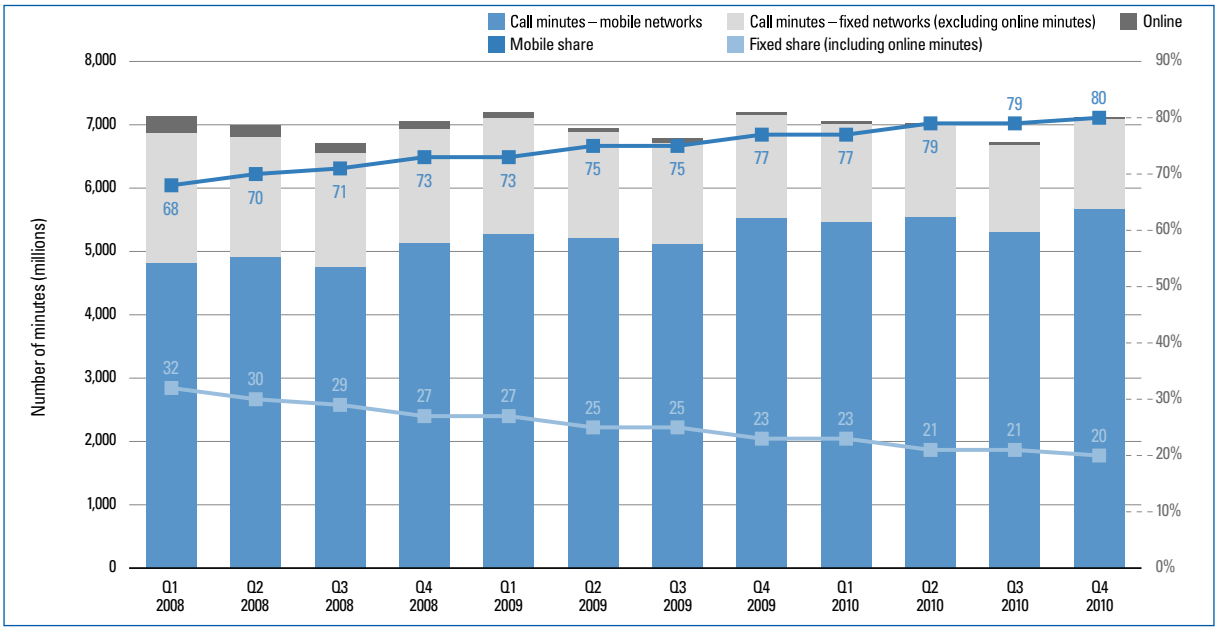
Leased lines: Retail revenues from periodic base fees and setup charges for domestic retail leased lines (see Glossary, page 88); wholesale revenues from periodic base fees and setup charges for terminating and trunk segments (see Glossary, page 90).

The data underlying this chart can be found in the Appendix (see page 95).

- The chart clearly shows that revenues are generally declining throughout the telecommunications sector. In the year 2010, revenues totalled EUR 4.81 billion, which represents a decline of 6.0% compared to 2009.
- The largest share of these revenues (65.3% in Q4 2010) was generated by mobile networks (including mobile broadband), followed by revenues from fixed networks with a share of approximately 22.3% of the overall figure. Fixed broadband accounted for 9.5% of revenues in the sector, and the remaining 2.9% can be attributed to leased lines.
- Revenues from fixed voice telephony dropped 5.8% to EUR 1.06 billion in 2010. Likewise, the revenues from mobile communications declined by 4.8% to EUR 3.13 billion, and revenues from leased lines saw a substantial decrease (-26%). Over the year 2010, a decline was also observed in revenues from fixed broadband connections, which slipped 4.5% to EUR 457 million.

Technical minutes in fixed and mobile networks

➡ GRADUAL SHIFT FROM FIXED TO MOBILE MINUTES



The chart above shows the number of call minutes in the following segments:

Mobile networks: Call minutes to the domestic fixed-link network, domestic mobile networks, international numbers, service numbers and directory assistance services.

Fixed network: Call minutes to the domestic fixed-link network, domestic mobile networks, international numbers, service numbers and directory assistance services.

Online: Call minutes for online services (i.e. narrowband dial-up Internet).

Moreover, the chart also shows the percentage of minutes attributable to the fixed network (including online services) and to mobile networks. An international comparison of these percentages can be found in Section 7 (page 62).

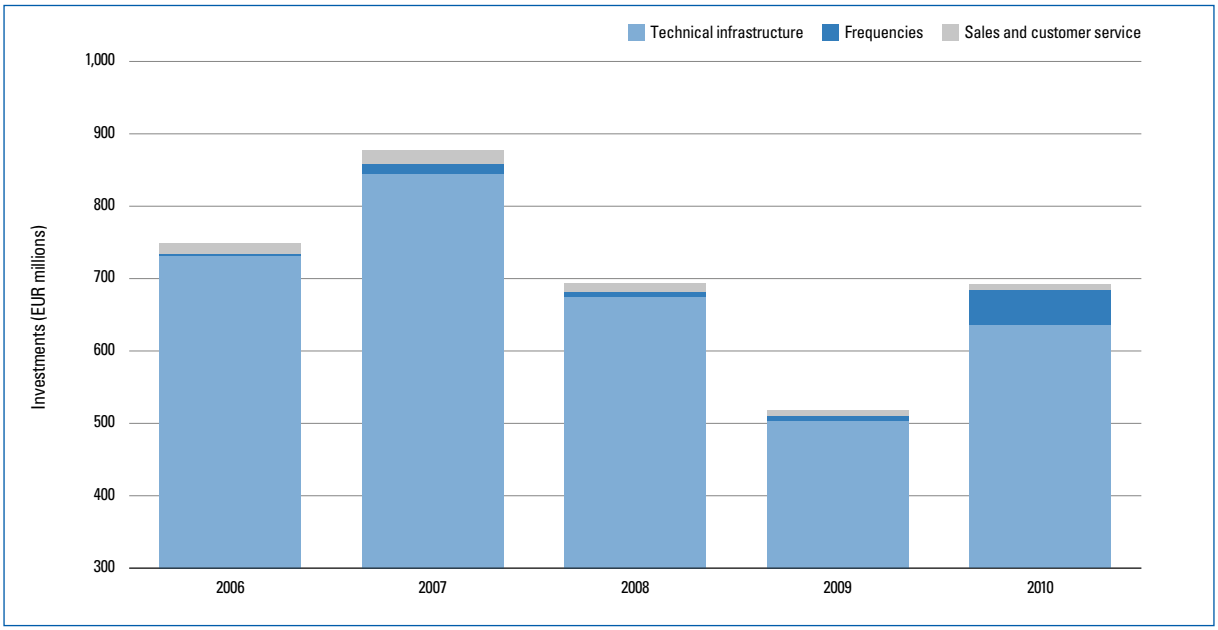
The data underlying this chart can be found in the Appendix (see page 96).

- A total of 27.94 billion call minutes were recorded in Austria in 2010, down 0.7% from 2009. Some 80% of call minutes (21.96 billion) can be attributed to mobile networks. 5.83 billion minutes came from fixed voice telephony, and 155 million minutes were used for online services.
- In comparison to the previous year's figures, 4% more call minutes were registered in mobile networks in 2010, but over the same period the number of minutes in the fixed network dropped by 13.4%. Starting from its already low level, the number of online minutes nearly halved between 2009 and 2010.

Section 6 | Business indicators

Investments

➡ LTE BOOSTS INVESTMENTS IN 2010



The chart above shows the development of investments in frequencies, technical infrastructure as well as sales and customer service on an annual basis. In this context, it is important to note that the values reported here are partly based on estimates and extrapolations from individual quarters for entire years. As a result, the exact figure for total investments cannot be calculated reliably.

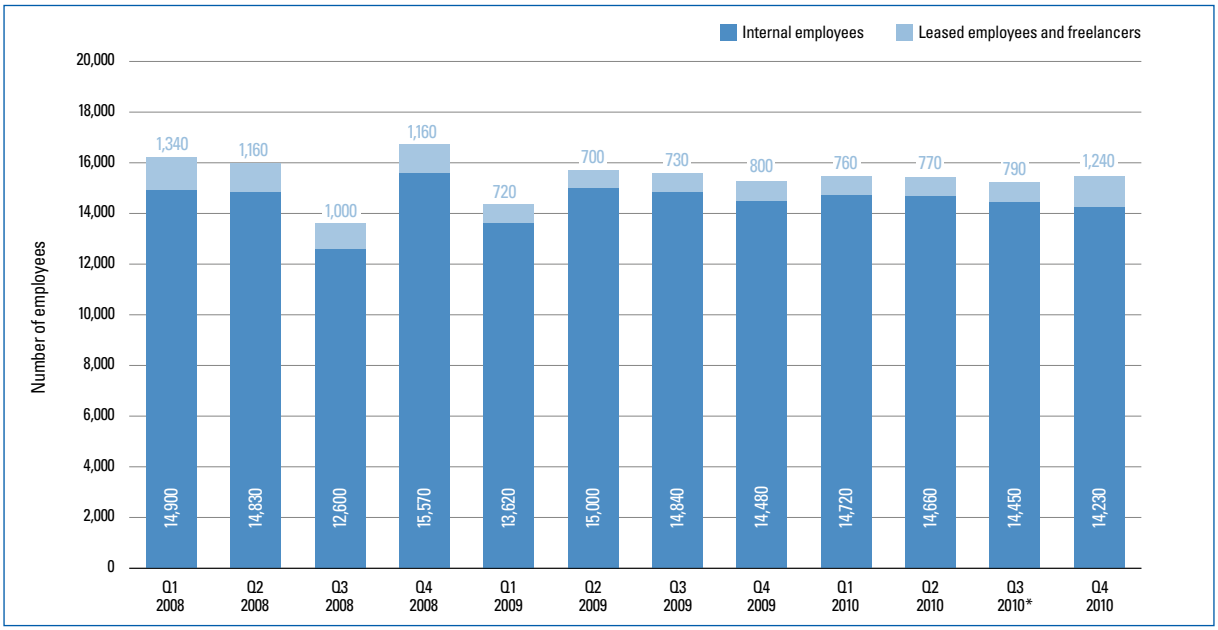
The investment volumes shown above only include those investments made directly by telecommunications enterprises. They do not include investments in upstream branches of industry.

The data underlying this chart can be found in the Appendix (see page 96).

- In 2010, investment activity recovered in the telecommunications sector, and after two consecutive years of declining investment levels, telecom operators again began to invest more heavily in technical infrastructure. In total, the volume of investments in this sector amounted to EUR 692.6 million in 2010. As in previous years, a vast majority of that amount (91.7%) was invested in the expansion of technical infrastructure, while 7.2% was devoted to acquiring frequencies and 1.1% to sales and customer service.
- It is especially worth noting the increased investments in technical infrastructure (up from EUR 503.5 to 635.2 million) and in frequencies (up from EUR 6.4 to 49.6 million) compared to the figures from 2009. The main factors behind these increases were the auction of LTE frequency licenses for next-generation mobile communications as well as the accompanying expansion of technical infrastructure.

Employees in the telecommunications sector

➡ NUMBER OF EMPLOYEES REMAINS STABLE IN 2010



The chart above shows the number of employees in the telecommunications sector, broken down into internal employees, leased personnel and freelancers, and expressed in terms of full-time equivalents (FTEs).

When interpreting these figures, please note that they only include staff employed directly by telecommunications enterprises. The figures do not include employees in supplier industries, external call-centre employees or outsourced positions.

- The total number of employees at telecommunications companies (internal employees as well as leased personnel and freelancers) has remained largely unchanged since Q2 2009. At the end of 2010, a total of 15,470 persons were employed in the telecommunications sector.
- Compared to the figure from Q4 2009, the number of internal employees (14,230 in Q4 2010) dropped slightly (-1.7%) in the course of the year 2010. In contrast, the number of freelancers and leased personnel rose markedly over the same period. At 1,240 employees, this figure rose by a full 55% compared to Q4 2009.

* Due to a post-hoc data correction, the deviation in the number of leased personnel from the figure reported in previous issues of the Telecom Monitor is greater than 5%.

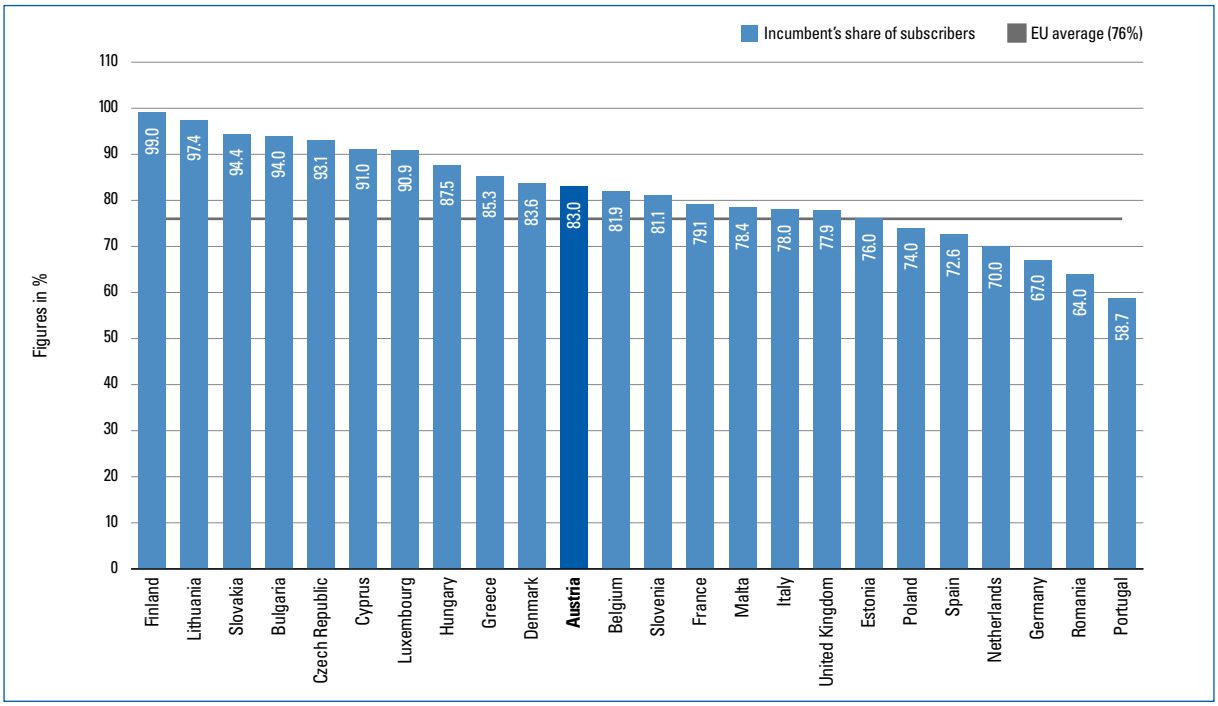
Section 7 | International comparisons

This section contains a number of international comparisons (generally across EU countries) of data on key areas of the telecommunications sector, ranging from fixed telephony and mobile communications to broadband and leased lines. The statistics contained in this section represent an extended and more in-depth analysis of the data on the Austrian market as discussed in Sections 1 to 6. The information in this section was derived almost entirely from the most recent Progress Report on the Single European Electronic Communications Market (with sources indicated separately for each chart), which is published by the European Commission on a yearly basis and contains extensive data from EU member states with regard to various telecommunications sector indicators.

The current (15th) Progress Report is available at *http://ec.europa.eu/information_society/policy/ecomm/library/communications_reports/annualreports/15th/ index_en.htm*.

Share of subscribers using the incumbent for direct access

➡ AUSTRIA IN MIDDLE RANGE AMONG EU COUNTRIES



Source: 15th Progress Report of the European Commission

The chart above provides an international comparison of the share of subscribers who use the incumbent operator (former monopolist) for direct access, expressed as a percentage of the total number of lines (as of July 2009).

- In Austria, 83% of fixed subscribers used the incumbent operator, A1 Telekom Austria, for direct access as of July 2009. As the average figure for EU countries is 76%, this places Austria in the middle range.
- The largest share of lines provided by incumbent operators (in this case, there are multiple incumbents) can be found in Finland (99%); at the other end of the scale, less than two-thirds of fixed subscribers use the former monopolist for direct access.

Average market share of incumbent operators on the EU voice telephony market

➡ A1 TELEKOM AUSTRIA BELOW EU AVERAGE FOR NATIONAL CALLS

	National calls (total)		Calls to mobile networks		International calls	
	EU average	A1 Telekom Austria	EU average	A1 Telekom Austria	EU average	A1 Telekom Austria
2006	60.9%	55.3%	60.0%	52.0%	53.6%	52.4%
2007	71.6%	61.8%	61.6%	59.3%	54.4%	57.9%
2008	70.2%	62.4%	59.5%	59.2%	50.6%	52.1%

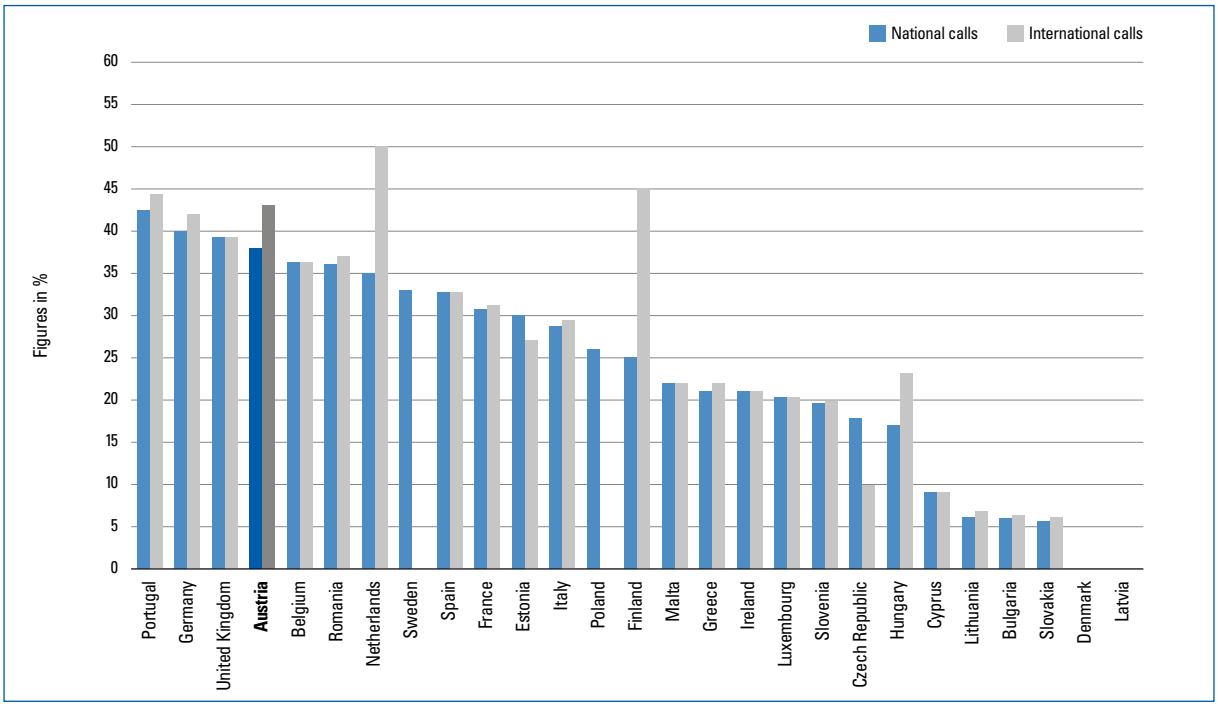
Source: 14th and 15th Progress Reports of the European Commission

The table above shows the respective market shares of the incumbent operator (former monopolist) as well as the average market share in the EU for calls to certain destinations. In this context, market shares are calculated on the basis of revenues from the various call services. The market shares for national calls, calls to mobile networks and international calls are shown separately in this comparison.

- In terms of national calls, A1 Telekom Austria's market share of 62.4% was below the EU average (70.2%) in 2008. As for mobile communications, this operator's market share was only just below that of the average EU incumbent operator (59.5%). On the other hand, the Austrian incumbent's share of the market for international calls (52.1%) is higher than the EU average of 50.6%.
- Over time, A1 Telekom Austria's share of the market for national calls has risen – despite declining retail revenues (see page 13). After a brief increase in 2007 due to the takeover of eTel, A1 Telekom Austria's market share for international calls in 2008 dropped back down to the level observed in 2006.

Subscribers using an alternative provider for fixed voice telephony services

➡ FREQUENT USE OF ALTERNATIVE PROVIDERS IN AUSTRIA



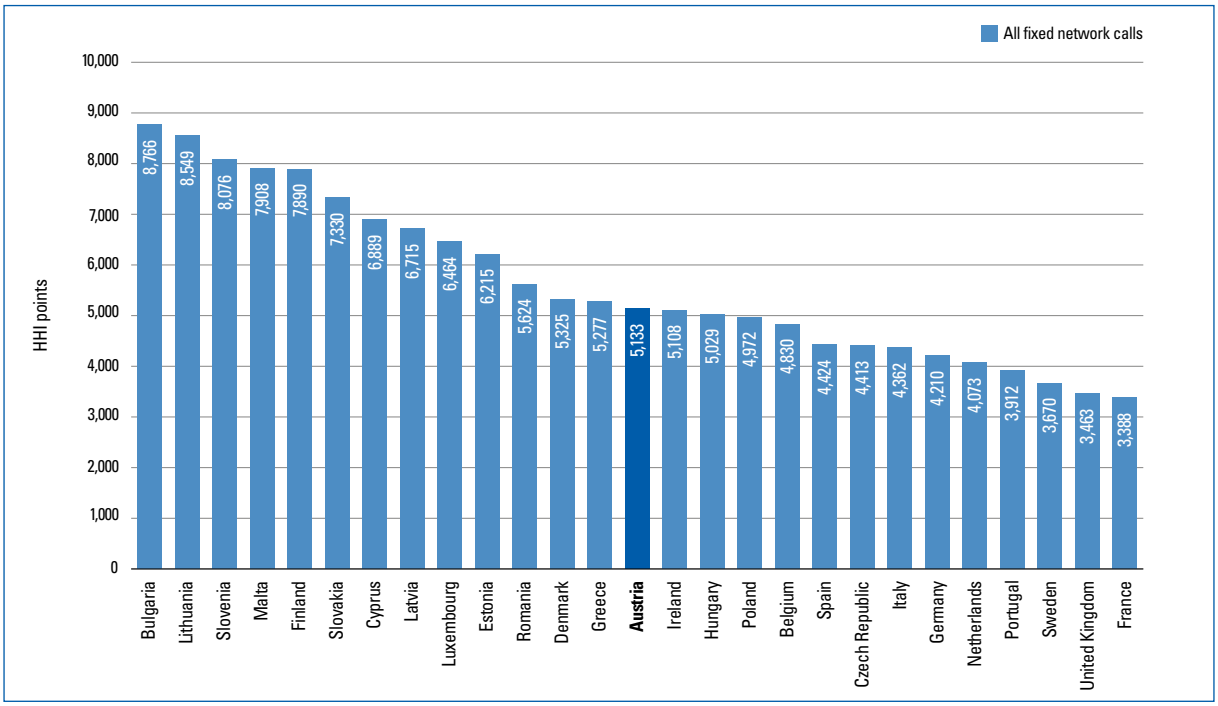
Source: 15th Progress Report of the European Commission

The chart above provides an international comparison (as of July 2009) of the percentage of fixed subscribers who do not use the incumbent (former monopolist), but an alternative provider for calls to national and international destinations. The data underlying this chart can be found in the Appendix (see page 97).

- In Austria, 38% of fixed subscribers use an operator other than the former monopolist for national calls. By international comparison, this is a fairly large share; the highest percentage can be found in Portugal (42.4%). Alternative fixed service providers are hardly used in Eastern European countries, where no more than one in five fixed subscribers choose an alternative provider.
- Alternative providers are used more frequently for international calls. In Austria, 43% of fixed subscribers use an alternative provider for this purpose. In this context, the data on the Netherlands and Finland are especially striking, as the use of an alternative provider for international calls is substantially higher than for national calls in those countries. Half of the fixed subscribers in the Netherlands use a service provider other than the incumbent for international calls, and in Finland this share is 45%.

Market concentration (Herfindahl-Hirschman Index)

➡ AUSTRIA IN MIDDLE RANGE



Source: 15th Progress Report of the European Commission

The chart above provides an international comparison of Herfindahl-Hirschman Index values (as of 2008) for calls from fixed networks to all destinations.

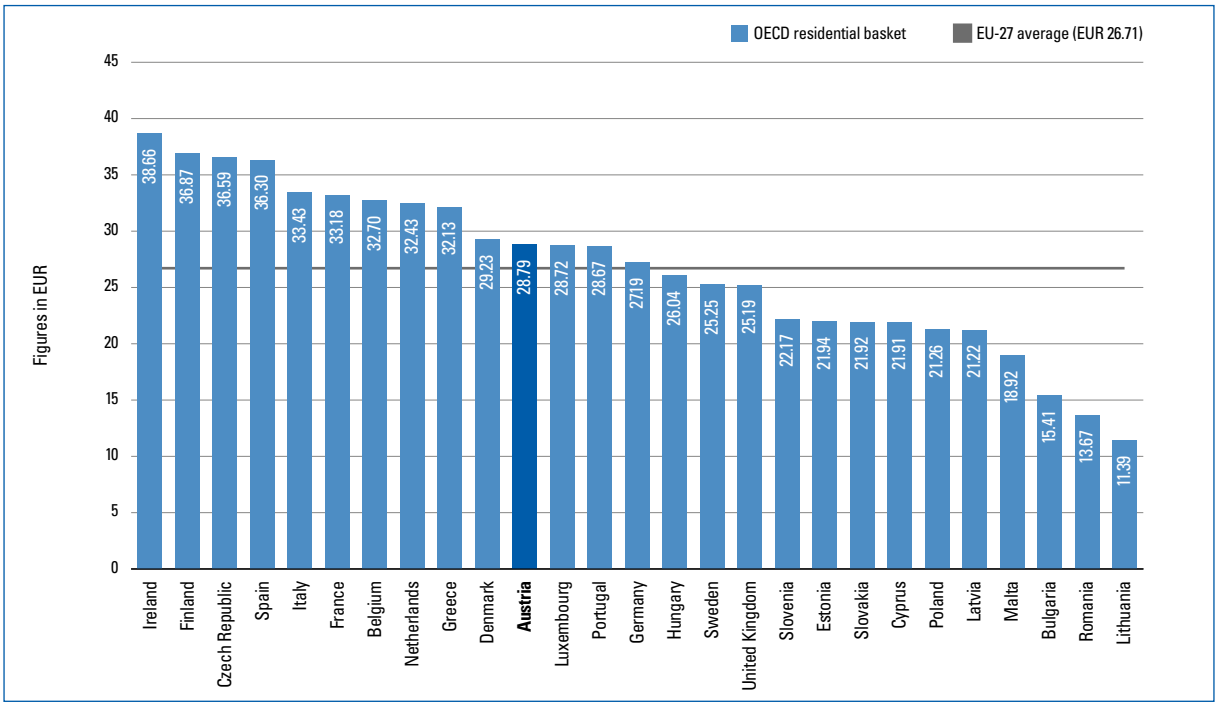
The Herfindahl-Hirschman Index (HHI) is an indicator used to measure market concentration. The index values represent the sum of squares of all competitors' market shares on a given market. Therefore, these index values can range from 0 to 10,000 points, with the latter figure representing a complete monopoly.

The data underlying this chart can be found in the Appendix (see page 98).

- With an index value of 5,133 points at the end of 2008, Austria was in the middle range among EU countries. The incumbent operator, A1 Telekom Austria, is clearly the market leader but is also clearly exposed to competition.
- The HHI is highest in Eastern European countries, where the incumbents only face very weak competition. The situation is entirely different in Western Europe, especially in France and the United Kingdom, where the HHI points to a very weak market leader and very strong competitors. In general, this chart highlights a clear disparity between east and west – which can mainly be attributed to the fact that the liberalisation of telecommunications markets in Eastern Europe began at a later point in time.

Monthly expenditure for fixed telephony: OECD residential composite basket

➡ AUSTRIA JUST ABOVE EU AVERAGE



Source: 15th Progress Report of the European Commission

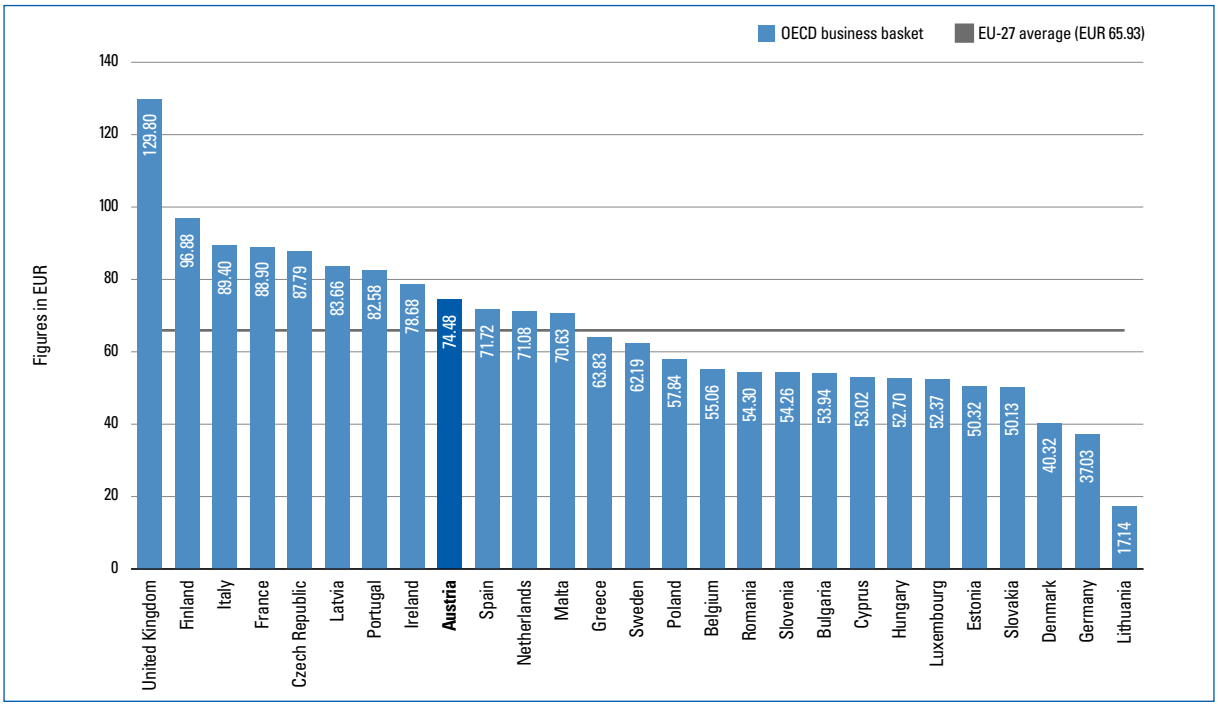
The chart above provides an international comparison of the average household's monthly expenditure on fixed telephone services (as of September 2009; including value-added tax). The calculations are based on a basket which includes the periodic base fee, the connection setup charge, national calls over various distances, international calls as well as calls to mobile networks. The underlying demand behaviour and weighting factors are designed to reflect a "standard European residential user".

When interpreting this international price comparison, it is also necessary to consider the purchasing power in each country (see Glossary, page 89).

- On average, fixed telephony in Europe costs EUR 26.71 per month. With an average monthly expenditure of EUR 28.79, Austria is just above the EU average (+7.8%). At EUR 27.19 (+1.8%), Germany's figure is closest to the EU average.
- The highest monthly expenditure on fixed telephony can be identified in Ireland, where the costs average EUR 38.66 per month – a full 44.7% above the EU average. These costs are especially low in Lithuania, where fixed subscribers only pay an average of EUR 11.39 (-57.4%) per month.

Monthly expenditure for fixed telephony: OECD business composite basket

➡ VAST DIFFERENCES BETWEEN INDIVIDUAL COUNTRIES



Source: 15th Progress Report of the European Commission

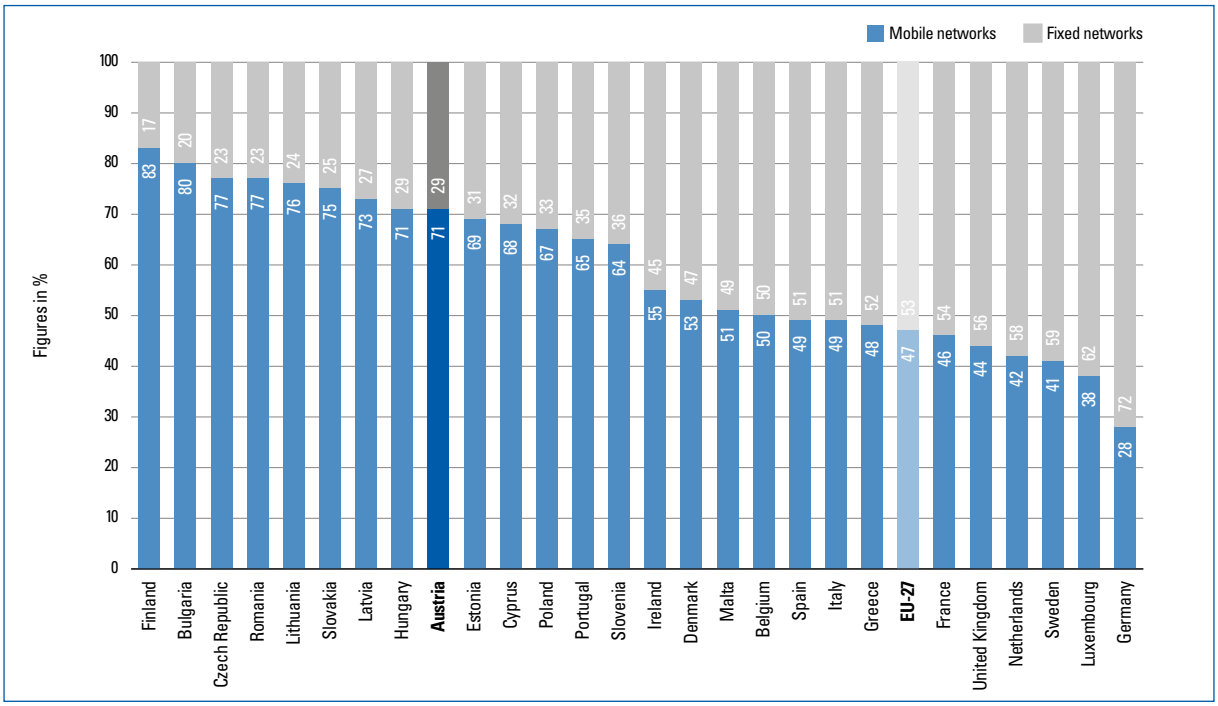
The chart above provides an international comparison of a business customer's average monthly expenditure on fixed telephone services (as of September 2009; not including value-added tax). The calculations are based on a basket which includes the periodic base fee, the connection setup charge, national calls over various distances, international calls as well as calls to mobile networks. The underlying demand behaviour and weighting factors are designed to reflect a "standard European business user".

When interpreting this international price comparison, it is also necessary to consider the purchasing power in each country (see Glossary, page 89).

- In the business segment, Austria's figures are not substantially different from those in the residential market. At EUR 74.48, the average business customer's monthly expenditure is also above the EU average (+13.0%).
- In this segment, the highest costs by far were identified in the United Kingdom, where business customers spend an average of EUR 129.8 per month on fixed telephony. The lowest average expenditure in the business segment was in Lithuania (EUR 17.14 per month). However, as mentioned above, it is also necessary to consider the purchasing power in each country when interpreting these data.

Outgoing fixed and mobile traffic minutes

➡ AUSTRIA: 7 OF 10 CALL MINUTES ORIGINATE FROM MOBILE NETWORKS



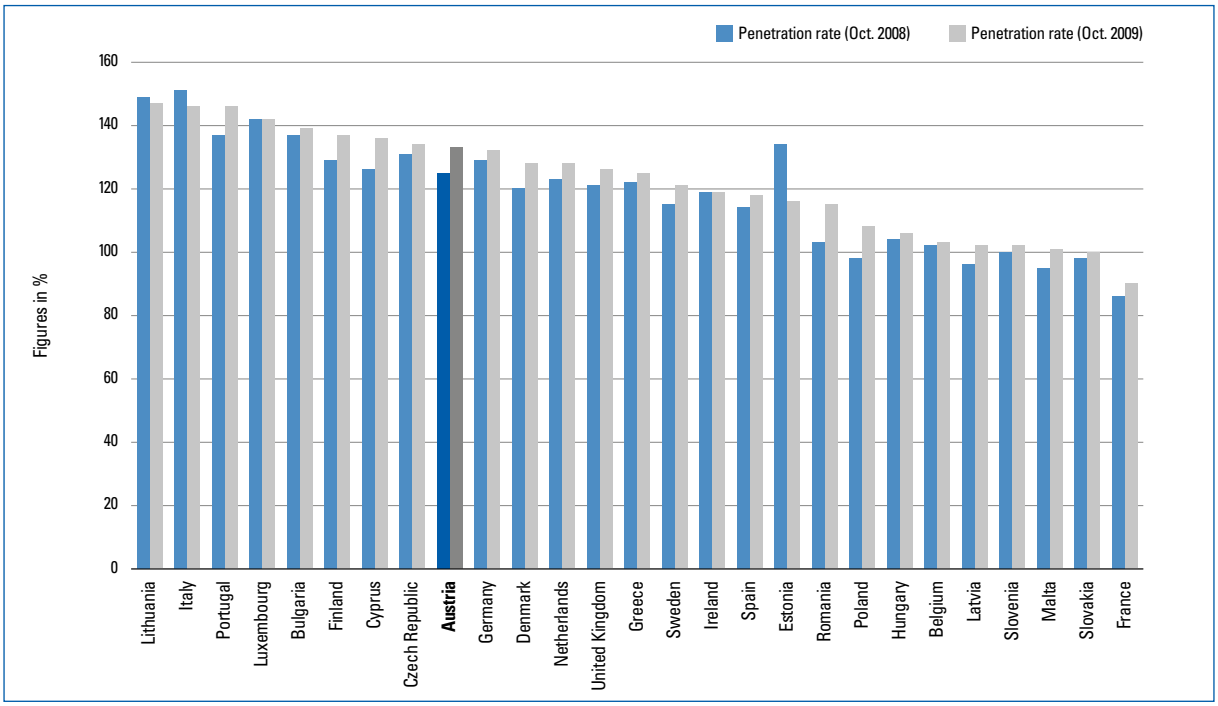
Source: 15th Progress Report of the European Commission

The chart above provides an international comparison of fixed and mobile networks' shares in the overall number of outgoing call minutes (as of 2008).

- In Austria, 7 out of 10 outgoing call minutes originated from mobile networks in 2008. This share is relatively high in comparison to the rest of the EU, where fixed networks are used slightly more often on average (53% of call minutes).
- One especially mobile-friendly country is Finland, where 83% of all outgoing call minutes are generated by mobile phones. On the other hand, the situation is vastly different in Germany, where only 28% of outgoing call minutes come from mobile networks.

Mobile penetration rate (2008 to 2009)

➡ MORE MOBILE PHONES THAN INHABITANTS IN MOST EUROPEAN COUNTRIES



Source: 15th Progress Report of the European Commission

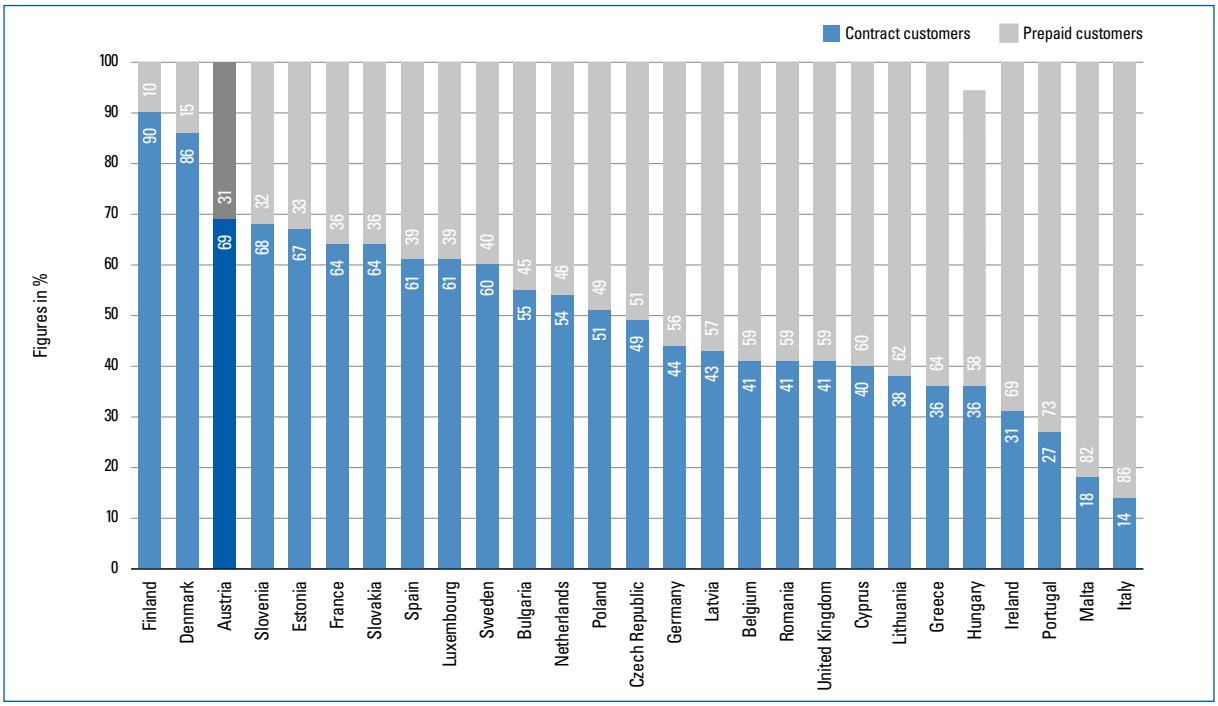
The chart above provides an international comparison of mobile penetration rates (as of October 2008 and October 2009). These rates are calculated by dividing the number of mobile subscribers by the population of each country (for further information on penetration rates, please refer to the Glossary, page 88).

The data underlying this chart can be found in the Appendix (see page 99).

- The mobile penetration rate in Austria came to 133% in 2009. In statistical terms, this means that there were four mobile phones (or SIM cards) for every three inhabitants in Austria. In this respect, Austria is heavily "oversupplied", which is also the case in (nearly) all EU member states.
- The rate is even higher in Lithuania, where there were three SIM cards for every two inhabitants in 2009. Lithuania has thus surpassed Italy, which had the highest mobile penetration rate in 2008. France was the only country where the number of inhabitants exceeded that of SIM cards in 2009; at that time, the mobile penetration rate stood at 90%.

Prepaid vs. postpaid customers

➡ LARGE SHARE OF CONTRACT CUSTOMERS IN AUSTRIA



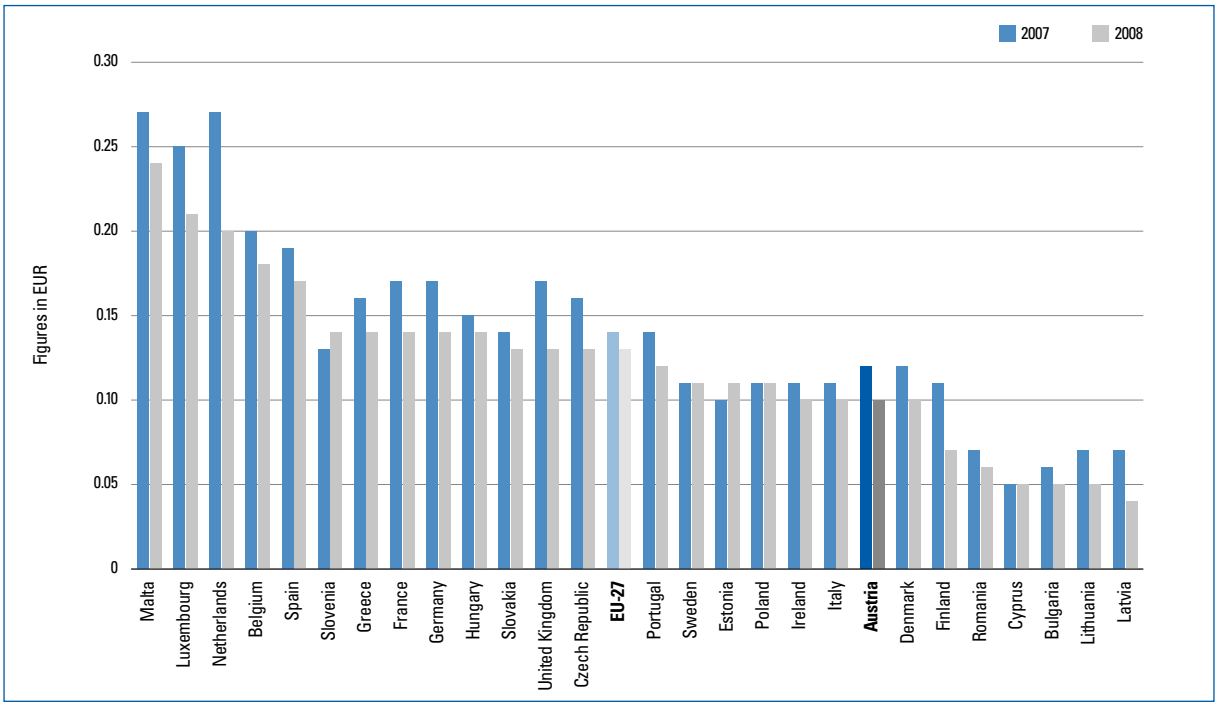
Source: 15th Progress Report of the European Commission

The chart above provides an international comparison of the share of prepaid and contract customers in mobile networks (as of October 2009). Prepaid customers use SIM cards on which a certain amount of credit (in the form of minutes, text messages, data volume or the like) is stored. Thus the customer pays for the service in advance. In the case of contract ("postpaid") customers, a bill for the service is sent after it is used (usually on a monthly basis).

- In October 2009, 90% of all Finnish mobile subscribers and 86% of all Danish customers used mobile services on the basis of a postpaid contract. In this respect, Austria was in third place in the EU, as 69% of all mobile customers in Austria used postpaid services in 2009.
- One interesting point is that the prepaid business model is still very common in Italy, where mobile telephony is extremely popular (see penetration rates, page 63): 86% of all mobile subscribers in Italy do not have a contract, but use prepaid cards for their mobile phones instead.
- As the chart shows, the percentage shares do not add up to 100% in the case of Hungary. However, the reason for this anomaly is not indicated in the Commission's Progress Report.

Average price per minute in mobile networks

➡ TELEPHONE CALLS IN AUSTRIA COMPARATIVELY INEXPENSIVE



Source: 15th Progress Report of the European Commission

The chart above provides an international comparison of average prices per call minute in mobile networks. The price per minute is calculated on the basis of revenues from mobile call charges divided by the number of call minutes used. However, the data for Austria also include revenues from periodic base fees and activation charges, which creates an upward distortion in the price per minute.

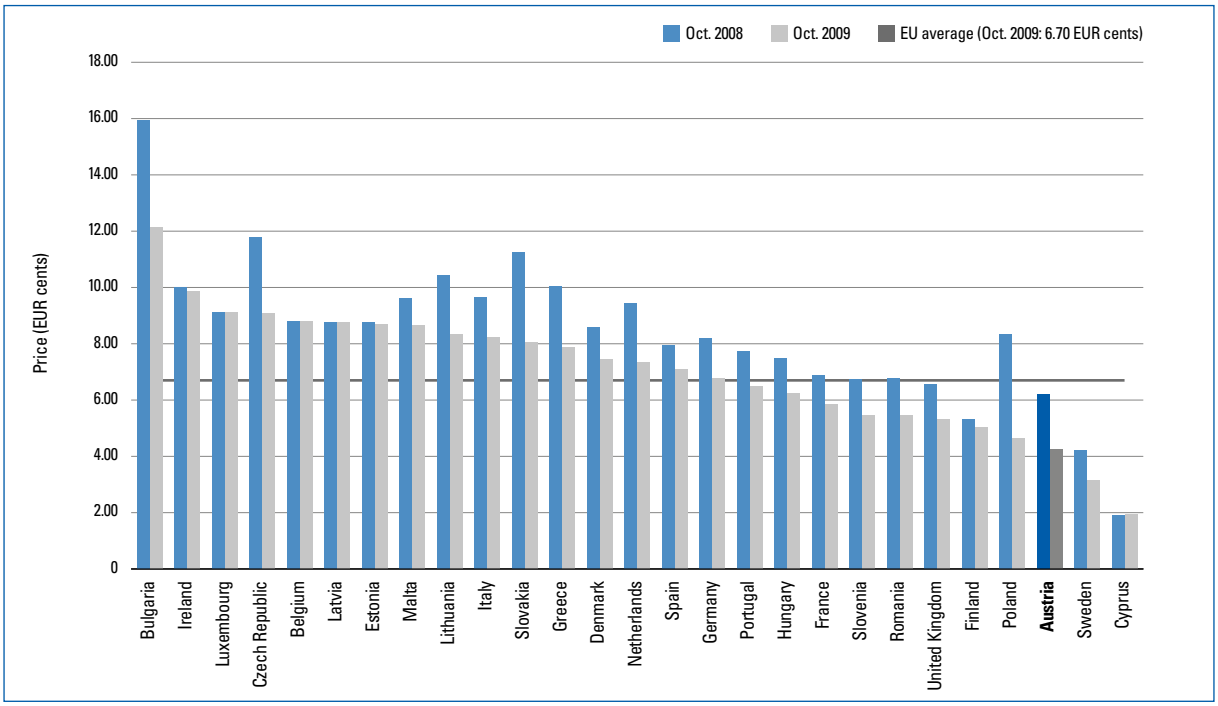
When interpreting this international price comparison, it is also necessary to consider the purchasing power in each country (see Glossary, page 89).

The data underlying this chart can be found in the Appendix (see page 100).

- Although the revenues from periodic base fees and activation charges are included in the figures for Austria, the calculated average price per minute (EUR 0.10) still placed the country among the least expensive EU member states in 2008. At the time, the EU average was EUR 0.13 per minute.
- The price per minute was lowest in Lithuania (EUR 0.04 per minute), while the most expensive country was Malta (EUR 0.24 per minute) in 2008.
- The only EU countries where the price per minute for mobile calls rose between 2007 and 2008 were Slovenia and Estonia.

Interconnection fees for termination in mobile networks

➡ REDUCTION OF TERMINATION CHARGES: AUSTRIA IN THE TOP 3



Source: 15th Progress Report of the European Commission

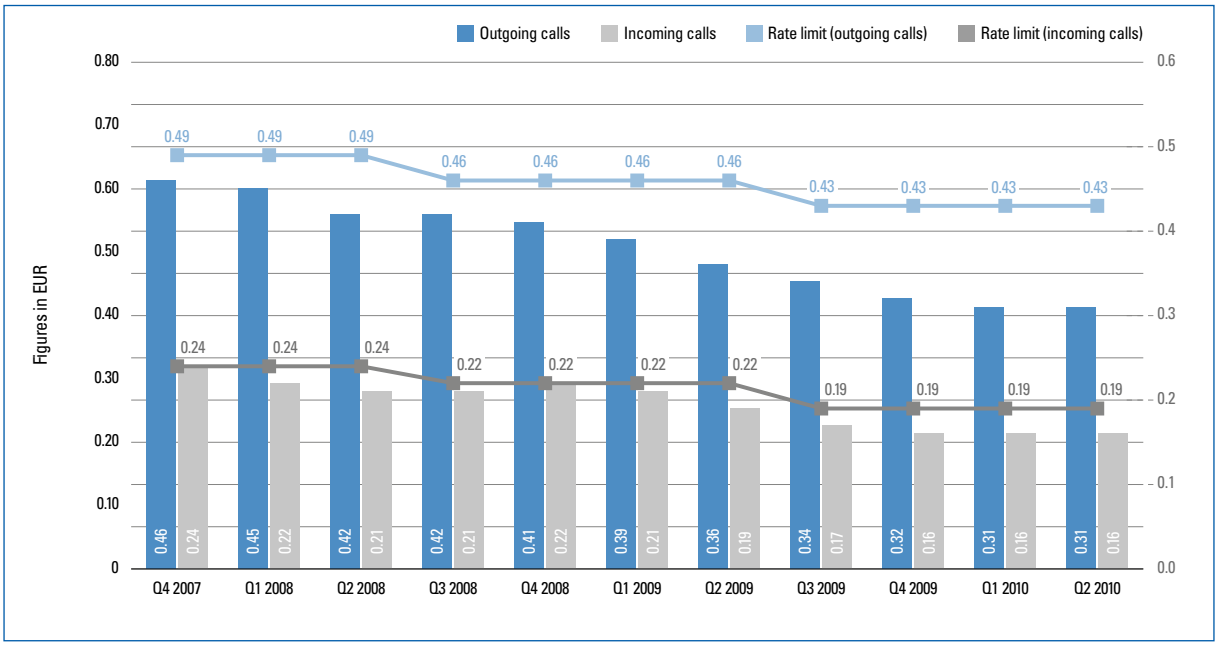
The chart above provides an international comparison of mobile termination charges. Telecommunications service providers charge each other (at the wholesale level) for termination services, that is, the routing of incoming calls to their mobile networks.

The data underlying this chart can be found in the Appendix (see page 101).

- Austria is among those European countries in which the lowest termination charges prevail (October 2009: 4.25 euro cents per minute). These charges were only lower in Sweden (3.14 euro cents) and Cyprus (1.95 euro cents).
- In contrast, mobile termination is rather expensive in Bulgaria (12.14 euro cents) as well as Ireland (9.86 euro cents). Overall, the chart clearly shows that interconnection charges were lowered in all EU countries, in some cases even significantly (Poland, Slovakia, Bulgaria, etc.), between October 2008 and October 2009. In Austria, termination charges were also reduced from 6.21 to 4.25 euro cents (i.e. by 31.6%) per minute during that period.

Average retail roaming rates for calls within the EU/EEA

➡ ROAMING CHARGES CONTINUE TO FALL



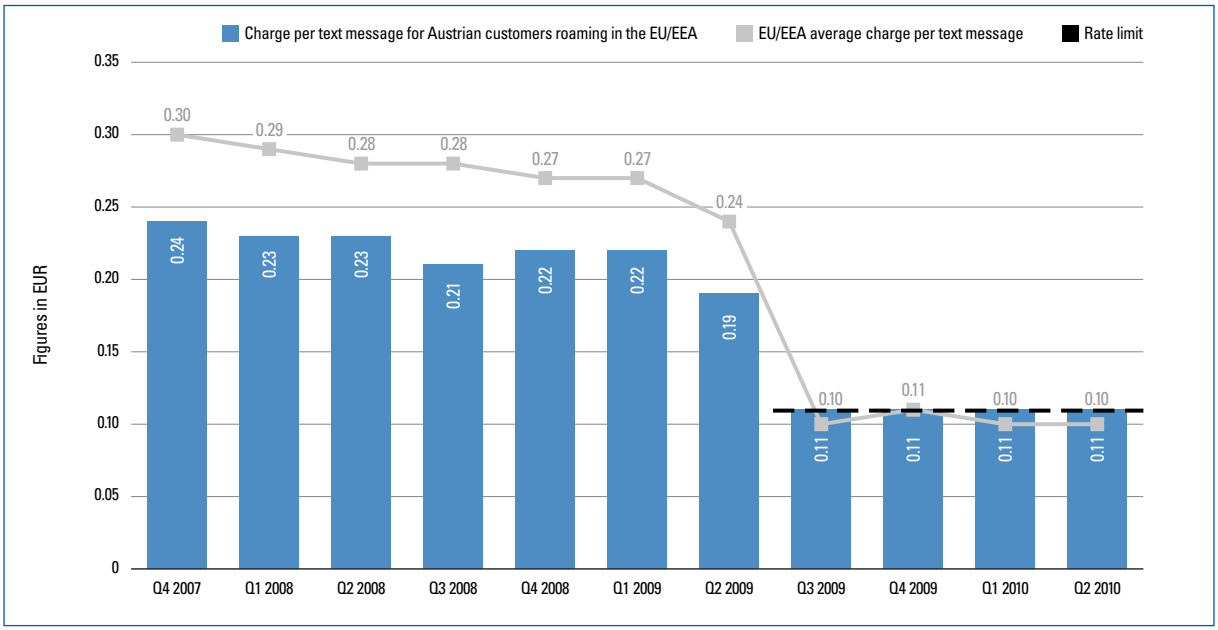
Source: ERG/BEREC International Roaming Benchmark Data Reports

The chart above shows the average retail roaming rates (see Glossary, page 88) charged to Austrian subscribers for incoming and outgoing calls while roaming within the EU/EEA as well as the price caps prescribed by the Roaming Regulation.

- Roaming charges have been declining steadily in Austria. At the end of Q2 2010, the average charge for outgoing calls came to EUR 0.31 per minute, approximately three-quarters of the maximum charge permitted under the Roaming Regulation.
- Incoming roaming charges averaged EUR 0.16 per minute in the first half of 2010, roughly 84% of the maximum permitted amount.

Average retail SMS roaming charges within the EU/EEA

➡ SMS ROAMING CHARGES REGULATED SINCE SUMMER 2009



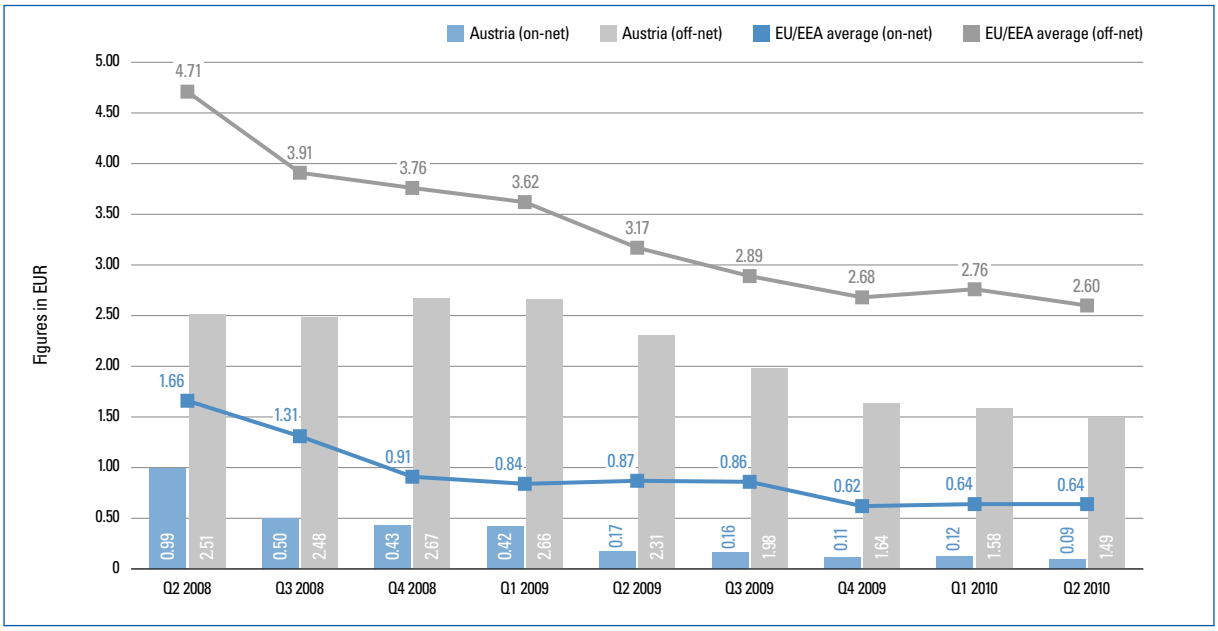
Source: ERG/BEREC International Roaming Benchmark Data Reports

The chart above shows the average amount charged to Austrian subscribers and EU/EEA subscribers for sending a text message within the EU/EEA as well as the price cap applicable to SMS roaming since the Roaming Regulation was expanded in the summer of 2009 (see Glossary, page 88).

- In Austria, the average SMS roaming charges have consistently remained below the EU average. In the summer of 2009, price caps were also imposed on text messages sent while roaming in the EU/EEA, thus reducing these charges by more than 50%.
- As the calculation of the average roaming charge for text messages also includes tariffs which are not subject to price regulations, the value for Austria may exceed the defined price cap slightly, but these limits are observed in accordance with the provisions of the law.

Average retail data roaming rates within the EU/EEA (per megabyte)

➡ DATA ROAMING CHARGES BELOW EU/EEA AVERAGE



Source: ERG/BEREC International Roaming Benchmark Data Reports

The chart above shows the average charges per megabyte for data roaming (see Glossary, page 88) within the EU/EEA, broken down into on-net and off-net prices for Austria and the corresponding EU/EEA averages. At present, there is only a legally defined price cap for data roaming at the wholesale level, that is, between mobile network operators (this price cap is reduced on a yearly basis).

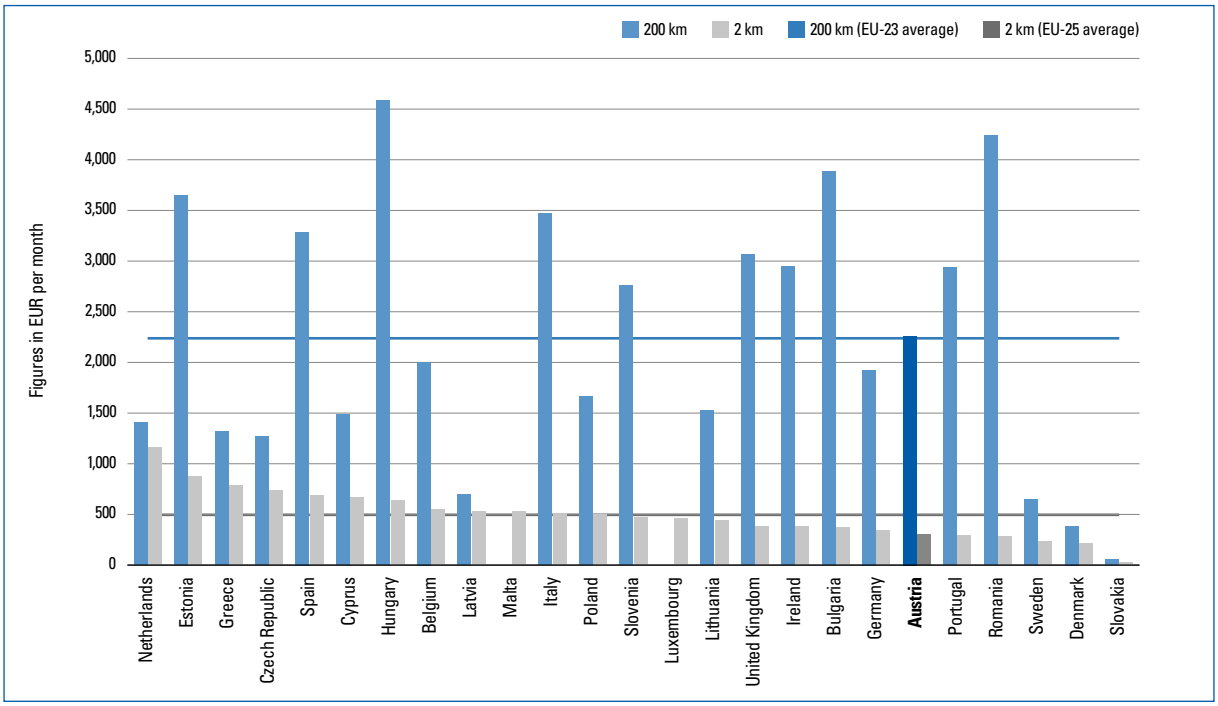
On-net: The visited network operator belongs to the same corporate group (majority shareholder) as the home network operator.

Off-net: The visited network operator does not belong to the same corporate group (majority shareholder) as the home network operator.

- The charges for data roaming (both on-net and off-net) have declined steadily since Q4 2007. At the beginning, Austria's rates were substantially lower than the EU/EEA average (off-net: 49.3% of the average; on-net: 75.3% of the average).
- At the end of Q2 2010, Austria's average data roaming charges were still lower than the EU/EEA average values, but the margin had narrowed in the case of off-net roaming. At that time, Austria's average off-net roaming rate came to 57.3% of the average EU/EEA rate. In contrast, the average charge of only EUR 0.09 per megabyte for on-net roaming in Austria was just 14% of the EU/EEA average.

International leased line prices (2 Mbit/s)

➡ AUSTRIA'S LEASED LINE PRICES AMONG THE LOWEST IN EUROPE



Source: 15th Progress Report of the European Commission

The chart above provides an overview of international prices for leased lines (see Glossary, page 88) with a capacity of 2 Mbit/s in Europe (as of 2009). When interpreting these data, it is important to note that rate packages, billing structures, market structures, etc. are not homogeneous, which may lead to a certain degree of imprecision. As data are not available from all EU member states for all of the categories shown, the EU average may be distorted to a certain extent.

In the 200 km category, no data are available on Luxembourg, Malta, Finland and France for 2009; in the 2 km category, the same applies to Finland and France for 2009.

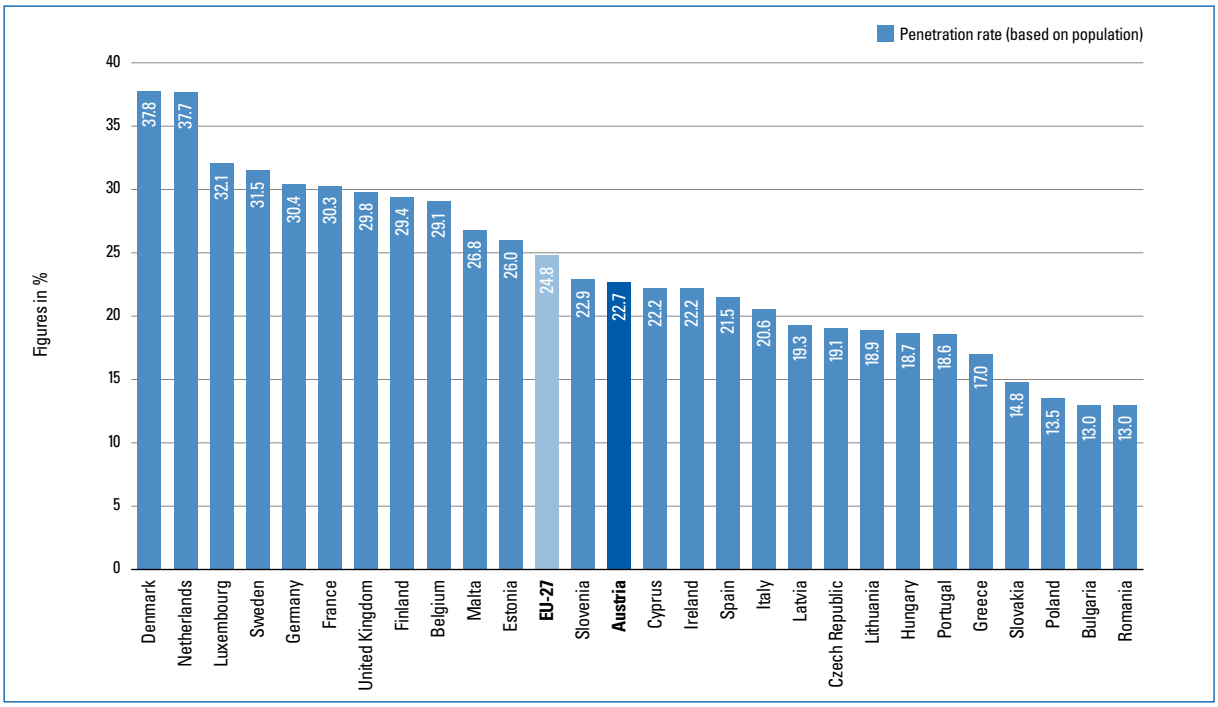
When interpreting international price comparisons, it is also necessary to consider the purchasing power in each country (see Glossary, page 89).

The data underlying this chart can be found in the Appendix (see page 102).

- In the depiction of prices for 2 Mbit/s leased lines, a distinction is drawn on the basis of the length of the line, namely between "long" 200 km lines and "short" 2 km lines. Austria's average price for a long leased line is close to the EU average of approximately EUR 2,250 per month.
- At the same time, the price of a 2 km leased line in Austria is substantially lower than the EU average of approximately EUR 500 per month.

Fixed broadband penetration

➡ ONE IN FIVE AUSTRIANS HAS FIXED BROADBAND ACCESS



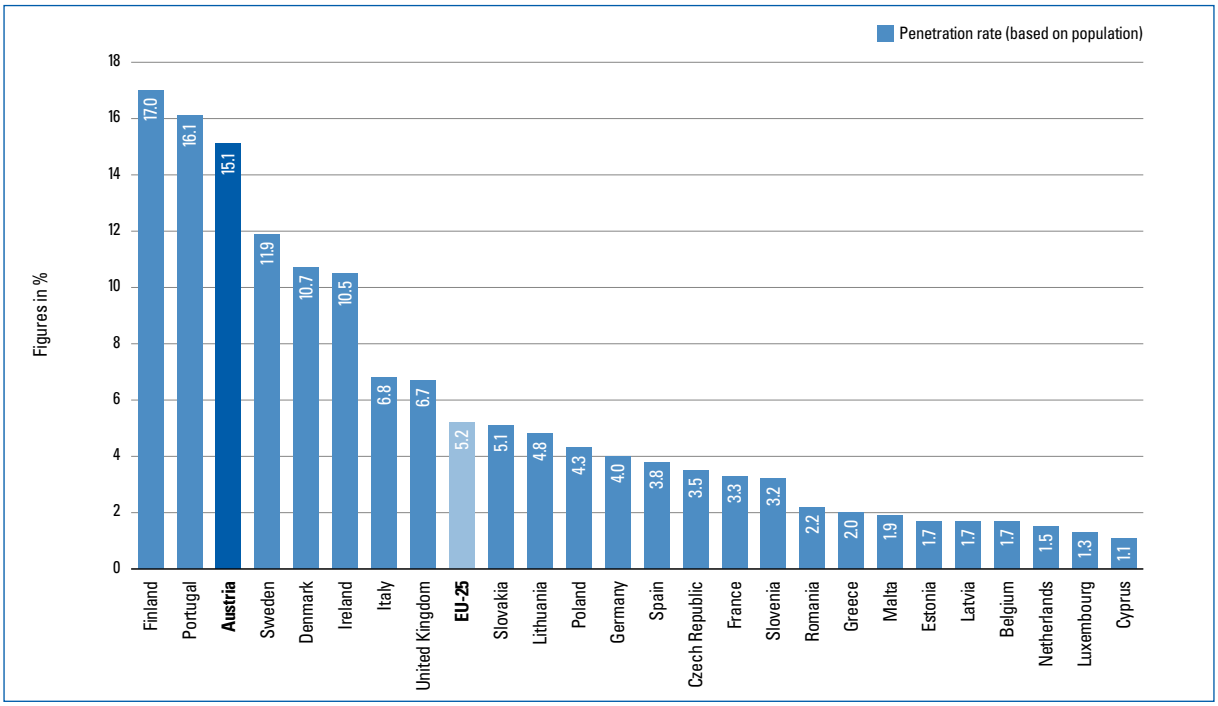
Source: 15th Progress Report of the European Commission

The chart above provides an international comparison of broadband penetration rates based on fixed infrastructure such as DSL, coaxial cable, unbundled lines (see Glossary, page 90), wireless, etc. (as of January 2010). The penetration rate is calculated here as the number of broadband connections divided by the total population. For further information on penetration rates, please refer to the Glossary (page 88). Mobile broadband connections are not included in these figures.

- With a broadband penetration rate of 22.7%, Austria was just slightly below the EU average (24.8%) in January 2010. From a purely statistical standpoint, therefore, one out of five Austrians has fixed broadband access.
- In this context, the highest penetration rates were observed in Denmark (37.8%) and the Netherlands (37.7 %), while broadband penetration was lowest in Bulgaria and Romania (13% each).

Mobile broadband penetration

➡ AUSTRIA AMONG TOP 3 IN MOBILE BROADBAND PENETRATION



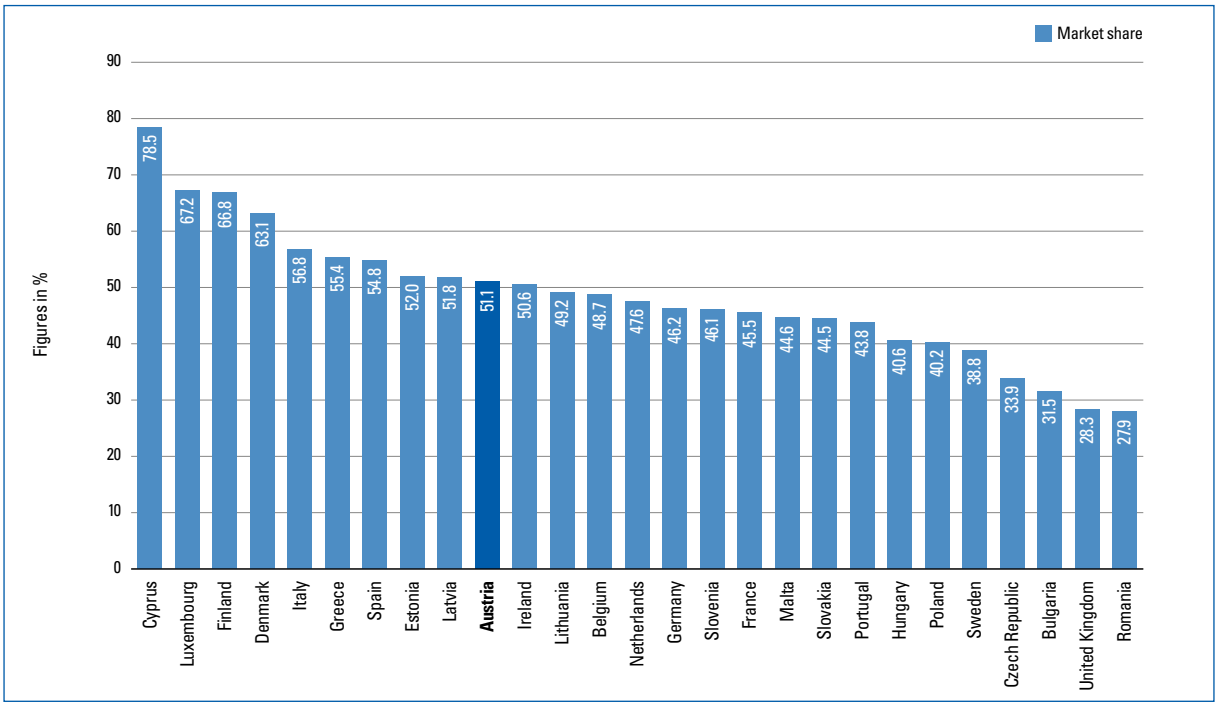
Source: 15th Progress Report of the European Commission

The chart above provides an international comparison of mobile broadband penetration rates (as of January 2010). The penetration rate is calculated as the number of mobile broadband connections divided by the total population. For further information on penetration rates, please refer to the Glossary (page 88). Broadband connections based on fixed infrastructure (such as ADSL, coaxial cable, etc.) are not included in these figures.

- In contrast to fixed broadband, Austria's mobile broadband penetration rate is very high by international comparison. At 15.1% (as of January 2010), this penetration rate was still lower than fixed broadband penetration, but it does put Austria in third place throughout the EU. The only EU countries with higher mobile penetration rates are Finland (17%) and Portugal (16.1%).
- The average rate in the EU is 5.2%, and even economically strong countries such as Germany (4%), France (3.3%) and the Netherlands (1.5%) exhibit below-average penetration rates.

Incumbent operator's share of broadband market

➡ INCUMBENT HOLDS OVER 50% OF BROADBAND MARKET



Source: 15th Progress Report of the European Commission

The chart above provides an international comparison of the share of the retail broadband market held by each incumbent operator (former monopolist) as of January 2010. These figures only include broadband connections based on fixed infrastructure (e.g. DSL, coaxial cable, etc.). Mobile broadband connections are not included.

■ Not including mobile broadband connections, Austria's market leader and incumbent A1 Telekom Austria held a 51.1% share of the retail broadband market in January 2010. Retail broadband market shares exhibit a relatively narrow distribution in Europe; in 18 out of 27 EU countries, the incumbent holds a 40% to 60% share of this market.

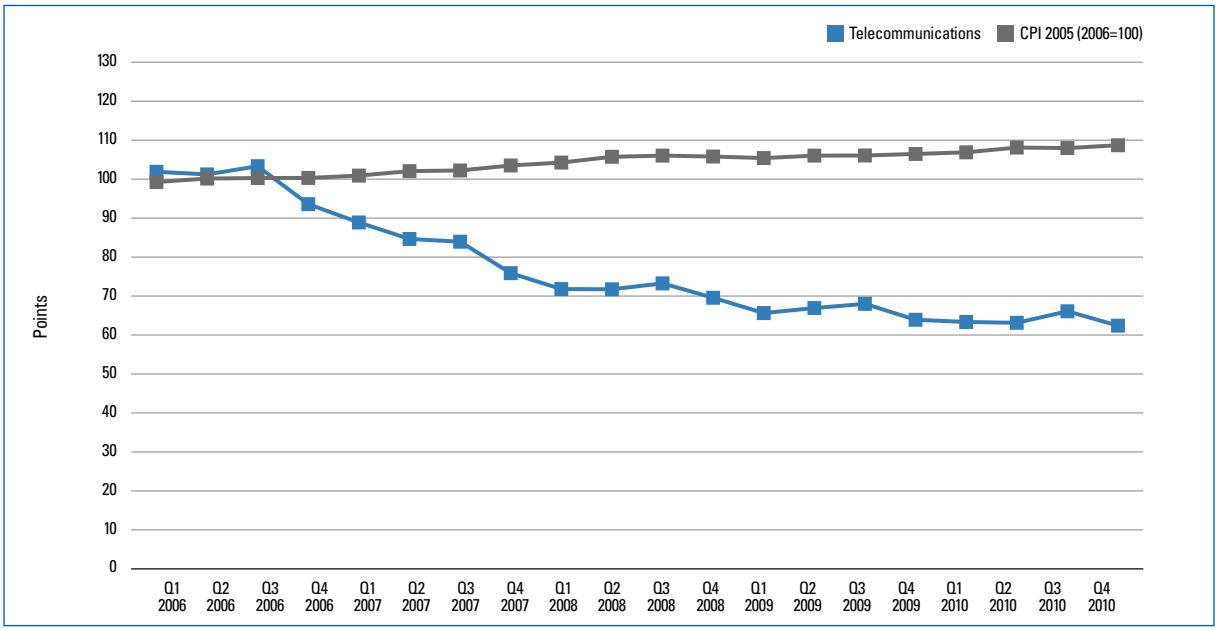
Section 8 | Telecom Index, information and communications technologies

This section essentially consists of two parts: In the first part, the RTR Telecom Index is presented and explained. This index reflects calculated prices on retail markets over time, thus providing a meaningful general overview of price developments in the telecommunications sector.

In addition, this section also contains statistics on information and communications technologies (ICTs) in Austria; the data are based not only on supply-side surveys, but also on direct customer surveys. Moreover, this section also addresses various dimensions of the Networked Readiness Index (NRI) and Austria's current position in that ranking. The NRI measures a country's potential to participate in and exploit ICT developments. Finally, this section presents statistics regarding the general significance of the ICT sector in Austria, measured on the basis of various indicators.

Telecom Index – Overview

➡ TELECOM INDEX STABLE SINCE EARLY 2009



Source: RTR (CPI: Statistics Austria)

The chart above compares the Telecommunications Index with Austria's Consumer Price Index (CPI 2005; normalised to 2006). The Telecommunications Index depicts the development of (calculated) retail prices in the telecommunications sector.

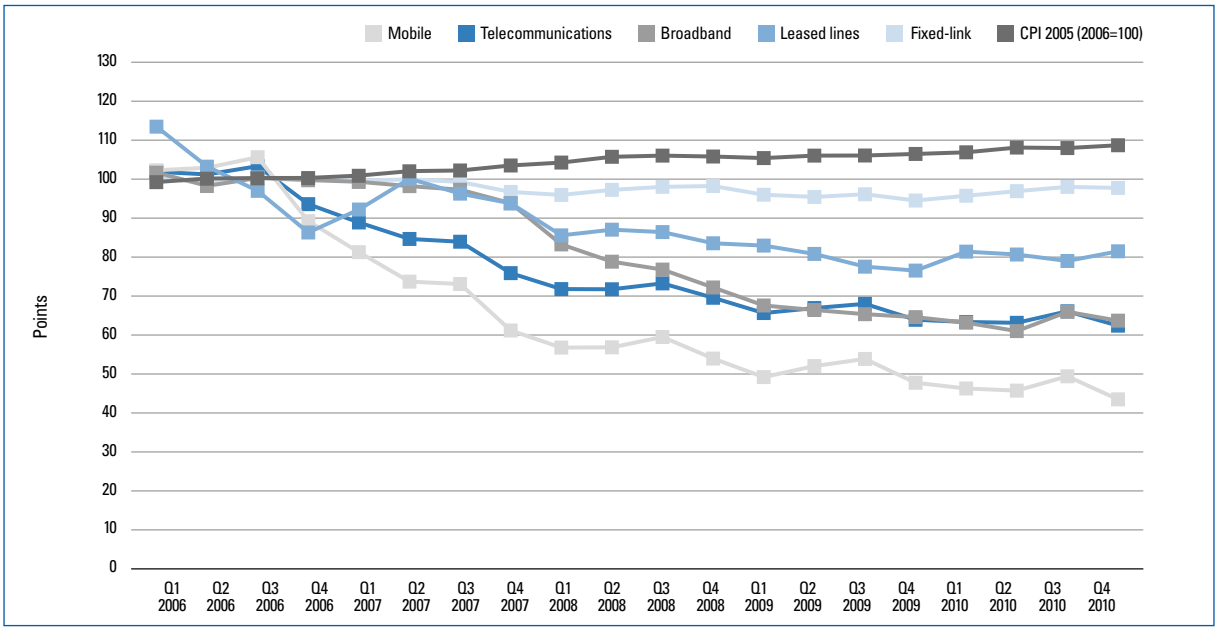
A full description of the index can be found in the Glossary (page 89).

The data underlying this chart can be found in the Appendix (see page 103).

- The Telecommunications Index is calculated from individual sub-indices reflecting price developments in the fixed, mobile, broadband and leased line segments. In the chart above, this index is compared to Austria's CPI (2006 = 100) as an indicator of more general price developments. The chart clearly shows that the Telecommunications Index has declined drastically since 2006, falling to a level approximately 33% below the more general price curve in 2010.
- The divergence of the two indices once again became less pronounced in the course of the year 2009, and since that time the Telecommunications Index has declined only very gradually.

Telecom Index – Detailed view

➡ MOBILE COMMUNICATIONS DRIVING PRICE DECREASES



Source: RTR (CPI: Statistics Austria)

The chart above provides a comparison of the four sub-indices included in the Telecommunications Index (fixed network, mobile networks, broadband, leased lines) with the Austrian Consumer Price Index (CPI 2005, normalised to 2006). The Telecommunications Index depicts the development of (calculated) retail prices in the telecommunications sector.

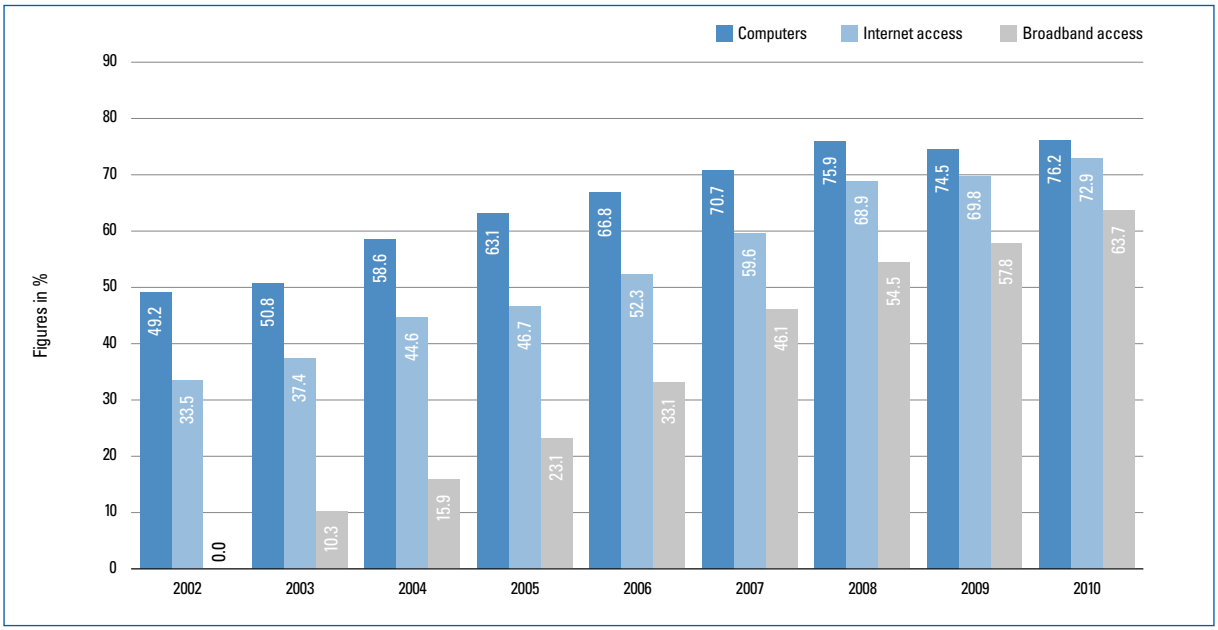
A full description of the index can be found in the Glossary (page 89).

The data underlying this chart can be found in the Appendix (see page 103).

- A closer look at the individual components of the Telecommunications Index reveals the reason why prices have fallen since the year 2006. While prices for fixed telephone services have remained below the general development of prices (but have still largely held steady), prices in the mobile communications segment have declined drastically, reaching their most recent low in Q4 2010.
- The other sub-indices (broadband, leased lines) have also fallen considerably; in the broadband segment, the decline in prices only began to show itself clearly in Q1 2008. This development was triggered by the increased use of mobile broadband, which is not included in the calculation of the index but had a marked influence on the prices of fixed broadband connections.

Computers, Internet access and broadband in households

➡ RAPID DEVELOPMENT IN AUSTRIAN HOUSEHOLDS



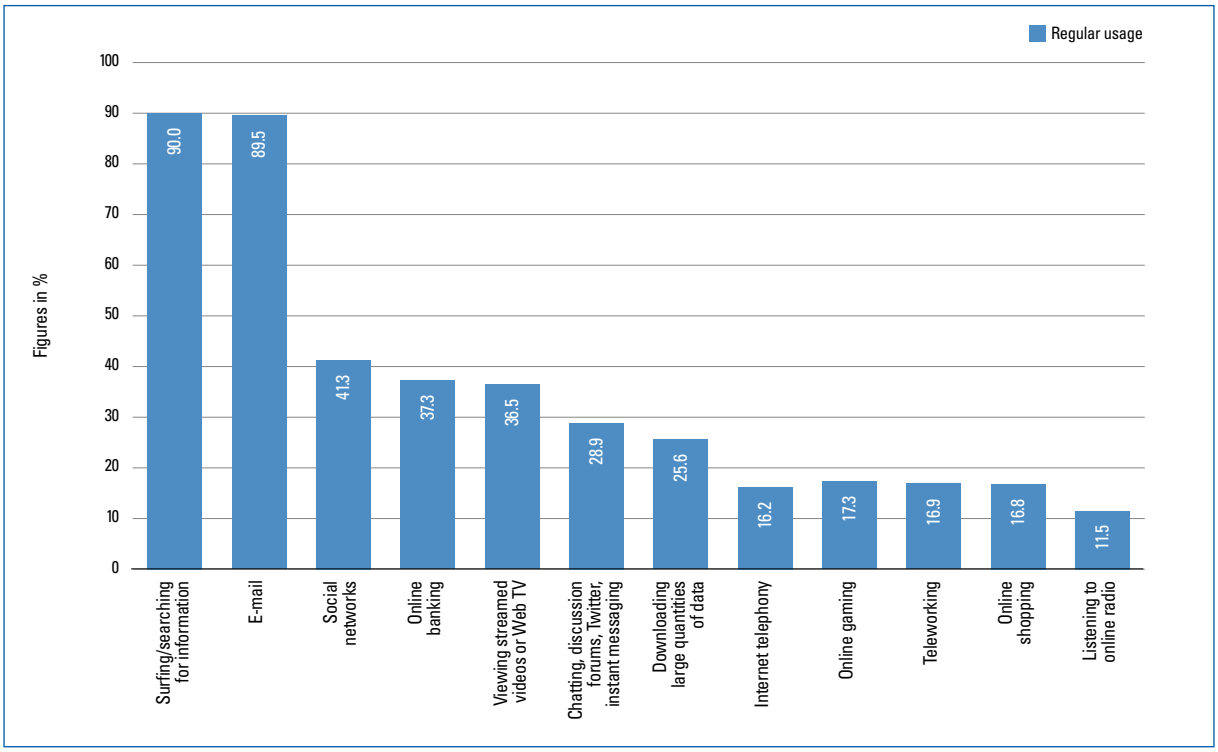
Source: Statistics Austria

The chart above shows the respective shares of households in Austria which have a computer, Internet access and/or broadband access (fixed or mobile) over time. For further information on penetration rates, please refer to the Glossary (page 88). The values indicated above are based on demand-side survey data.

- Since the year 2002, the number of households in Austria which have a computer has increased steadily. Whereas just under half of households had a desktop or laptop computer in 2002, this share had risen to more than three-quarters by the year 2010. Nearly every one of those households also had Internet access.
- The forms of Internet access have also changed substantially since 2002: Whereas broadband was practically non-existent in 2002, 10% of households in Austria had this type of connection just one year later. By the end of 2010, this figure had risen to 63.7% of households in Austria.

Internet usage in households

➡ SOCIAL NETWORKS IN THIRD PLACE



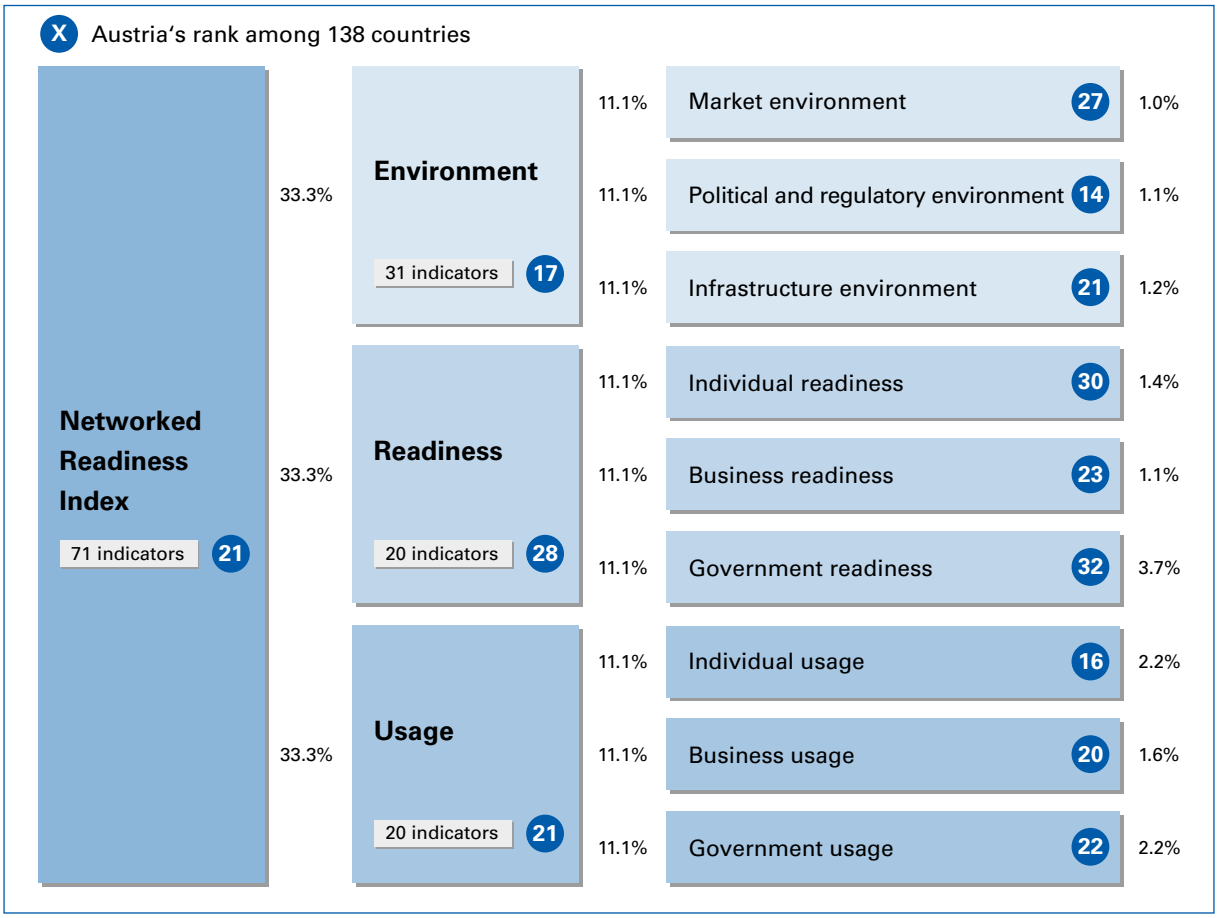
Source: RTR: Demand-side survey, 2011

The chart above shows the percentage of the Austrian population that regularly uses specific Internet applications. In this context, "regular use" is defined as use of the relevant application at least once per week. The values indicated above are based on customer survey data.

- RTR's most recent demand-side survey (2011) of Austrian households clearly reveals the main areas of Internet usage: According to the survey, 90% of households in Austria use the Internet regularly to surf the Web and find information, and to send and receive e-mail.
- Social networks such as Facebook are now the third most commonly used application, followed by online banking and viewing streaming videos or Web TV. Services such as online shopping or online radio were not used as regularly in early 2011.

Networked Readiness Index – Austria

➡ AUSTRIA STILL AMONG TOP NATIONS DESPITE LOWER RANKING



Source: World Economic Forum

The chart above shows the structure of the Networked Readiness Index (NRI) as well as the rankings assigned to Austria in each area (as of April 2011). A detailed description of the NRI can be found in the Glossary (page 88).

- In the current NRI ranking (2010-2011), Austria came in 21st place, which is a rather mediocre standing among industrialised nations. However, Austria has still been able to claim a fairly high spot among the world's leading ICT nations.
- Compared to the NRI 2009-2010, Austria moved down one spot in the overall ranking. Despite marked improvements in the individual readiness pillar, where Austria advanced from 49th to 30th place, the country's rank in the business readiness pillar slipped from 14th to 23rd place. The composition of the NRI changed slightly compared to the previous year: A number of indicators in which Austria earned high marks (e.g. the use of social networks) were added to the individual readiness pillar. In the business readiness pillar, on the other hand, several less favourable indicators were added, including the impact of ICT on new organisational models.

Networked Readiness Index – International

➡ SCANDINAVIAN NATIONS LEADING THE WAY IN ICT FIELD

Austria's rank		2010-2011 **21** (out of 138 countries)	2009-2010 **20** (out of 133 countries)	2008-2009 **16** (out of 134 countries)	2007-2008 **15** (out of 127 countries)	2006-2007 **17** (out of 122 countries)	2005-2006 **19** (out of 111 countries)	2004-2005 **19** (out of 104 countries)
Top-ranked countries	1	Sweden	Sweden	Denmark	Denmark	Denmark	USA	Singapore
	2	Singapore	Singapore	Sweden	Sweden	Sweden	Singapore	Iceland
	3	Finland	Denmark	USA	Switzerland	Singapore	Denmark	Finland
	4	Switzerland	Switzerland	Singapore	USA	Finland	Iceland	Denmark
	5	USA	USA	Switzerland	Singapore	Switzerland	Finland	USA

Source: World Economic Forum

The chart above shows Austria's overall ranking in the Networked Readiness Index (NRI) over time as well as the top-ranked countries in each respective year. A detailed description of the NRI can be found in the Glossary (page 88).

- In general, Austria's overall NRI ranking has shown fairly stable development over time. In light of the country's sound performance in information and communications technologies, this also provides an indication of the index's quality.
- A look beyond Austria's borders shows that Scandinavian countries, especially Sweden, Finland and Denmark, are currently leading the way in the field of ICT in Europe, although Denmark did drop from third to seventh place in the most recent NRI rankings. Sweden took first place for the second consecutive year, while Finland was able to advance to third. Singapore, widely regarded as an ICT benchmark in Asia, took second place ahead of Finland. While infrastructure and private usage in particular have favoured the dissemination of ICTs in Scandinavia, Singapore's high rank was mainly based on the use of ICTs in government and organisations close to the government.

Networked Readiness Index – Strengths and weaknesses

➡ AUSTRIA: STRONG ENVIRONMENT FOR PROLIFERATION OF ICTs

Strengths (Economy's 8 best ranks)	
Indicator	Rank
Local supplier quality	1
Accessibility of digital content	4
Number of procedures to enforce a contract (hard data)	4
Software piracy rate, % of software installed (hard data)	5
Availability of research & training services	6
Property rights	7
Availability of latest technologies	8
Mobile cellular tariffs (hard data)	8

Weaknesses (Economy's 8 worst ranks)	
Indicator	Rank
Residential phone installation (hard data)	124
Business phone installation (hard data)	113
Total tax rate (hard data)	112
Business monthly phone subscription (hard data)	107
Residential monthly phone subscription (hard data)	103
Number of days to start a business (hard data)	93
Fixed telephone tariffs (hard data)	79
Number of procedures to start a business (hard data)	76

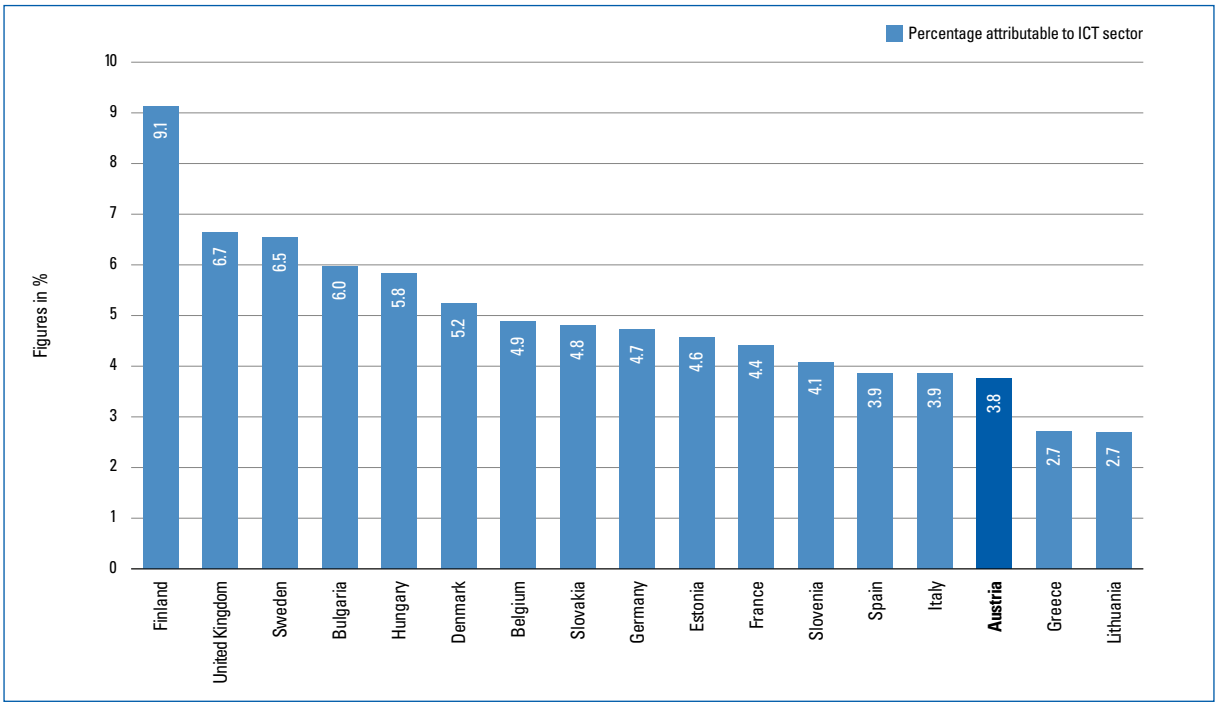
Source: World Economic Forum

The chart above presents Austria's strengths and weaknesses according to the Networked Readiness Index (NRI 2010-2011). The left-hand side shows the eight indicators in which Austria achieved its highest rankings in this international comparison. The right-hand column contains the eight indicators in which Austria shows the most room for improvement. A detailed description of the NRI can be found in the Glossary (page 88).

- In the NRI 2010-2011, the quality of local suppliers in Austria was ranked first among all countries included in the index for the second consecutive year. Austria was also among the top four countries with regard to the accessibility of digital content. It is also striking that Austria earned high marks with regard to its legal framework (e.g. number of procedures to enforce a contract, software piracy rate and property rights). Austria was also among the top countries in terms of the availability of research and training as well as the availability of the latest technologies, and the country also enjoys low mobile cellular tariffs.
- The situation was less encouraging when it came to taxes and contributions: Compared to that of other countries, Austria's total tax rate is regarded as very high. Likewise, the rates charged for fixed telephone services are considered high by international comparison. Moreover, Austria placed 76th in terms of the number of procedures required to start a business.

Percentage of GDP attributable to ICT sector

➡ SMALL BUT EFFICIENT ICT SECTOR IN AUSTRIA



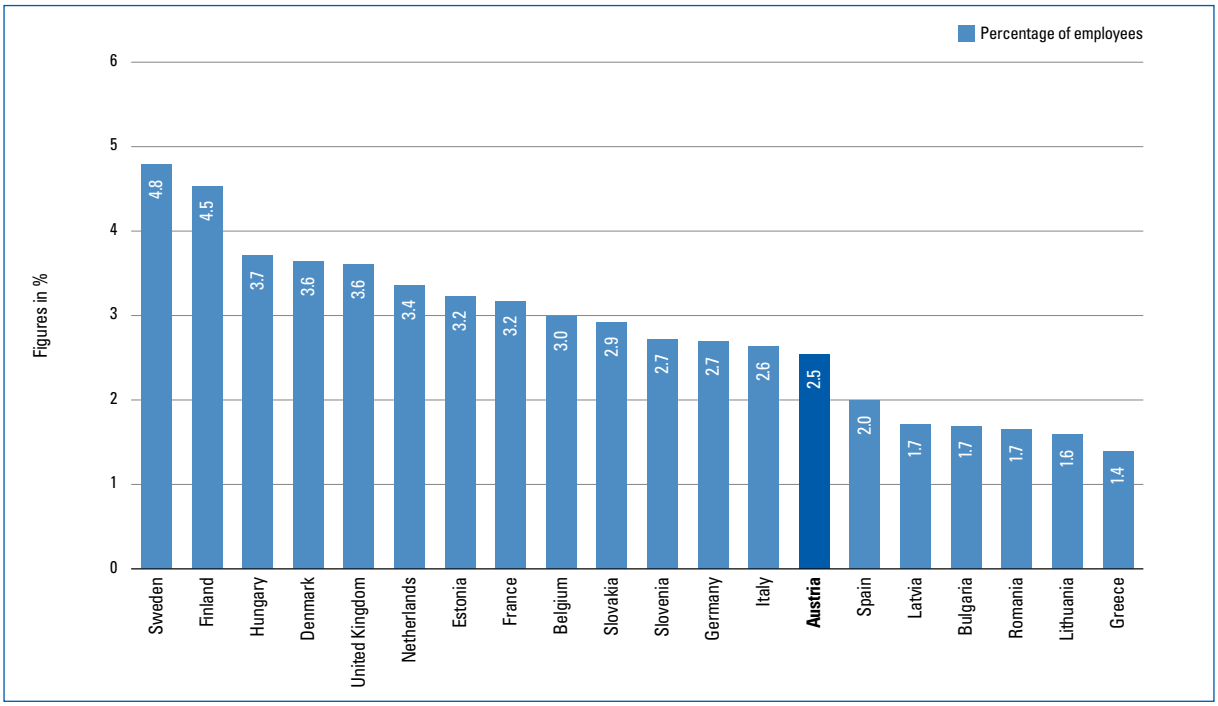
Source: Eurostat, 2007

The chart above provides an international comparison of the share of gross domestic product (GDP) which can be attributed to the ICT sector (as of 2007). In this context, businesses operating in ICT manufacturing and ICT services are assigned to the sector.

- Once again, the chart above clearly illustrates the dominance of Scandinavian countries as leaders in the ICT field. In 2007, Finland placed first, with its ICT sector accounting for 9.1% of GDP. This means that nearly one in ten euros earned in that country could be attributed to ICT businesses; this also put Finland far ahead of the UK, which took second place with a share of 6.7%.
- As the Austrian ICT sector generated only 3.8% of the country's GDP in 2007, Austria is third from last in this ranking. However, the country's ICT sector is apparently very efficient, as Austria came in 15th worldwide in the NRI ranking that year (see page 81). In Bulgaria, for example, the ICT sector accounts for 6% of GDP, placing the country well ahead of Austria in that respect, but Bulgaria only came in 68th in the NRI ranking. In Italy, the ICT sector's share of GDP (3.9%) was nearly the same as in Austria, yet Italy was ranked 42nd.

Percentage of total employment attributable to ICT sector

➡ ICT SECTOR EMPLOYS 2.5% OF AUSTRIA'S WORKFORCE



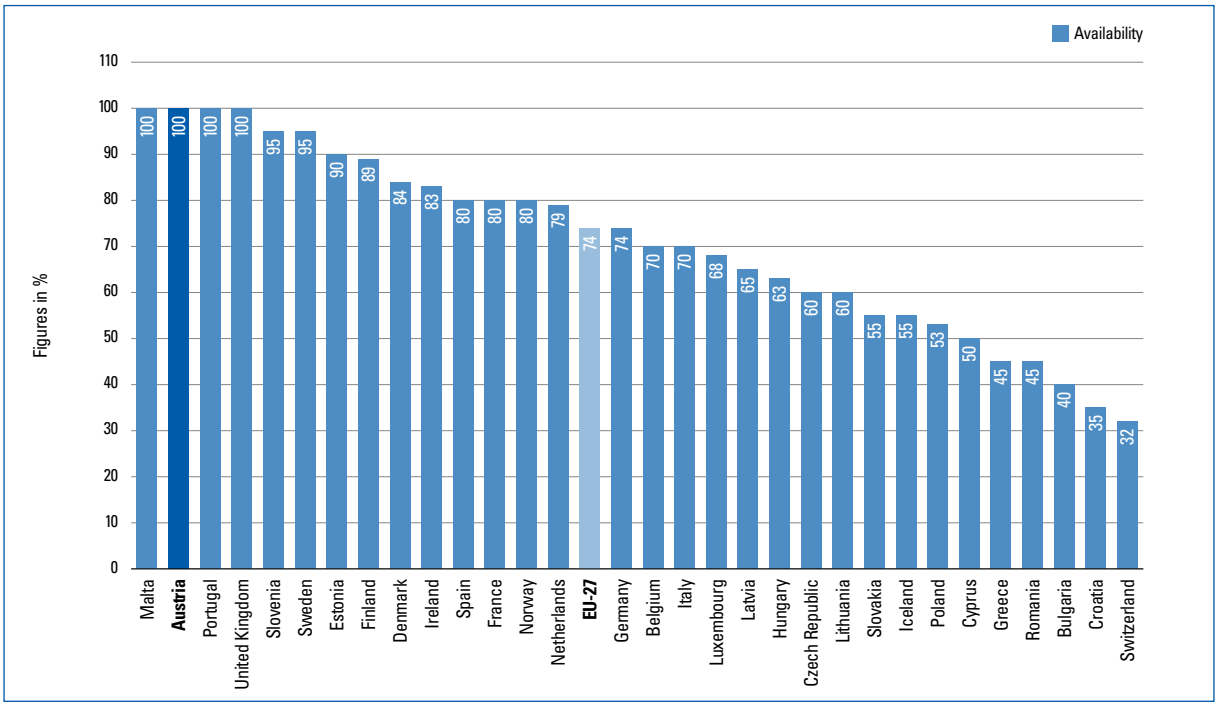
Source: Eurostat, 2007

The chart above provides an international comparison of the percentage of the workforce employed in the ICT sector (as of 2007). In this context, businesses operating in ICT manufacturing and ICT services are assigned to the sector.

- A similar picture of Austria's ICT sector emerges if the share of the workforce employed by Austrian ICT companies (instead of the sector's contribution to GDP as shown on page 83) is used as a basis for analysis. In 2007, Scandinavian countries also saw top rankings in this indicator, in particular Sweden with a share of 4.8%, followed by Finland (4.5%), Hungary (3.7%) and Denmark (3.6%).
- Austria placed fairly low in this ranking, as some 2.5% of the workforce (roughly one in 40 employees) is employed in the Austrian ICT sector. However, this can be explained by the structure of Austrian businesses: Approximately half of the businesses in Austria are one-person undertakings, meaning that they do not have any employees. ICT businesses without employees are not included in this indicator.

Online availability of e-government services

➡ AUSTRIA: A MODEL FOR E-GOVERNMENT



Source: Eurostat, 2009

Based on a set of 20 basic government services, the indicator in the chart above shows the percentage which can be handled entirely electronically (as of 2009). If, for example, 13 of those 20 services can be handled 100% electronically in a given country and one service is not relevant (e.g. because it does not exist), the indicator is calculated as 13/19, or 68.4%. Measurement is based on a sample of URLs of government web sites agreed with member states as relevant to each service.

■ The chart above clearly illustrates that new forms of communication have already found their way into the public sector. In the e-government ranking, Austria shares first place with the UK, Portugal and Malta. 100% availability means that all of the 20 services defined as relevant were available online in 2009.

Section 9 | Appendix

Glossary

Airtime (mobile communications)
Airtime refers to a service which mobile network operators provide for domestic resellers. A reseller is a communications service provider that offers public mobile services to retail customers but does not provide those services using its own network. This includes all mobile service providers (such as resellers or [enhanced] service providers) that do not operate their own communications network – neither a radio network nor a core network – in providing mobile communications services.

International roaming
In connection with mobile communications, the term "roaming" refers to the use of a mobile telephone outside the coverage area of one's own network operator (the home network), in which case the mobile phone uses the service of another network (the visited network). In international roaming, the home and visited networks are located in different countries and their coverage areas generally do not overlap.

Leased lines
Leased lines provide symmetrical transmission capacity with a guaranteed bandwidth between two points without switching functions. Leased lines may also be referred to as "private circuits" or "data lines".

Networked Readiness Index
The Networked Readiness Index (NRI) measures the propensity of countries to participate in and benefit from developments in information and communications technologies (ICTs). For this purpose, various individual indicators (68 in all), such as the availability of scientists and engineers, the number of patents, the availability of financing sources, and even the number of personal computers, mobile phones and available telephone lines are included in the analysis. In ranking the various countries, the index also accounts for the legal framework in terms of intellectual property rights, the independence of the judiciary and other factors.
The NRI examines the current state of an economy with regard to ICTs on the basis of three components: the general macroeconomic, regulatory and infrastructure environment for ICTs, the readiness of the three key stakeholder groups (individuals, businesses and government institutions) to use and benefit from ICTs, and the actual use of the latest ICTs by those stakeholder groups.
The NRI is now recognised worldwide as a benchmark for measuring a country's capacity to participate in the networked economy.

Penetration rates
The data presented in Section 8 on broadband penetration among Austria's households/individuals appear to contradict the penetration rates published in other sections of the Telecom Monitor. The reason for this apparent discrepancy lies in the different survey methods used.

The statistics in the Telecom Monitor are (unless noted otherwise) based on data collected directly from telecommunications service providers. However, one disadvantage of this method is that the companies know their own products (and the related data) very well, but they have very little information about those who buy the products. For this reason, RTR supplements these data with information collected directly from users (i.e. consumers) through surveys.
Penetration rates thus depend on whether they are calculated using data from the supply or the demand side (among other factors). A customer who indicates that s/he has a broadband connection at home is included in the calculation of penetration rates only once, regardless of how many broadband connections that customer has at home.
In contrast, broadband service providers indicate the number of connections sold, and that figure is divided by the number of households. For this reason, a penetration rate calculated using data from the supply side will, as a rule, always be higher (as each connection is counted as a separate household) than penetration rates determined using demand-side data. This might also yield penetration rates in excess of 100% (e.g. in the case of mobile penetration, as many people have more than one mobile phone).
The broadband penetration rates on pages 43 and 71 were both calculated using supply-side data, but they still differ because of the different reference values used (number of households / population).
Penetration rates calculated on the basis of different data sources can therefore not be compared directly. When interpreting these figures, it is thus important to pay special attention to how the information was collected, what statistical population was used, and which reference values were applied.

Purchasing power parity

Purchasing power is a measure of the value of money. Like the exchange rates between currencies, measures of purchasing power enable inter-currency comparisons between different countries or economic areas. In an international price comparison such as the average price per call minute in mobile communications, it is also necessary to consider the differing levels of purchasing power in individual countries. Strictly speaking, direct price comparisons would only be feasible and reasonable if purchasing power parity prevailed (but it basically does not occur in that form). Purchasing power is not accounted for in the charts presented in this report.

Telecommunications Index (Telecom Index)

The RTR Telecommunications Index is based on the logic of the Laspeyres index, in which the values at a given time are compared to a defined base value from the past. This comparison results in relevant index values. In the Telecommunications Index, these values are determined on the basis of calculated (not actual) prices, that is, the revenues from each segment are divided by the relevant traffic-related values (e.g. minutes, lines). This yields an implicit price per unit.
The Telecommunications Index comprises four sub-indices (fixed network, mobile networks, broadband, leased lines), which themselves consist of multiple indicators. All of the sub-indices are weighted differently so that they have a higher/lower impact on the overall index value. These weights are assigned on the basis of each segment's share of overall revenues in 2006.
The base year for the index is 2006 (= 100), meaning that it only includes data from those operators who conducted operations throughout the year 2006. The individual telecommunications operators

are included in the index with various weights, which are based on each operator's share of overall revenues in the year 2006. Should an operator in the index be taken over by another operator, the weight assigned to the former is re-assigned to the latter.

The Telecommunications Index includes only retail data and specifically comprises the following indicators:
FIXED NETWORK:
– Base fees (residential and non-residential customers)
– Connection fees (residential and non-residential customers): Domestic mobile networks, international calls, online services, domestic fixed network
MOBILE CONNECTION FEES
RETAIL BROADBAND CONNECTIONS (FIXED)
LEASED LINES:
– Domestic leased lines in 64 kbit/s equivalents <= 2 Mbit/s
– Domestic leased lines in 64 kbit/s equivalents > 2 Mbit/s

Trunk and terminating segments (leased lines)
Trunk segments refer to leased lines which link interconnection points in two of 28 specified Austrian towns. Terminating segments refer to all leased lines which cannot be classified as trunk segments.

Unbundling
In telecommunications, unbundling refers to the separate provision of specific services which were previously only available in conjunction with other services: For example, the unbundling of subscriber lines from fixed network access offered by the incumbent operator gives alternative service providers direct access to the customer without requiring the latter to install the "last mile" themselves, as they can lease the (naked) subscriber line from the incumbent at a regulated price.

Data tables

DEVELOPMENT OF FIXED LINES (P. 9)

		POTS	ISDN	Multi-ISDN
2008	Q1	2,356	371	9
	Q2	2,333	365	9
	Q3	2,326	359	9
	Q4	2,321	354	9
2009	Q1	2,337	349	9
	Q2	2,332	344	9
	Q3	2,315	340	9
	Q4	2,327	335	9
2010	Q1	2,349	328	9
	Q2	2,339	327	9
	Q3	2,335	324	9
	Q4	2,359	319	9

RETAIL REVENUES FROM CARRIER SERVICES 2/2 (P. 13)

		Domestic fixed network	Domestic mobile network	International	Service numbers	Online services
2008	Q1	43,800	54,200	34,200	6,300	3,300
	Q2	40,100	53,700	33,500	5,700	2,600
	Q3	38,100	51,300	32,600	5,500	2,600
	Q4	38,300	50,000	31,000	5,600	2,500
2009	Q1	33,800	47,000	28,800	6,200	2,100
	Q2	29,700	44,400	26,100	5,700	1,600
	Q3	28,900	43,500	26,500	5,500	1,300
	Q4	29,900	43,000	26,000	5,600	1,200
2010	Q1	29,800	41,800	27,000	4,900	1,000
	Q2	27,100	42,300	26,300	4,400	800
	Q3	25,600	41,400	26,100	4,500	800
	Q4	26,300	41,500	25,500	4,600	700

BREAKDOWN OF RETAIL REVENUES (RESIDENTIAL CUSTOMERS) (P. 14)

		Access services	Carrier services	Other
2008	Q1	86,297,549	68,727,224	13,202,799
	Q2	83,668,634	64,743,229	12,800,597
	Q3	81,901,804	62,431,882	12,530,286
	Q4	80,346,597	62,688,072	12,292,353
2009	Q1	83,459,175	57,463,125	12,768,551
	Q2	82,168,999	52,237,585	12,571,165
	Q3	82,271,504	51,139,108	12,586,847
	Q4	81,151,646	53,237,664	12,415,519
2010	Q1	80,465,297	49,017,311	12,310,513
	Q2	80,403,895	47,596,485	12,301,119
	Q3	81,064,157	46,419,832	12,402,134
	Q4	81,110,103	48,473,570	12,409,163

BREAKDOWN OF RETAIL REVENUES (BUSINESS CUSTOMERS) (P. 15)

		Access services	Carrier services	Other
2008	Q1	49,111,034	73,067,875	4,805,014
	Q2	48,795,104	70,795,002	4,774,104
	Q3	48,608,403	67,749,753	4,755,837
	Q4	48,159,743	64,797,645	4,711,940
2009	Q1	45,866,848	60,435,530	4,487,604
	Q2	45,415,160	55,202,050	4,443,411
	Q3	45,203,123	54,564,759	4,422,665
	Q4	44,497,160	52,448,229	4,353,594
2010	Q1	44,038,727	55,475,259	4,308,741
	Q2	42,557,990	53,287,407	4,163,866
	Q3	41,711,347	52,016,365	4,081,030
	Q4	41,498,270	50,209,906	4,060,183

CALL MINUTES ON THE RETAIL MARKET (P. 16)

		Domestic fixed network	Domestic mobile network	International	Service numbers	Online services
2008	Q1	1,345,600	340,900	300,400	71,300	255,800
	Q2	1,216,600	332,400	290,000	62,800	184,700
	Q3	1,132,700	321,000	279,100	65,100	149,800
	Q4	1,169,000	310,800	271,800	54,400	125,200
2009	Q1	1,187,800	301,600	256,500	87,600	101,300
	Q2	1,051,000	289,400	237,800	83,600	73,700
	Q3	1,004,700	283,900	230,500	77,500	63,700
	Q4	1,053,600	285,700	236,600	54,900	56,900
2010	Q1	997,900	275,100	230,800	50,100	47,600
	Q2	922,900	272,700	220,700	41,500	38,500
	Q3	869,000	265,600	212,500	41,400	35,500
	Q4	903,400	267,000	213,500	40,300	33,100

IMPLICIT PRICE PER CALL MINUTE (P. 17)

		Domestic fixed network (residential customers)	Domestic mobile network (residential customers)	International (residential customers)	Domestic fixed network (business customers)	Domestic mobile network (business customers)	International (business customers)
2008	Q1	3.2	18.5	11.3	3.3	14.2	11.4
	Q2	3.3	19.3	11.5	3.3	14.1	11.6
	Q3	3.4	18.9	11.8	3.3	14.1	11.6
	Q4	3.2	19.2	11.2	3.3	14.1	11.6
2009	Q1	3.0	18.9	11.2	2.7	13.5	11.2
	Q2	3.0	18.8	11.1	2.7	13.1	10.8
	Q3	3.1	19.1	11.8	2.7	13.0	11.2
	Q4	3.0	18.7	11.2	2.6	12.7	10.7
2010	Q1	3.1	18.9	11.6	2.9	13.0	11.8
	Q2	3.1	19.2	11.9	2.8	13.4	11.9
	Q3	3.2	19.4	12.7	2.8	13.4	12.0
	Q4	3.1	19.3	12.4	2.7	13.3	11.5

WHOLESALE REVENUES (P. 20)

		Revenues from origination	Revenues from termination	Revenues from transit
2008	Q1	5,490	17,860	17,470
	Q2	4,960	16,830	16,510
	Q3	4,230	16,310	6,980
	Q4	4,140	17,460	5,480
2009	Q1	3,850	16,570	6,890
	Q2	3,420	15,200	6,710
	Q3	3,180	15,240	7,530
	Q4	3,360	16,400	6,800
2010	Q1	3,170	16,580	7,200
	Q2	2,830	16,490	6,370
	Q3	2,650	13,360	4,230
	Q4	2,650	13,760	4,270

SERVICE NUMBERS IN USE: (0)800, (0)810, (0)820, (0)821, (0)828, (0)900, (0)930 (P. 22)

		(0)800	Total for (0)810, (0)820, (0)821, (0)828	Total for (0)900, (0)930
2008	Q1	14,780	10,720	28,680
	Q2	14,970	11,800	28,930
	Q3	15,080	13,900	27,950
	Q4	15,210	14,700	27,290
2009	Q1	15,190	16,830	27,890
	Q2	15,280	16,090	26,500
	Q3	15,510	18,750	27,180
	Q4	15,700	18,810	27,310
2010	Q1	15,610	17,560	27,730
	Q2	16,160	17,450	27,610
	Q3	14,240	20,100	28,220
	Q4	17,030	20,760	28,270

PREPAID VS. POSTPAID SIM CARDS (P. 37)

		Contract customers	Prepaid customers
2008	Q1	6,307,038	3,613,206
	Q2	6,435,032	3,536,943
	Q3	6,568,827	3,529,054
	Q4	6,822,448	3,552,199
2009	Q1	6,978,440	3,522,788
	Q2	7,086,985	3,501,318
	Q3	7,190,012	3,590,247
	Q4	7,453,938	3,641,692
2010	Q1	7,517,329	3,830,200
	Q2	8,019,450	3,772,371
	Q3	8,142,077	3,833,250
	Q4	8,344,419	3,896,666

FIXED AND MOBILE BROADBAND CONNECTIONS (P. 42)

		Fixed connections	Mobile connections	Fixed share	Mobile share
2008	Q1	1,675	644	72%	28%
	Q2	1,692	715	70%	30%
	Q3	1,697	818	67%	33%
	Q4	1,736	968	64%	36%
2009	Q1	1,805	1,066	63%	37%
	Q2	1,817	1,141	61%	39%
	Q3	1,834	1,213	60%	40%
	Q4	1,878	1,324	59%	41%
2010	Q1	1,913	1,402	58%	42%
	Q2	1,951	1,444	57%	43%
	Q3	1,976	1,539	56%	44%
	Q4	2,032	1,713	54%	46%

RETAIL BROADBAND CONNECTIONS BY TYPE OF INFRASTRUCTURE (P. 44)

		Copper-wire pairs	Unbundled lines	Coaxial cable	Other infrastructure	Mobile
2008	Q1	817,100	240,600	567,200	49,800	644,200
	Q2	826,000	245,300	572,300	48,600	715,000
	Q3	834,900	241,200	574,700	46,600	818,300
	Q4	885,300	240,300	563,700	47,000	967,700
2009	Q1	935,200	256,500	564,300	49,100	1,066,500
	Q2	958,000	249,500	564,100	45,600	1,141,000
	Q3	982,200	245,400	561,300	45,400	1,212,700
	Q4	1,022,200	240,800	569,900	44,900	1,324,200
2010	Q1	1,064,600	233,500	570,200	44,500	1,402,100
	Q2	1,089,300	240,600	577,700	43,600	1,444,100
	Q3	1,111,400	240,500	581,000	43,000	1,539,100
	Q4	1,160,700	239,600	589,800	41,800	1,713,200

WHOLESALE BROADBAND CONNECTIONS (P. 45)

		Bitstreaming via A1 Telekom's network	Bitstreaming via unbundled lines	Bitstreaming via coaxial cable (open access)	Mobile
2008	Q1	92,350	5,910	16,240	2,100
	Q2	88,640	5,820	15,980	2,250
	Q3	69,020	5,070	15,650	2,530
	Q4	66,950	4,980	15,010	2,580
2009	Q1	63,350	4,900	14,610	2,300
	Q2	62,620	4,880	14,370	2,270
	Q3	56,570	4,780	14,410	2,070
	Q4	55,380	4,640	14,570	1,910
2010	Q1	53,560	4,520	14,480	2,100
	Q2	53,330	4,460	14,270	1,850
	Q3	45,710	4,290	14,240	2,710
	Q4	45,510	4,060	14,340	5,250

REVENUES FROM FIXED, MOBILE, BROADBAND AND LEASED LINE SERVICES (P. 48)

		Revenues from fixed voice services	Revenues from mobile services	Revenues from broadband services	Revenues from leased lines	Total revenues
2008	Q1	336	857	142	59	1,394
	Q2	324	851	134	62	1,371
	Q3	305	856	130	58	1,349
	Q4	300	861	126	60	1,347
2009	Q1	292	828	121	61	1,302
	Q2	277	820	119	59	1,275
	Q3	276	825	118	58	1,277
	Q4	275	813	119	57	1,264
2010	Q1	273	792	118	53	1,236
	Q2	266	784	117	52	1,219
	Q3	258	795	112	35	1,203
	Q4	258	756	110	34	1,155

TECHNICAL MINUTES IN FIXED AND MOBILE NETWORKS (P. 49)

		Online	Technical minutes (fixed, excluding online minutes)	Technical minutes (mobile)	Fixed share (including online minutes)	Mobile share
2008	Q1	256	2,058	4,814	32%	68%
	Q2	185	1,902	4,904	30%	70%
	Q3	150	1,798	4,753	29%	71%
	Q4	125	1,806	5,126	27%	73%
2009	Q1	101	1,834	5,269	27%	73%
	Q2	74	1,662	5,213	25%	75%
	Q3	64	1,597	5,116	25%	75%
	Q4	57	1,631	5,516	23%	77%
2010	Q1	48	1,554	5,457	23%	77%
	Q2	39	1,458	5,535	21%	79%
	Q3	35	1,389	5,298	21%	79%
	Q4	33	1,424	5,666	20%	80%

INVESTMENTS (P. 52)

	Frequencies	Technical infrastructure	Sales and customer service
2006	2,600	730,800	15,400
2007	13,300	844,600	19,200
2008	5,900	674,400	13,400
2009	6,400	503,500	8,600
2010	49,600	635,200	7,800

SUBSCRIBERS USING AN ALTERNATIVE PROVIDER FOR FIXED VOICE TELEPHONY SERVICES (P. 58)

	National calls	International calls
Portugal	42.4	44.4
Germany	40.0	42.0
United Kingdom	39.3	39.3
Austria	38.0	43.0
Belgium	36.3	36.3
Romania	36.0	37.0
Netherlands	35.0	50.0
Sweden	33.0	n.a.
Spain	32.8	32.8
France	30.7	31.2
Estonia	30.0	27.0
Italy	28.7	29.4
Poland	26.0	n.a.
Finland	25.0	45.0
Malta	22.0	22.0
Greece	21.0	22.0
Ireland	21.0	21.0
Luxembourg	20.3	20.3
Slovenia	19.6	19.8
Czech Republic	17.8	9.9
Hungary	17.0	23.1
Cyprus	9.0	9.0
Lithuania	6.1	6.8
Bulgaria	6.0	6.3
Slovakia	5.6	6.1
Denmark	0.0	0.0
Latvia	0.0	0.0

MARKET CONCENTRATION (HERFINDAHL-HIRSCHMAN INDEX) (P. 59)

	National calls	All fixed network calls	International calls
Bulgaria	9,068	8,766	6,795
Lithuania	9,131	8,549	6,249
Slovenia	8,715	8,076	5,781
Malta	8,011	7,908	7,356
Finland	8,200	7,890	2,360
Slovakia	7,699	7,330	6,510
Cyprus	8,100	6,889	4,761
Latvia	7,279	6,715	4,904
Luxembourg	n.a.	6,464	n.a.
Estonia	n.a.	6,215	n.a.
Romania	5,935	5,624	4,084
Denmark	5,442	5,325	3,500
Greece	5,326	5,277	2,976
Austria	5,402	5,133	4,392
Ireland	5,441	5,108	4,360
Hungary	5,067	5,029	3,520
Poland	5,871	4,972	4,619
Belgium	5,041	4,830	4,046
Spain	4,385	4,424	2,686
Czech Republic	4,586	4,413	3,558
Italy	4,600	4,362	2,058
Germany	4,350	4,210	3,900
Netherlands	4,452	4,073	2,935
Portugal	3,960	3,912	3,754
Sweden	3,820	3,670	2,690
United Kingdom	3,542	3,463	3,020
France	3,555	3,388	2,284

MOBILE PENETRATION RATE (2008–2009) (P. 63)

	Penetration rate (Oct. 2008)	Penetration rate (Oct. 2009)
Lithuania	149	147
Italy	151	146
Portugal	137	146
Luxembourg	142	142
Bulgaria	137	139
Finland	129	137
Cyprus	126	136
Czech Republic	131	134
Austria	125	133
Germany	129	132
Denmark	120	128
Netherlands	123	128
United Kingdom	121	126
Greece	122	125
Sweden	115	121
Ireland	119	119
Spain	114	118
Estonia	134	116
Romania	103	115
Poland	98	108
Hungary	104	106
Belgium	102	103
Latvia	96	102
Slovenia	100	102
Malta	95	101
Slovakia	98	100
France	86	90

AVERAGE PRICE PER MINUTE IN MOBILE NETWORKS (P. 65)

	2007	2008
Malta	0.27	0.24
Luxembourg	0.25	0.21
Netherlands	0.27	0.20
Belgium	0.20	0.18
Spain	0.19	0.17
Slovenia	0.13	0.14
Greece	0.16	0.14
France	0.17	0.14
Germany	0.17	0.14
Hungary	0.15	0.14
Slovakia	0.14	0.13
United Kingdom	0.17	0.13
Czech Republic	0.16	0.13
EU	0.14	0.13
Portugal	0.14	0.12
Sweden	0.11	0.11
Estonia	0.10	0.11
Poland	0.11	0.11
Ireland	0.11	0.10
Italy	0.11	0.10
Austria	0.12	0.10
Denmark	0.12	0.10
Finland	0.11	0.07
Romania	0.07	0.06
Cyprus	0.05	0.05
Bulgaria	0.06	0.05
Lithuania	0.07	0.05
Latvia	0.07	0.04

INTERCONNECTION FEES FOR TERMINATION IN MOBILE NETWORKS (P. 66)

	Oct. 2008	Oct. 2009	EU average (Oct. 2009)
Bulgaria	15.92	12.14	6.70
Ireland	10.01	9.86	6.70
Luxembourg	9.13	9.13	6.70
Czech Republic	11.76	9.09	6.70
Belgium	8.80	8.81	6.70
Latvia	8.75	8.75	6.70
Estonia	8.76	8.69	6.70
Malta	9.62	8.66	6.70
Lithuania	10.43	8.34	6.70
Italy	9.66	8.23	6.70
Slovakia	11.24	8.03	6.70
Greece	10.03	7.86	6.70
Denmark	8.58	7.44	6.70
Netherlands	9.43	7.32	6.70
Spain	7.94	7.08	6.70
Germany	8.18	6.76	6.70
Portugal	7.72	6.50	6.70
Hungary	7.48	6.23	6.70
France	6.86	5.83	6.70
Slovenia	6.73	5.44	6.70
Romania	6.77	5.44	6.70
United Kingdom	6.56	5.31	6.70
Finland	5.31	5.02	6.70
Poland	8.32	4.64	6.70
Austria	6.21	4.25	6.70
Sweden	4.22	3.14	6.70
Cyprus	1.90	1.95	6.70

INTERNATIONAL LEASED LINE PRICES (2 MBIT/S) (P. 70)

	200 km	2 km	200 km (EU-23 average)	2 km (EU-25 average)
Slovakia	57	30	2,238	496
Denmark	385	217	2,238	496
Sweden	647	231	2,238	496
Romania	4,240	283	2,238	496
Portugal	2,936	290	2,238	496
Austria	2,260	300	2,238	496
Germany	1,925	340	2,238	496
Bulgaria	3,885	368	2,238	496
Ireland	2,945	381	2,238	496
United Kingdom	3,068	386	2,238	496
Lithuania	1,526	443	2,238	496
Luxembourg	n.a.	460	2,238	496
Slovenia	2,756	472	2,238	496
Poland	1,663	504	2,238	496
Italy	3,473	513	2,238	496
Malta	n.a.	531	2,238	496
Latvia	695	532	2,238	496
Belgium	2,004	547	2,238	496
Hungary	4,583	643	2,238	496
Cyprus	1,489	671	2,238	496
Spain	3,288	687	2,238	496
Czech Republic	1,271	736	2,238	496
Greece	1,321	786	2,238	496
Estonia	3,647	877	2,238	496
Netherlands	1,410	1,162	2,238	496

TELECOM INDEX (P. 76 AND 77)

		Telecommunications	Fixed networks	Mobile networks	Broadband	Leased lines	CPI
2006	Q1	101.88	100.49	102.27	101.70	113.46	99.26
	Q2	101.21	98.90	102.91	98.27	103.24	100.15
	Q3	103.32	100.39	105.62	100.28	96.99	100.28
	Q4	93.58	100.22	89.21	99.75	86.31	100.31
2007	Q1	88.88	99.61	81.26	99.32	92.20	100.90
	Q2	84.65	99.94	73.70	98.20	100.11	102.05
	Q3	83.94	99.28	73.09	97.29	96.28	102.22
	Q4	75.88	96.71	61.16	93.83	93.80	103.50
2008	Q1	71.79	95.94	56.78	83.25	85.57	104.25
	Q2	71.74	97.24	56.84	78.82	87.03	105.73
	Q3	73.25	98.02	59.49	76.79	86.41	106.03
	Q4	69.56	98.23	53.96	72.20	83.54	105.80
2009	Q1	65.64	95.99	49.21	67.58	82.95	105.40
	Q2	66.92	95.43	52.03	66.42	80.81	106.03
	Q3	68.00	96.12	53.86	65.35	77.54	106.06
	Q4	63.91	94.51	47.75	64.59	76.53	106.46
2010	Q1	63.35	95.73	46.28	63.17	81.40	106.88
	Q2	63.13	96.91	45.74	61.01	80.66	108.10
	Q3	66.09	98.01	49.41	65.95	79.00	107.97
	Q4	62.40	97.75	43.49	63.69	81.48	108.69

Publishing information

Owner and publisher: Austrian Regulatory Authority for Telecommunications and Broadcasting (Rundfunk und Telekom Regulierungs-GmbH), Mariahilfer Strasse 77-79, A-1060 Vienna.
Tel.: +43 (0)1 58058-0, Fax: +43 (0)1 58058-9191, e-mail: rtr@rtr.at, Internet: http://www.rtr.at
Responsible for content: Georg Serentschy (CEO Telecommunications and Postal Services), Austrian Regulatory Authority for Broadcasting and Telecommunications.
Conceptual design and text: Austrian Regulatory Authority for Broadcasting and Telecommunications
Graphic design and layout: studio 2000, 3150 Wilhelmsburg
Translation: Christopher Anderson, e-mail: chris@anderson.at

Although the contributions to the RTR Telecom Monitor Annual Review 2010 were reviewed with the utmost care, it is not possible to rule out errors. Therefore, no guarantee of accuracy can be provided for this information.

The text in this report was prepared with due attention to gender neutrality. Any and all deviations from this policy are exclusively for the sake of improving the text's readability.