

# 4

Part

## CHAPTER 2

# Electronic communications markets

## A. Market figures and status

### 1. End-user market

#### 1.1 The electronic communications market

##### 1.1.1 Market revenue

#### End-user revenue

€ million	2004	2005	2006	2007	2008p	Growth
Fixed services	15 454	15 297	15 217	15 620	15 992	2.4%
Fixed telephony	12 629	12 072	11 378	10 999	10 593	-3.7%
Internet	2 825	3 226	3 839	4 620	5 400	16.9%
Mobile services	14 868	16 203	16 771	17 569	18 556	5.6%
<b>Total telephony and Internet</b>	<b>30 323</b>	<b>31 501</b>	<b>31 988</b>	<b>33 189</b>	<b>34 548</b>	<b>4.1%</b>
Value-added services	2 359	2 638	2 633	2 788	2 611	-6.3%
Advanced services	2 143	2 415	2 480	2 625	2 453	-6.5%
Directory services	216	223	153	163	158	-3.3%
Capacity services	4 264	3 467	3 391	3 432	3 391	-1.2%
Leased lines	2 160	1 467	1 518	1 444	1 522	5.4%
Data transport	2 104	2 000	1 873	1 987	1 869	-6.0%
<b>Total electronic communication services</b>	<b>36 946</b>	<b>37 605</b>	<b>38 104</b>	<b>39 409</b>	<b>40 550</b>	<b>2.9%</b>
Other services	2 416	3 020	2 928	3 255	3 636	11.7%
<b>Total operator end-market revenue</b>	<b>39 362</b>	<b>40 625</b>	<b>41 032</b>	<b>42 664</b>	<b>44 186</b>	<b>3.6%</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

#### Notes :

- fixed telephony includes access and subscription fees, calls originating on fixed lines (PSTN and Voice over Broadband, billed over and above the flat rate charged for bundled services), calls from public payphones and made with prepaid cards. ToIP calls originating on lines included in flat rate bundles are not counted;

- *mobile services include mobile telephony (including SMS revenue), pagers and professional mobile networks up to 2002;*
- *value-added services are calculated in gross sums, excluding commission, in other words including the portion of revenue that operators pay back to enterprises providing the VAS;*
- *“other services” are not part of the electronic communications market, per se. Contributions from declared operators provide only a partial view of these market segments. This heading covers revenue generated by the sale and rental of terminals and equipment, including the rental of IP boxes, hosting and call centre management revenue, and revenue derived from print directories, advertising and the sale of databases*

Mobile services revenue (€18.6 billion) grew by 5.6%, following a rise of +4.8% in 2007 and of +3.5% in 2006. The increasingly high growth rate over the past few years is due in part to a steady rise in income from voice services of over 2% a year, and especially to increased data revenue (+27% in 2008, accounting for 17% of mobile revenue). In 2008, the use of SMS increased exponentially, which helped drive up income earned on text messaging. Mobile multimedia and Internet access services developed in the second half of the year especially, which led to a roughly 50% rise in the revenue they generated. Mobile services accounted for 42% of retail market revenue in 2008.

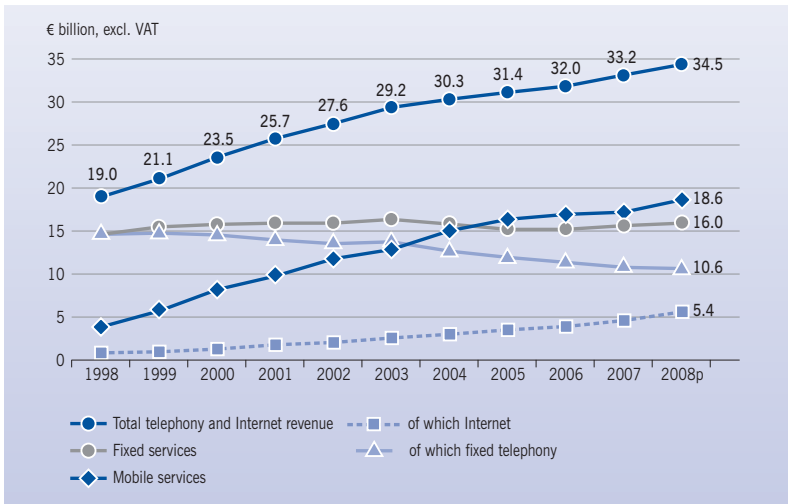
Revenue from fixed services (telephony and Internet access) rose for the second year in a row (+2.4% following a +3.3% increase the year before) after having decreased between 2004 and 2006. Moreover, the revenue that can be attributed directly to fixed telephony (€10.6 billion) decreased at a slightly slower pace than in previous years: by around -3% instead of -5%, added to which the +€0.8 billion rise in Internet revenue (to €5.4 billion) more than offset the decline in fixed telephony income. The total income earned on fixed services accounts for 36% of operators' retail market revenue, of which 24% are derived directly from fixed telephony (two points less than in 2007) and 12% from Internet access (up one point from the year before).

Income from value-added services (VAS) dropped by 6.3%, after having increased in 2007. The revenue earned from services originating on fixed lines is declining at an ever-increasing pace (-17% compared to -3% in 2007), and is not being offset by a rise in the sale of surcharged data services originating on mobile lines.

Capacity service revenue is declining as well. Contrary to the situation in 2007, leased line revenue is up (+5.4% compared to 2007) whereas data transport revenue is down (-6%).

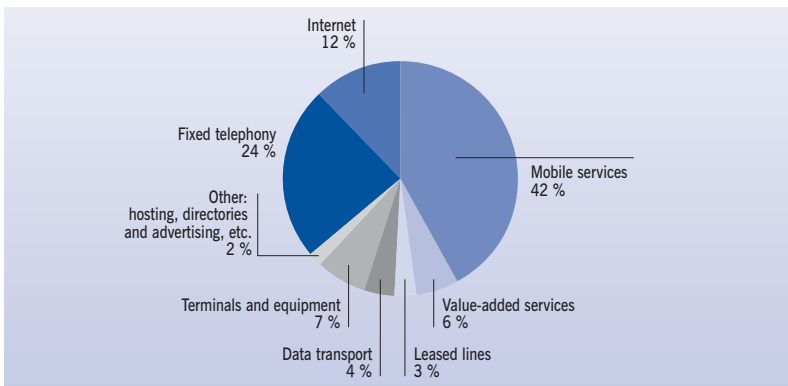
Revenue from terminal sales rose substantially in 2008 (€3 billion, +16.6%) – thanks to increased sales of touch screen phones, especially in the second half of the year.

### Telephony and Internet service revenue



Source: ARCEP.

### Breakdown of electronic communication service end-user revenue in 2008



Source: ARCEP.

### Details concerning the “fixed services” segment

The fixed services segment is made up of fixed telephony and Internet. As is generally the case, the segmentation applied in Observatory publications associates all of the revenue generated by bundled services to Internet and assigns to “fixed” only that revenue that can be attributed directly to it. The indicator tied to revenue that can be attributed directly to fixed telephony services includes income from access fees and subscriptions to the telephone service (PSTN and VoIP when billed separately from the Internet service), fixed line calling revenue that is billed on its own (PSTN and VoIP when billed over and above bundled service flat rates), and income from public payphones and prepaid cards. Access to VoIP services and IP telephony calls that are included in a broadband flat rate are therefore not factored into the fixed services indicator, but rather into the “broadband Internet access revenue” indicator and, at a broader level, in the “Internet revenue” indicator.

## 1.1.2 Electronic communications traffic

### End-user volume

Million minutes	2004	2005	2006	2007	2008p
Fixed telephony	105 100	106 176	105 716	106 049	108 629
Mobile services	74 248	81 711	94 026	99 525	101 819
<b>Total "voice" services</b>	<b>179 348</b>	<b>187 886</b>	<b>199 742</b>	<b>205 575</b>	<b>210 448</b>
Narrowband Internet	54 687	38 233	25 921	15 708	9 806
Number of SMS sent (million units)	10 335	12 597	15 050	19 236	34 396

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

### Growth of end-user volume

In%	2004	2005	2006	2007	2008p
Fixed telephony	-3.5%	1.0%	0.4%	0.3 %	2.4%
Mobile services	17.0%	10.1%	15.1%	5.8%	2.3%
<b>Total "voice" services</b>	<b>4.0%</b>	<b>4.8%</b>	<b>6.3%</b>	<b>2.9%</b>	<b>2.4%</b>
Narrowband Internet	-23.8%	-30.1%	-32.2%	-39.4%	-37.6%
Number of SMS sent (million units)	26.2%	21.9%	19.5%	27.8%	78.8%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

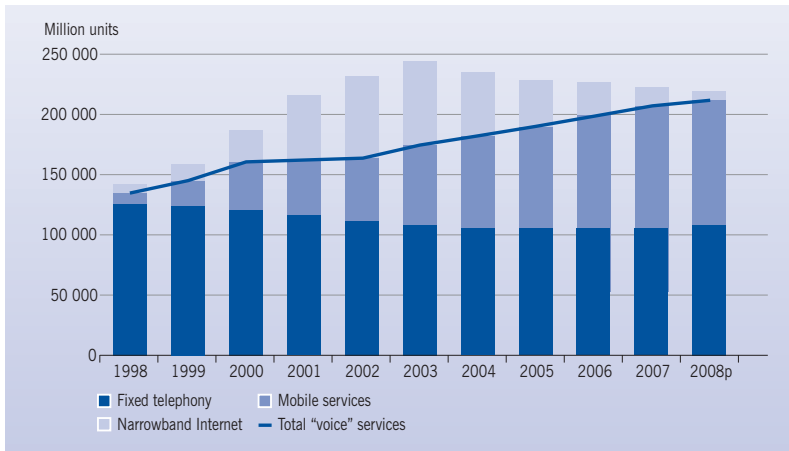
More than 210 billion minutes of calls (fixed and mobile combined) were made in 2008. This translates into an overall increase of +2.4%, which is comparable to what we saw in 2007 (+2.9%) but significantly lower than the growth rates from 2004 to 2006. This can be attributed to a lower rate of growth for mobile calls in 2007 and 2008. Traffic originating on mobile networks increased by only 2.3% in 2008 after having risen by 5.8% in 2007, and by +15.1% in 2006. This increase in the volume of mobile voice calls began to drop off in the first quarter of 2007 and carried on throughout that year and into 2008. In the second half of 2008, mobile calling minutes were virtually the same as in the second half of 2007 – marking an only 1.4% rise in the third quarter, and a slight drop of 0.4% in the final quarter of 2008.

Thanks to the introduction of voice over broadband in 2004, traffic originating on fixed networks levelled off at around 105 billion minutes, after having been in a steady decline up to then. Growth for the whole of 2008 totalled 2.4%, although the volume of calls dropped slightly in the last quarter of the year (-0.6%), which marks a departure from annual growth in fixed line traffic of around 4% during the three previous quarters. Broadband-based services (Internet access, along with IP telephony and IPTV) helped revive the rate of fixed telephony equipment amongst residential users, which had risen to 85% by the end of 2008. IP traffic has more than compensated for the decline in PSTN calls over the past few years. Voice over broadband now accounts for 45% of traffic originating on fixed lines (excluding public payphones and prepaid cards), compared to 32% one year earlier.

Narrowband Internet traffic continues to decline at an annual rate of more than 30% (-37.6%). Internet traffic represents a total of 9.8 billion minutes.

Following through on 2007 which was marked by an exceptional rise in the number of text messages sent (+4.2 billion messages for the whole of 2007, or +27.8%), the increase in 2008 was even more remarkable as SMS consumption continues to accelerate (+15.3 billion messages). The rate of increase in the number of messages being sent picked up speed throughout the year, going from around 50% in the first quarter, to double that by year-end. In all, 34.8 billion person-to-person text messages were sent in 2008, compared to 19.5 billion the year before.

### Growth of telephony and narrowband Internet volumes



Source: ARCEP.

### 1.1.3 Customer base still growing

#### Million units

Million units	2004	2005	2006	2007	2008p
Subscriptions to a fixed telephony service	34.541	36.498	38.249	39.643	40.650
Carrier selection	7.676	8.220	6.893	4.949	3.206
Internet subscriptions	11.939	13.217	15.268	17.248	18.674
Number of mobile service customers	44.544	48.088	51.663	55.337	57.972

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

#### Growth of subscriptions

in %	2004	2005	2006	2007	2008p
Subscriptions to a fixed telephony service	1.8 %	5.7 %	4.8 %	3.6 %	2.5 %
Carrier selection	2.2 %	7.1 %	-16.1 %	-28.2 %	-35.2 %
Internet subscriptions	12.4 %	10.7 %	15.5 %	13 %	8.3 %
Number of mobile service customers	6.8 %	8.0 %	7.4 %	7.1 %	4.8 %

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

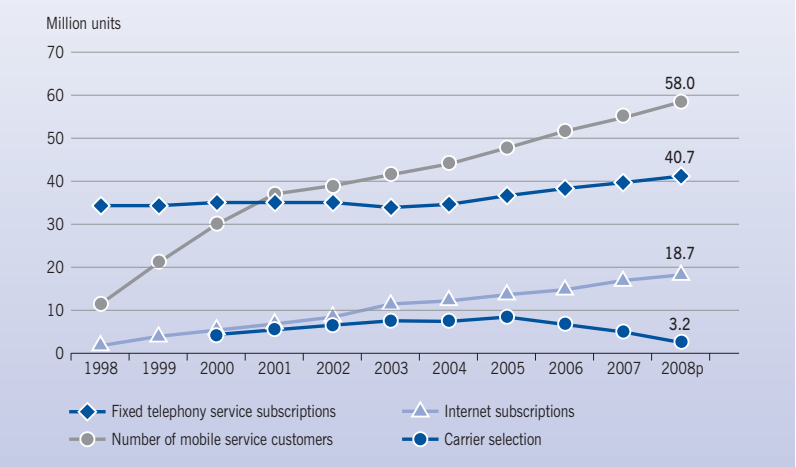
The number of fixed telephony subscriptions rose by 2.5% in 2008 to reach 40.7 million. The number of PSTN subscriptions shrank by 2.4 million during the year to 26.3 million, while the number of voice over broadband subscriptions continued to increase at a dramatic rate: totalling more than 14.4 million at the end of 2008, or 3.4 million more than in 2007.

While voice over broadband is becoming increasingly popular, carrier selection has declined sharply since mid-2006, losing 1.7 million customers in 2008, after having lost two million the year before. IP telephony offers are being used by a majority of customers, while another portion of the user base – 857,000 customers in all – has migrated to offers marketed by alternative operators that include a phone subscription and fixed line calls over the PSTN.

The number of Internet subscriptions totalled 18.7 million at the end of 2008, up 8.3% from the year before, with broadband accounting for 95% of them, or 17.7 million subscriptions. Broadband subscription growth had already been showing signs of slowing in 2007, which was confirmed in 2008 as the annual growth rate dropped considerably: there were just under 2 million new broadband subscribers in 2008, compared to an increase of around 3 million new customers annually between 2003 and 2007.

France was home to 58 million mobile customers at the end of 2008 – marking an increase of 2.6 million over the year before, compared to an increase of 3.7 million in 2007. At 4.8%, the growth rate has dropped slightly in 2008 compared to the 7% to 8% increases in previous years. This decline was particularly noticeable in late 2008, with a roughly 40% drop in the number of new mobile customers in the third quarter of the year, and a 30% drop in Q4 2008. This change can be attributed entirely to the decrease in the number of prepaid cards sold, whereas the number of new subscriptions rose by even more than the year before.

Telephony and Internet subscriptions



Source: ARCEP.

## 1.2 Average customer consumption

The average customer invoice for monthly spending on fixed telephony and Internet access totalled €36.7, excluding VAT, in 2008 – marking an increase for the second year in a row: up €0.50 in 2008, after having risen by €0.70 in 2007. The average monthly invoice for mobile customers is around 10 euros less than average spending on fixed line services, which has remained unchanged since 2007: €27.3, excl. VAT, for 2008, or a roughly €0.10 drop compared to 2007) – after having been on a downwards trajectory since 2005. This was due to a sharp increase in customers of between 7% and 8% a year, and a less dynamic rise in mobile service revenue (+3.5% in 2006 and +4.8% in 2007).

In terms of volume, average monthly traffic on fixed lines (4 hours and 17 minutes), which concerns all members of the household, is well above average monthly mobile traffic (2 hours and 30 minutes), which is generally confined to a single individual.

### Customers' average monthly voice and data bill (excluding value-added services)



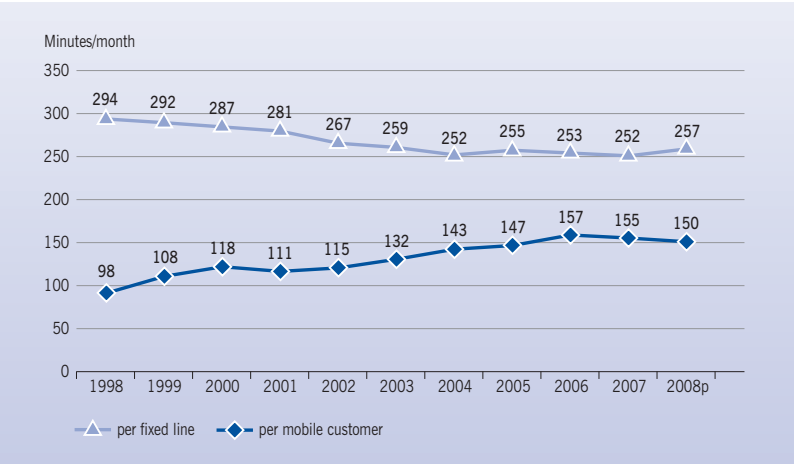
Source: ARCEP.

The average monthly fixed line bill is calculated by dividing the fixed line revenue (access, calls and Internet revenue) for Year N by the estimated average customer base for Year N, then dividing the result by twelve. See inset for a more detailed definition of "line".

The average monthly mobile bill is calculated by dividing the mobile revenue (voice and data revenue, including roaming out, but excluding incoming call revenue) for Year N by the estimated average customer base for Year N, then dividing the result by twelve. This figure, which does not include interconnection or VAS revenue, is to be distinguished from the traditional average revenue per user (ARPU) indicator.

Notes: Average customer base for Year N:  $[(\text{total customer base at the end of Year N} + \text{Total customer base at the end of Year N-1})/2]$ .

Average monthly volume of outbound voice calls



Source: ARCEP.

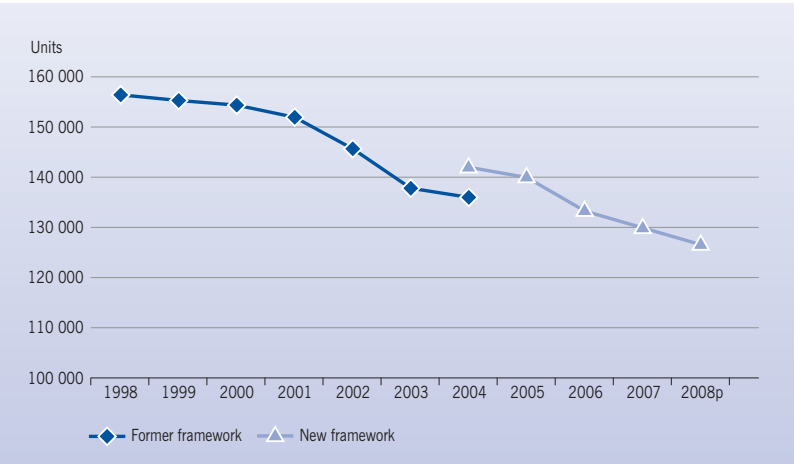
Average monthly volume per fixed line is calculated by dividing the traffic volume (PSTN and IP) for Year N by the estimated average customer base for Year N, then dividing the result by 12.

Average monthly volume per mobile customer is calculated by dividing the mobile traffic volume (including roaming out) for Year N by the estimated average customer base for Year N, then dividing the result by 12.

2. Employment and investment

The number of people working in the electronic communications sector in France has been declining for several years now – totalling 128 000 at the end of 2008, a 1.7% decrease from the year before.

Electronic communications operator employees



Source: ARCEP.



### Direct employment (as of 31/12)

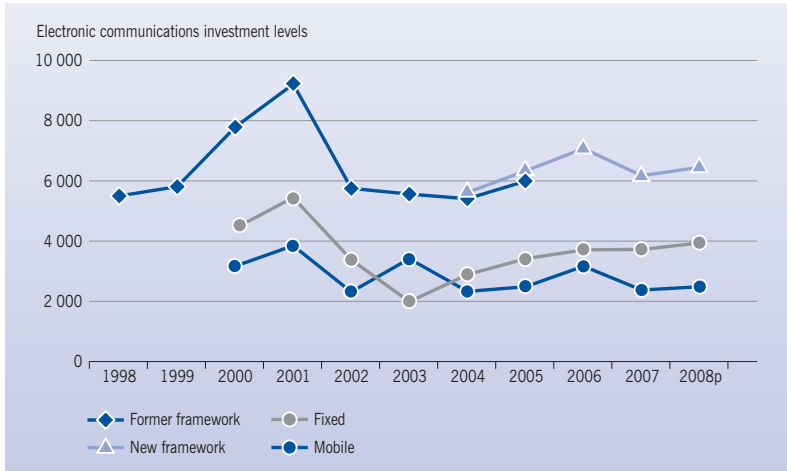
Units	2004	2005	2006	2007	2008p
<b>Jobs (former regulatory framework)</b>	<b>136 547</b>	<b>134 066</b>	-	-	-
Growth, in %	-1.6%	-1.8%	-	-	-
<b>Jobs (former regulatory framework)</b>	<b>142 137</b>	<b>140 410</b>	<b>133 114</b>	<b>129 894</b>	<b>127 665</b>
Growth, in %	-	-1.2%	-5.2%	-2.4%	-1.7%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Note: these figures include only operators declared with ARCEP, and not the entire electronic communications economic sector. Excluded are distributors/retailers, service providers (consultants, market research firms, call centres...) and equipment manufacturers. Enterprises declared with ARCEP and which are involved only marginally in the electronic communication sector are not included in sector employment figures.

Electronic communications operators' investments in their business rose in 2008, after having shrunk by 12.5% in 2007 – reaching a total €6.5 billion compared to €6.1 billion in 2007. Fixed operators' investments having been rising since 2003, even though growth has been slight, and account for just under two thirds of total spending, with the bulk of it going to broadband access networks. Mobile operator investments were back on the rise in 2008, after having dropped by close to 30% in 2007.

### Electronic communications investment levels



Source: ARCEP.

## Annual investments

€ million	2004	2005	2006	2007	2008p
<b>Investment</b> (under former regulatory framework)	<b>5 343</b>	<b>6 037</b>	-	-	-
Evolutions en %	-1.7%	13.0%	-	-	-
<b>Investment</b> (under new regulatory framework)	<b>5 493</b>	<b>6 342</b>	<b>7 015</b>	<b>6 140</b>	<b>6 458</b>
<b>% change</b>	-	<b>15.5%</b>	<b>10.6%</b>	<b>- 12.5%</b>	<b>5.2%</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

*Note: investment figures refer to the gross investments made by operators declared with ARCEP in their electronic communications business during the fiscal year in question.*

## 3. Intermediate market: interconnection and wholesale services

### 3.1 Revenue and volume

Interconnection market revenue totalled €8.6 billion in 2008, a 1.2% drop on the year before, with revenue generated by fixed operators (€4.7 billion) rising by 6.2%, whereas mobile operators' income in this market dropped by 8.7% to €3.9 billion. Broadband-related services are the main source of the increase for fixed operators, while other services such as unbundling and bitstream continued to enjoy a healthy momentum in 2008, with the revenue they generated increasing by 13.5%, after having risen by 30% in 2007. Mobile operator revenue decreased due to the ordered reduction in call termination prices for voice calls on 1 January 2008: 13% for Orange France and SFR, and by 8% for Bouygues Telecom.

### Interconnection revenue, including Internet interconnection services

€ million	2004	2005	2006	2007	2008p	Growth
Fixed operator interconnection and access services	3 783	3 980	4 132	4 382	4 652	6.2%
Mobile operator interconnection services	2 807	5 120	4 606	4 283	3 910	-8.7%
<b>Total interconnection services</b>	<b>6 590</b>	<b>9 100</b>	<b>8 738</b>	<b>8 665</b>	<b>8 562</b>	<b>- 1.2%</b>
of which inbound international calls	566	521	509	584	585	0.2%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Traffic was down by 9.6% to 187 billion minutes. After having risen steadily up to 2005 with the increase in the number of market players and a dramatic increase in traffic originating on mobile networks and narrowband Internet, interconnection traffic has decreased by 5% to 10% a year since then. It is now back to where it was in 2003. Contrary to the growth trajectory for their revenue, fixed operators' interconnection traffic is shrinking (-12.3%), but increasing for mobile operators (+7.4%).

### Interconnection volume, including narrowband Internet interconnection services

Million minutes	2004	2005	2006	2007	2008p	Growth
Fixed operator interconnection services	131 463	169 753	166 438	155 468	136 326	- 12.3 %
Narrowband Internet interconnection services	33 720	29 948	19 786	9 124	5 238	- 42.6 %
Mobile operator interconnection services	30 150	31 106	35 301	41 996	45 108	7.4 %
<b>Total interconnection services</b>	<b>195 333</b>	<b>230 806</b>	<b>221 525</b>	<b>206 588</b>	<b>186 672</b>	<b>-9.6 %</b>
of which inbound international calls	6 812	7 288	8 086	10 653	11 393	6.9 %

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

#### Notes:

- Interconnection refers to all of the services offered between operators resulting from interconnection agreements. In cases of corporate mergers or takeovers, a portion of this traffic disappears.
- Interconnection revenue and volumes are not calculated using the same parameters, which makes it inappropriate to compare the two when seeking to estimate average prices (interconnection revenue includes fixed revenue such as payments for connection links as well as operator-to-operator services).
- Readers should note that the interconnection figures presented above may include overlaps, particularly in fixed operators' accounts.
- Broadband access wholesale services include revenue generated by unbundling and bitstream, or bitstream equivalent

### 3.2 Fixed operator interconnection and access services

The revenue generated by the interconnection services sold by fixed operators rose by 6.2%, thanks to a 13.5% increase in broadband services revenue in 2008 – and this despite a drop in the price of these services in late 2008. Meanwhile, income from the telephone service – which includes access, call termination and collection – rose by 3% after experiencing a comparable decline in 2007. France Telecom's sale of wholesale subscriptions to other operators (just over 900,000 subscriptions in December 2008) helped contain the decrease in telephone service revenue. The number of interconnection minutes was down by 12.3% to 136.3 billion minutes.

The steady decline in revenue generated by narrowband Internet accelerated again in 2008, reaching close to 50%, with narrowband traffic experiencing a similar rate of decline – dropping by half, in other words at a comparable rate to 2007.

### Fixed operator interconnection services

Revenue, € million	2004	2005	2006	2007	2008p	Growth
Telephone-related services (including wholesale subscription sales)	2 764	2 889	2 916	2 829	2 914	3.0%
Narrowband Internet interconnection services	174	105	69	41	21	- 48.8%
Broadband wholesale services	845	987	1 147	1 513	1 717	13.5%
<b>Fixed operator interconnection and access services</b>	<b>3 783</b>	<b>3 980</b>	<b>4 132</b>	<b>4 382</b>	<b>4 652</b>	<b>6.2%</b>
of which inbound international calls	408	362	356	406	399	- 1.7%
Volume, million minutes						
Narrowband Internet interconnection services	33 720	29 948	19 786	9 124	5 238	- 42.6%
<b>Fixed telephony interconnection services</b>	<b>131 463</b>	<b>169 753</b>	<b>166 438</b>	<b>155 468</b>	<b>136 326</b>	<b>- 12.3%</b>
of which inbound international calls	5 792	6 064	6 539	8 376	8 801	5.1%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

### 3.3 Unbundling

Unbundling continues to prove a success, growing by 20.9% in 2008. There were 6.3 million unbundled lines in France at the end of 2008, 1.1 million more than in December 2007. The rise in the number of LLU lines since 2006 has been due entirely to the increase in fully unbundled lines whose numbers rose by 1.3 million, now accounting for 78% of LLU lines.

Shared access lines have been on a steady decline over the last three years, totalling only 1.4 million at the end of 2008, with a substantial number of them having been replaced by fully unbundled lines.

The other broadband wholesale services suffered a slight drop in 2008 (-1.3%, or 28,000 fewer lines) after having increased by close to 10% in 2007. The number of bitstream lines reached 2.2 million at the end of 2008, while the number of naked ADSL sold to alternative operators rose by 25.9% to 1.2 million.

### Unbundling

Million units	2004	2005	2006	2007	2008p	Growth
Number of shared access lines	1.446	2.248	1.826	1.613	1.393	- 13.6%
Number of fully unbundled lines	0.101	0.592	2.160	3.625	4.939	36.2%
<b>Total LLU lines as of 31/12</b>	<b>1.547</b>	<b>2.840</b>	<b>3.986</b>	<b>5.238</b>	<b>6.332</b>	<b>20.9%</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

### Bitstream (ATM and regional IP) and national IP

Million units	2004	2005	2006	2007	2008p	Growth
<b>Total number of lines</b>	-	<b>1.782</b>	<b>2.090</b>	<b>2.224</b>	<b>2.196</b>	<b>-1.3%</b>
Of which naked ADSL	-	-	0.188	0.942	1.186	25.9%

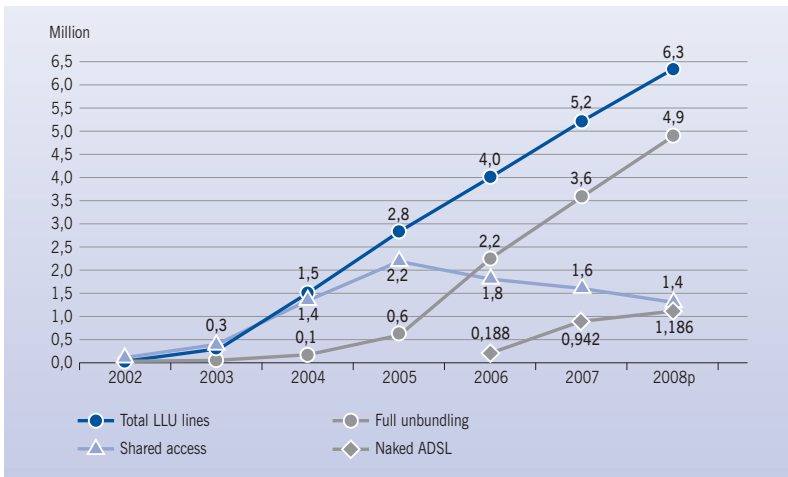
Source: ARCEP, EC Market Observatory, annual survey 2005; quarterly surveys for 2006 (estimated figures).

### Naked ADSL

Million units	2004	2005	2006	2007	2008p	Growth
Number of naked ADSL	-	-	0,188	0,942	1,186	25,9%

Source: ARCEP, EC Market Observatory, annual surveys 2005; quarterly surveys for 2006 (estimated figures).

### Number of unbundled lines



Source: ARCEP.

## 3.4 Mobile interconnection

### Mobile operator interconnection services

Revenue, € million	2004	2005	2006	2007	2008p	Growth
<b>Interconnection services</b>	<b>2 807</b>	<b>5 120</b>	<b>4 606</b>	<b>4 283</b>	<b>3 910</b>	<b>-8.7%</b>
of which inbound international calls	158	159	153	178	186	4.5%
of which foreign user roaming in	874	839	799	695	657	-5.5%
<b>Volume, million minutes</b>						
<b>Interconnection services</b>	<b>30 150</b>	<b>31 106</b>	<b>35 301</b>	<b>41 996</b>	<b>45 108</b>	<b>7.4%</b>
of which inbound international calls	1 020	1 224	1 547	2 278	2 592	13.8%
of which foreign user roaming in	1 350	1 393	1 521	1 641	1 881	14.6%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Note: roaming-in refers to French mobile operators' handling of the incoming and outgoing calls made in France by customers of a foreign mobile operator. The revenue corresponds to the remuneration between the two operators. The relationship between call revenue/volume does not correspond to any set price, or to any price that is billed to customers.

The revenue generated by mobile operators' interconnection services totalled €3.9 billion in 2008, which includes voice call and incoming SMS revenue, and decreased by 8.7% during the year. This drop in revenue is due to several factors, although the volume of calls and SMS is on the rise. First was the decrease in voice call termination tariffs on mobile networks, which contributed a great deal to the decrease in income, as it has done in previous years. In addition to this, a European Union regulation has imposed international roaming tariffs in the EU zone since June 2007, as well as multi-annual decreases in these prices. On 30 August 2008, the price of an overseas call (Eurotariff) went from €0.49, excl. VAT, to €0.46, excl. VAT, for calls placed abroad (i.e. roaming out, which affects the retail market) and from €0.24, excl. VAT, to €0.22, excl. VAT, for roaming-in calls, i.e. those received from abroad.

Traffic requiring interconnection services rose by close to 7.4% to reach 45.1 billion minutes in 2008. As in 2007, the drop in fixed-to-mobile traffic is being offset by the rise in interconnection traffic between mobile operators, and by a rise in inbound international (+13.8%) and roaming-in (+14.6%) calls.

Added to these services are those that derive from the wholesale market. In terms of revenue, the sale of access and call origination services to MVNOs generated €269 million in 2008. In terms of volume, calling minutes sold to MVNOs during the year totalled 1,452 million minutes.

## B. The different market segments

### 1. Fixed telephony

#### Total fixed telephony revenue

€ million units	2004	2005	2006	2007	2008p	Growth
Access, subscriptions and calls originating on fixed lines	12 105	11 612	10 994	10 709	10 357	-3.3%
Access/subscriptions	5 439	5 651	5 783	6 068	6 028	-0.7%
Calls	6 666	5 961	5 211	4 641	4 329	-6.7%
Public payphones	277	219	177	146	107	-26.6%
Cards	248	241	207	144	129	-10.6%
<b>Total fixed telephony</b>	<b>12 630</b>	<b>12 072</b>	<b>11 378</b>	<b>10 999</b>	<b>10 593</b>	<b>-3.7%</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

#### Total fixed telephony volume

Million minutes	2004	2005	2006	2007	2008p	Growth
All outbound fixed line calls	102 067	103 181	102 918	103 819	107 075	3.1%
Public payphones	1 092	821	627	508	329	-35.3%
Cards	1 941	2 173	2 170	1 723	1 226	-28.9%
<b>Total fixed telephony</b>	<b>105 100</b>	<b>106 176</b>	<b>105 716</b>	<b>106 049</b>	<b>108 629</b>	<b>2.4%</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

### 1.1 Access

#### Subscriptions to fixed telephony services, as of 31/12

Million units	2004	2005	2006	2007	2008p	Growth
Narrowband fixed line subscriptions (analogue and digital lines, and via cable)	33.610	33.106	31.598	28.738	26.298	- 8.5%
of which subscriptions from wholesale subscription sales	-	-	-	0.703	0.857	21.9%
IP-based subscriptions (xDSL, cable)	0.931	3.392	6.651	10.905	14.352	31.6%
of which naked DSL	0.101	0.601	2.379	5.483	8.049	46.8%
<b>Total subscriptions</b>	<b>34.541</b>	<b>36.498</b>	<b>38.249</b>	<b>39.643</b>	<b>40.650</b>	<b>2.5%</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

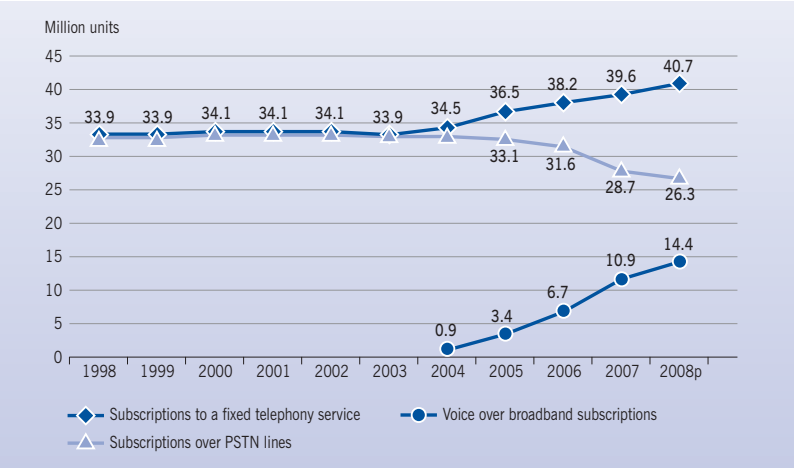
The number of phone subscriptions continues to increase, totalling 40.7 million at the end of 2008, or 2.5% more than the previous year. Broadband continues to sustain the increase, with the number of VoIP subscriptions rising by 3.4 million during the year to 14.4 million in December 2008. IP-based subscriptions represent 35% of fixed telephony accounts and 41% of fixed phone lines, 10% more than in 2007. Conversely, the number of narrowband subscriptions decreased by 2.4 million to 26.3 million subscriptions.

For the incumbent carrier in particular, the growing use of full unbundling and naked ADSL was a major contributor to the rise in the number of voice over broadband subscriptions over DSL with no PSTN phone service, which represented 8 million subscriptions in December 2008, or 2.6 million more than the year before. In all, i.e. by adding VoIP via cable, 25% of all lines support only a single subscription to a VoIP phone service.

The majority of lines (59%) are still used to deliver only a PSTN subscription, but this percentage shrank by 9% in 2008. Between 2004 and 2008, the number of subscriptions over PSTN-only lines has decreased by 40 points. Initially, wholesale offers that allowed customers to do away with their phone subscription were uncommon as the tendency was towards multiple subscriptions on the same line: customers kept their 'traditional' subscription and the ability to make and receive calls over the PSTN and added a second (i.e. VoIP) subscription. Based on shared access or bitstream (excluding naked ADSL), these offers continued to increase in 2008 – representing 5.6 million subscriptions, or 16% of all lines, compared to 5.1 million in 2007, but are proving less popular than VoIP-only subscriptions.

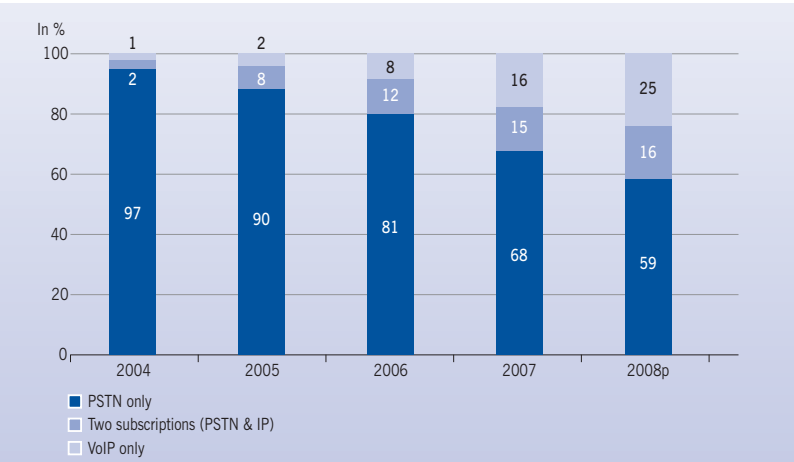
Launched in 2006, wholesale telephone subscription sales by alternative operators made real strides in 2007. In December 2008, 850,0000 subscriptions had been sold, accounting for 3.2% of all PSTN subscriptions.

Subscriptions to fixed telephony services



Source: ARCEP.

Breakdown of fixed lines with telephony service by subscription type



Source: ARCEP.

Note:

- Subscription to an IP telephony service over xDSL lines without a PSTN subscription: telephone subscription on lines whose low frequencies are not used to support a voice service (neither by the incumbent carrier or alternative operators). Such is the case with voice over broadband services enabled by full unbundling and naked ADSL offers.
- Subscription to an IP telephony service over xDSL lines with a PSTN subscription: telephone subscription on lines whose low frequencies are used to support a voice service over the PSTN. Such is the case with services enabled by shared access and bitstream offers, not including naked ADSL.

Number of lines supporting the phone service on fixed networks, as of 31/12

Million	2004	2005	2006	2007	2008p	Growth
Total number of lines	33.710	33.717	34.125	34.527	35.001	1.4 %

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).



In 2008, the number of fixed lines increased by 500,000 to 35 million, after having risen by more than 400,000 in 2006 and 2007. Growth has been steady since 2006, whereas the number of lines had been shrinking up to then, and can no doubt be attributed to growth of the number of households and the parallel levelling-off of residential fixed telephony equipment levels since the end of 2006, at around 82%. But the rate of fixed telephony equipment in households has been rising in recent years, and was back up to 85% by the end of 2008 (source: Médiamétrie, multimedia equipment survey).

### Details on the indicators for IP telephony services

#### Regarding the terminology used

IP telephony service indicators in this publication cover voice over broadband regardless of medium (chiefly DSL IP, but also cable IP) and voice over Internet for operators that have declared their activity to ARCEP.

ARCEP defines “voice over broadband” as fixed telephony service using Voice over IP technology on an Internet access network at speeds in excess of 128 kbps where quality is controlled by the operator providing the service. It defines “voice over Internet” as voice communications using the public Internet network where service quality is not controlled by the operator providing the service.

The outgoing Voice over IP calls counted by the Observatory correspond to access services. The indicators do not refer to IP traffic that traverses the IP backbone only.

Moreover, the Observatory does not survey operators which have not declared their activity and which support PC-to-PC voice over Internet. These operators are outside the scope of the survey.

#### Revenue taken into consideration

The Observatory distinguishes calls originating with IP telephony services from other voice calls. However, while VoIP calling volume includes all traffic observed in the end market, revenue includes only billed VoIP traffic (for example, over and above a service bundle flat rate).

### 1.1.1 Fixed portability

#### Number retention

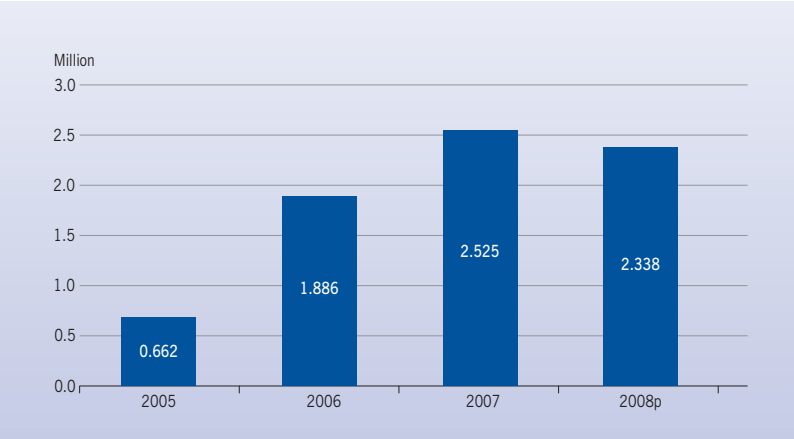
Million	2004	2005	2006	2007	2008p	Growth
Total numbers ported during the year		0.662	1.886	2.525	2.338	- 7.4%

Source: ARCEP, EC Market Observatory, annual survey 2005; quarterly surveys for 2006 (estimated figures).

There were 200,000 fewer numbers ported in 2008 than in 2007. In all 2.3 million fixed numbers were ported from one operator to another.

1.1.2 Carrier selection

Fixed number retention



Source: ARCEP.

Carrier selection subscriptions

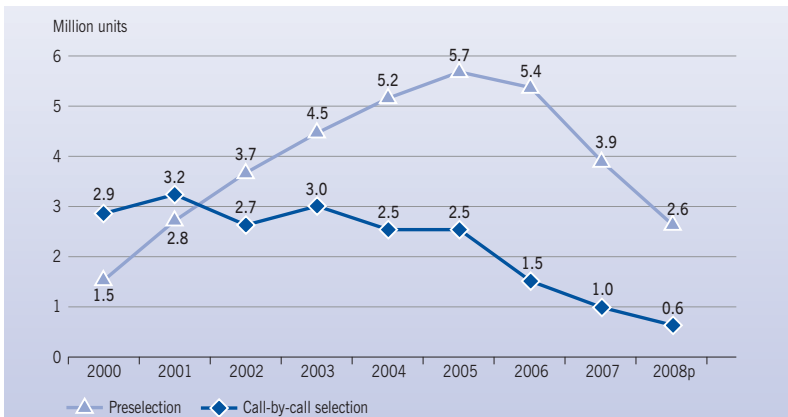
Million	2004	2005	2006	2007	2008p	Growth
Call-by-call selection subscriptions	2.513	2.533	1.471	1.042	0.585	- 43.9%
Preselection subscriptions	5.163	5.687	5.423	3.907	2.621	- 32.9%
Total carrier selection subscriptions	7.676	8.220	6.893	4.949	3.206	- 35.2%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 2005; quarterly surveys for 2006 (estimated figures).

Note: the call-by-call selection base includes only active subscriptions; the preselection base includes only subscriptions that are in service, minus cancellations

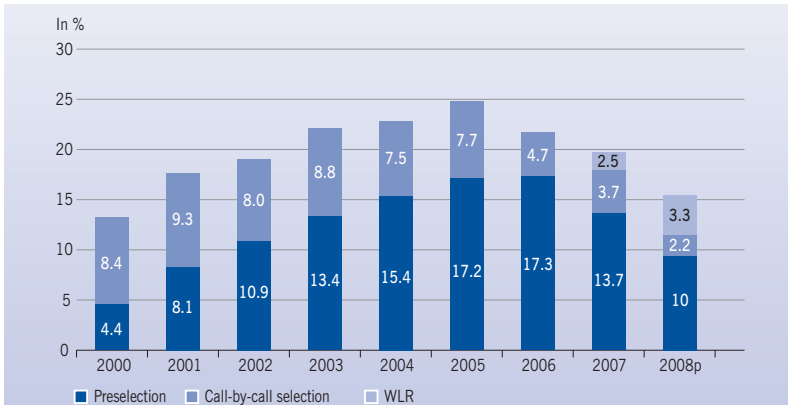
Having to contend with stiff competition from increasingly popular VoIP offers, the number of carrier selection subscriptions has been shrinking steadily since 2006, and at an even greater rate of decrease in 2008 (-35.2%) than in 2007 (-28.2%). At the end of 2008, there were 3.2 million customers using carrier selection. Call-by-call selection is used by only 600 000 customers while preselection now has a base of 2.6 million subscribers, or 1.3 million fewer than in December 2007. The data on preselection does not include customers who have switched to offers that included a PSTN subscription (wholesale subscription sales). These latter increased by 150,000 subscriptions over the course of 2008. In all, 12.2% of customers with a PSTN account subscribe to a carrier selection service.

### Number of carrier selection subscriptions



Source: ARCEP.

### Carrier selection subscriptions as a percentage of total narrowband telephone service subscriptions (excluding cable)



Source: ARCEP.

### Revenue from access fees, subscriptions and additional services

€ million	2004	2005	2006	2007	2008p	Growth
<b>Access fees, subscriptions and additional services</b>	<b>5 439</b>	<b>5 651</b>	<b>5 783</b>	<b>6 068</b>	<b>6 028</b>	<b>-0.7%</b>
of which revenue from Voice over IP subscriptions	-	-	199	533	628	17.7%

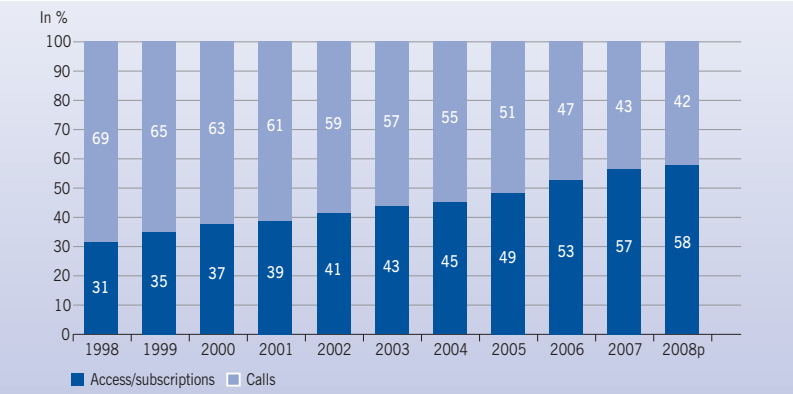
Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Note: in addition to income earned from providing access to a telephone service, access revenue includes income from IP telephony subscriptions and from additional services (caller ID, etc.).

After increasing steadily for several years, revenue from access fees and subscriptions to fixed line telephone services was down slightly in 2008 (-0.7%) – totalling €6 billion, or 58% of the revenue that can be attributed directly to fixed telephony (€10.4 billion excluding public payphones and prepaid cards). The 6.7% increase in the price of a telephone subscription on 1 July 2007 was not enough to offset the decrease in the number of PSTN subscriptions (close to 2.3 million in 2008). Revenue from “classic” telephone subscriptions shrank by €130 million, down to €5.4 billion in 2008.

Some operators bill their VoIP service over and above their Internet access flat rate. The income generated by these subscriptions increased by €100 million compared to 2007 (+17.7%), to reach €628 million in 2008 – and accounts for just over 10% of total access revenue.

Breakdown of fixed telephony revenue



Source: ARCEP.

1.2 Calls

1.2.1 Fixed telephony calls

Revenue that can be directly attributed to fixed line calls totalled €4.3 billion in 2008, a 6.7% decrease compared to 2007. This is a slightly smaller decrease than the roughly 10% drop we had been seeing annually since 2004, and can be put down to a more moderate decline in PSTN calling revenue than in previous years (-11.7% in 2008 compared to around -15% in 2006 and 2007) and to a steady rise in revenue earned on calls originating on IP lines (+43.2%).

As in 2007, it was revenue from national calls that experienced the sharpest decline (-10.1%), suffering from dwindling PSTN traffic. Income from calls to mobiles decreased by 4.8% while international calling revenue rose by 1.5%.

The way that fixed line traffic is evolving differs considerably from the revenue growth trajectory. After remaining relatively unchanged since 2004, overall calling volumes increased significantly in 2008 to 107.1 billion minutes compared to 103.8 minutes in 2007, although traffic in the fourth quarter was 0.2% below what it was in Q4 2007.

National calling minutes, which account for 82% of total traffic, rose by 2.6% compared to 2007 while fixed-to-mobile traffic (11.7 billion minutes) has not changed since 2004, despite the steady rise in the number of mobile phones in use. International calling traffic continues to increase at a healthy pace (+19.9%), following through on two already very substantial increases in 2006 and 2007 (+19.3% and +33.4%), thanks to an increase in the volume of international calls using IP telephony (+57.5%).

The volume of voice over broadband traffic accounts for a growing share of calls originating on fixed lines: 45% on average, all call destinations combined. Coming chiefly from services that are replacing the PSTN, particularly for national calls, this traffic is also a response to growing international communication needs – something that is reflected in the considerable rise in the volume of overseas calls.

### Outbound fixed line calling revenue

€ million	2004	2005	2006	2007	2008p	Growth
National calls	3 567	3 264	2 971	2 361	2 122	- 10.1 %
International calls	673	632	562	556	564	1.5 %
Calls to mobiles	2 425	2 065	1 678	1 725	1 642	- 4.8 %
<b>Total fixed-line revenue</b>	<b>6 666</b>	<b>5 961</b>	<b>5 211</b>	<b>4 641</b>	<b>4 329</b>	<b>- 6.7 %</b>
of which PSTN calls	6 647	5 865	4 986	4 223	3 730	- 11.7 %
of which calls originating from VoIP services	19	96	226	418	599	43.2 %

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Note: revenue generated by calls originating on an IP connection includes only the amounts that operators might bill for IP calls, over and above bundled service flat rates. This figure does therefore not include the price of the bundled subscription, or access to the voice over broadband service.

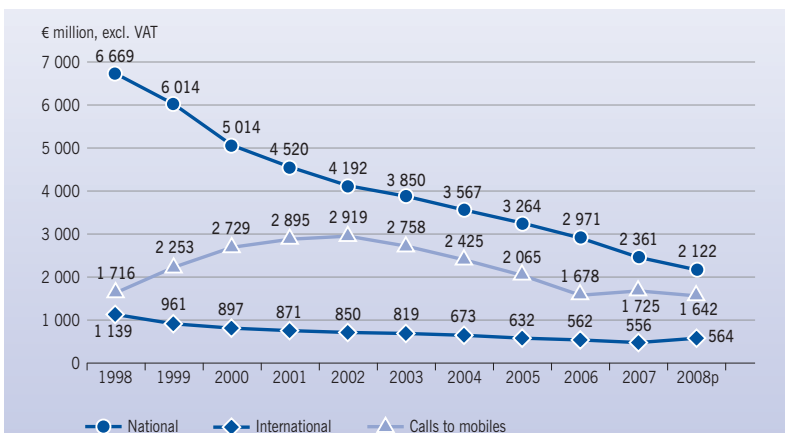
### Outbound fixed line calling volume

Million minutes	2004	2005	2006	2007	2008p	Growth
National calls	86 149	86 838	85 633	85 286	87 541	2.6 %
International calls	4 281	4 116	4 910	6 550	7 851	19.9 %
Calls to mobiles	11 638	12 227	12 375	11 983	11 682	- 2.5 %
<b>Total outbound fixed-line calls</b>	<b>102 067</b>	<b>103 181</b>	<b>102 918</b>	<b>103 819</b>	<b>107 075</b>	<b>3.1 %</b>
of which PSTN calls	100 615	94 742	84 255	70 573	60 028	- 14.9 %
of which calls originating from VoIP services	1 453	8 440	18 663	33 246	47 047	41.5 %

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

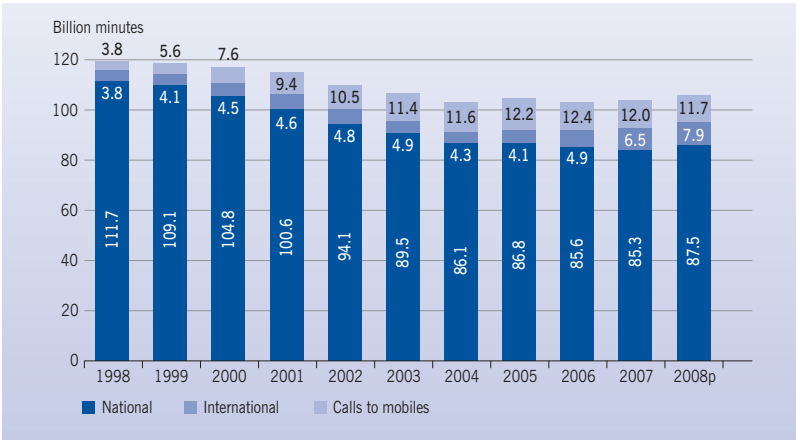
Note: Although the volume of VoIP calls refers to all end-market traffic, the revenue covers only invoiced VoIP traffic (e.g. over and above bundled service flat rates).

### Outbound fixed line call revenue



Source: ARCEP.

Volume of outbound fixed line calls



Source: ARCEP.

1.2.2 Calls over the PSTN (“traditional” telephony)

Having to contend with fierce competition from voice over broadband, the market segment for strictly PSTN calls continues to shrink dramatically, in terms of both value and volume (-11.7% and -14.9%, respectively). The decrease is nevertheless slightly less than the 15% drop reported in 2006.

National and international calls over the PSTN both decreased by close to 16%, while fixed-to-mobile calling traffic declined by 10%.

Revenue generated by PSTN calls totalled €3.7 billion, accounting for 86% of the income earned on calls originating on a fixed network – 5 points less than in 2007. The decrease in terms of volume is even more dramatic: 56% of minutes originated on the PSTN in 2008 (or 60 billion minutes) compared to 68% in 2007 and 82% in 2006.

Revenue from PSTN calls originating on a fixed line

€ million	2004	2005	2006	2007	2008p	Growth
National calls	3 563	3 256	2 952	2 348	2 088	-11.0%
International calls	667	606	496	437	389	-11.1%
Calls to mobiles	2 417	2 003	1 538	1 438	1 252	-12.9%
<b>Total PSTN fixed-line revenue</b>	<b>6 647</b>	<b>5 865</b>	<b>4 986</b>	<b>4 223</b>	<b>3 730</b>	<b>-11.7%</b>

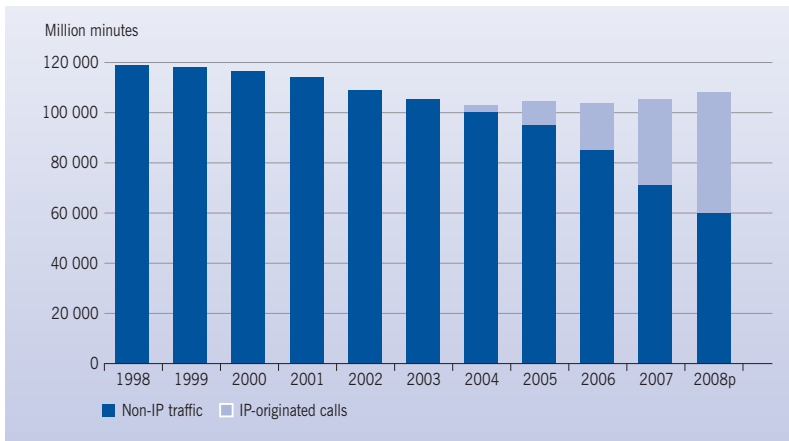
Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Volume of PSTN calls originating on a fixed line

Million minutes	2004	2005	2006	2007	2008p	Growth
National calls	84 826	78 984	68 933	56 717	47 739	-15.8 %
International calls	4 210	3 862	3 699	3 367	2 839	-15.7 %
Calls to mobiles	11 579	11 895	11 623	10 488	9 449	-9.9 %
<b>Total PSTN fixed-line calls</b>	<b>100 615</b>	<b>94 742</b>	<b>84 255</b>	<b>70 573</b>	<b>60 028</b>	<b>-14.9 %</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

### Volume of calls originating on a fixed line (excluding public payphones and cards)



Source: ARCEP.

#### 1.2.3 IP calls on a fixed line (via IP boxes)

The volume of IP traffic rose considerably once again in 2008, increasing by 13.8 billion minutes, following a comparable increase in 2007 (+14.6 billion minutes), to reach 47 billion minutes and accounting for 44% of traffic originating on fixed lines in 2008. This increase is due to the increased popularity of voice over broadband subscriptions.

National traffic, grew by 11.2 billion minutes to 39.8 billion minutes, or 45% of fixed line traffic – marking a 12-point increase over the previous year, comparable to the rise reported in 2007 and 2006. New offers were rolled out in late 2007 that included national IP calls in the flat rate price, which spurred an increase in national calling traffic in 2008.

For international calls, which users can now make for free to a number of destinations, growth continues to be steady: rising by 1.8 billion minutes to a total 5 billion minutes in 2008. Two-thirds of all international calling minutes are over IP.

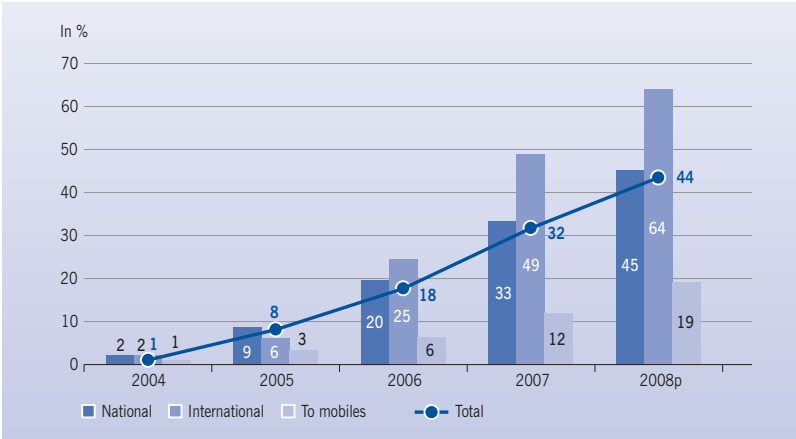
After having doubled in 2007, the volume of calls to mobiles increased by 750 million minutes in 2008 to reach 2.2 billion.

#### Volume of IP calls originating on a fixed line

Million minutes	2004	2005	2006	2007	2008p	Growth
National calls	1 323	7 853	16 700	28 569	39 802	39.3 %
International calls	71	254	1 211	3 183	5 011	57.5 %
Calls to mobiles	59	333	752	1 494	2 233	49.4 %
<b>Total calls originating on an IP connection</b>	<b>1 453</b>	<b>8 440</b>	<b>18 663</b>	<b>33 246</b>	<b>47 047</b>	<b>41.5 %</b>

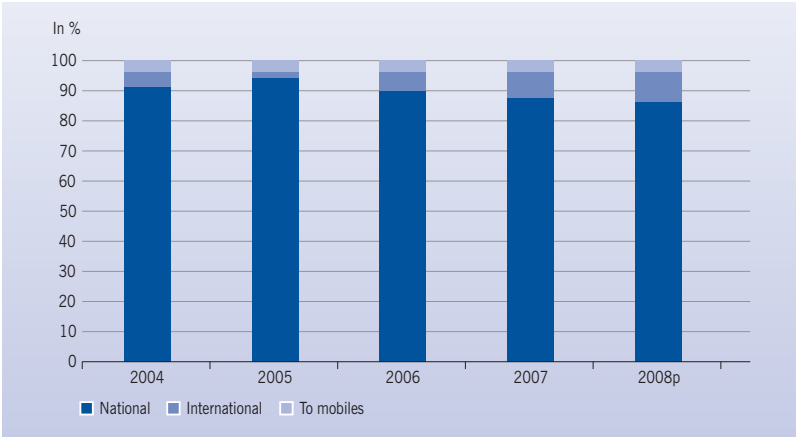
Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Share of fixed line calls originating on an IP connection, by call destination



Source: ARCEP.

Breakdown of VoIP traffic by call destination



Source: ARCEP.

Customers equipped with an IP box make more international calls and national calls to fixed lines than those using a classic phone service (PSTN): of calls originating on an IP connection, 11% are to international destinations (+2 points) and 85% to national fixed lines (-2 points), whereas the proportions for calls originating on the PSTN are 5% to international destinations and 80% to national fixed lines. On the other hand, only 5% of calls made from IP boxes are to mobiles, compared to 16% of calls originating on the PSTN (+4 points).

1.3 Average consumption

The invoice per line corresponds, on average, to what customers pay in total each month for access to the fixed network – whether or not they have narrowband or broadband Internet access – either via the PSTN or ToIP or both. This invoice has remained more or less stable over time, at around €36, excluding VAT, a month. It increased slightly for the second consecutive year – by +€0.70 in 2007 then by +€0.50 in 2008 – due chiefly to the rise in the number of people with Internet access and to the ongoing migration from narrowband to broadband.



Telephony traffic per line has also remained more or less unchanged, at just over four hours a month: in 2008 it totalled 4 hours and 17 minutes a month per fixed line, five minutes more than in 2007.

After decreasing slightly in 2007 (-0.2€), the average monthly PSTN subscription invoice rose by €0.50 in 2008. PSTN customers spend an average €27.6, excl. VAT, for their subscription and calls from their “classic” line. Average consumption for customers with a “classic” telephone subscription totals 3 hours and 2 minutes a month, 8 minutes less than in 2007.

The average invoice for voice over broadband calls that are billed over and above multi-play service bundle flat rates totalled €4 – virtually the same as in 2007. Average traffic for a ToIP customer in 2008 was 5 hours and 10 minutes a month.

### Average monthly consumption per fixed line

€, excl. VAT, or million minutes	2004	2005	2006	2007	2008p	Growth
Average monthly invoice: access and calls over the phone service and the Internet (€, excl. VAT)	36.0	35.9	35.5	36.2	36.7	1.2 %
Average monthly volume of outbound voice calls	251.6	255.0	252.8	252.0	256.7	1.8 %

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

The average monthly fixed line bill is calculated by dividing the fixed line call revenue (access, calls and Internet revenue) for Year N by the estimated average customer base for Year N, then dividing the result by twelve. (See inset for the definition of “line”).

### Average monthly fixed line consumption per customer

PSTN subscription	2004	2005	2006	2007	2008p	Growth
Average monthly invoice per customer (€, excl. VAT)	29.8	28.8	27.2	27.0	27.6	2.6%
Average monthly volume per customer (minutes)	248.3	236.7	215.4	190.2	181.8	- 4.4 %
<b>VoIP calls</b>						
Average monthly invoice per customer (€, excl. VAT)	3.3	3.7	3.7	4.0	4.0	- 0.4 %
Average monthly volume per customer (minutes)	-	325.4	309.7	315.6	310.4	- 1.6 %

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

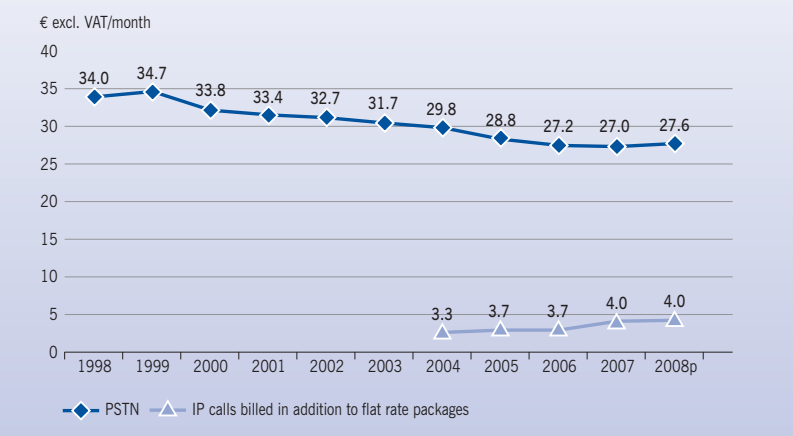
Average monthly volume per fixed line is calculated by dividing the traffic volume (PSTN and IP) for Year N by the estimated average customer base for Year N, then dividing the result by 12.

The average monthly bill for a PSTN line is calculated by dividing the revenue earned on a PSTN-based fixed line subscription and calls (i.e. excluding IP CALLS) for Year N by the estimated average customer base for Year N, then dividing the result by twelve.

The average bill for an IP telephony service is calculated by dividing the revenue earned on calls made over IP on a fixed line (billed over and above a service bundle flat rate) for Year N by the estimated average customer base for Year N, then dividing the result by twelve.

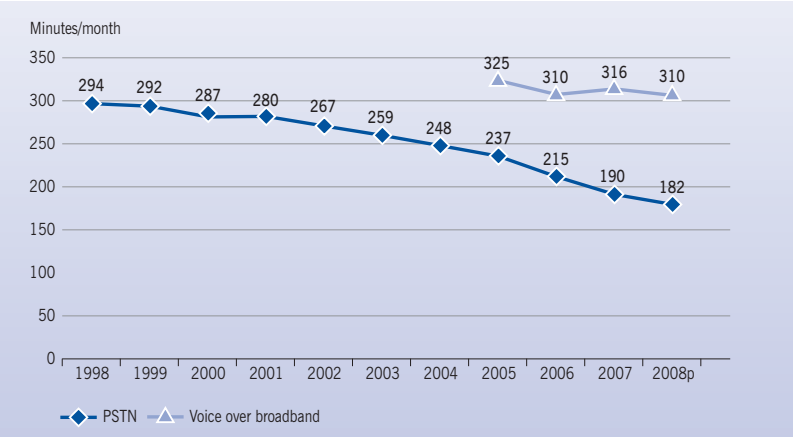
Average monthly volume per fixed line (PSTN or IP) is calculated by dividing the traffic volume (PSTN or IP) for Year N by the estimated (PSTN or IP) customer base for Year N, then dividing the result by 12.

Average monthly voice bill per fixed-line subscription (excl. VAS)



Source: ARCEP.

Average monthly voice traffic per fixed-line subscription (excl. VAS)



Source: ARCEP.

### Fixed networks: details on indicators used for customer invoices and average monthly volume

With the development of voice over broadband as a second phone line, the notion of average revenue per subscription loses its meaning. A great many households now have a second telephone subscription, generally VoIP, as a result of which average traffic and average revenue per subscription are dropping automatically. To be able to track consumption and average customer spending indicators in a more meaningful way, the notion of “line” needs to be introduced.

Up until 2004, the terms “line” and “subscription” were interchangeable when referring to the number of subscriptions to a telephone service.

For analogue line telephony, a subscription meant a fixed line. Similarly, for digital lines, there were as many fixed lines as there were subscriptions to the phone service, in other words two for basic connections and up to 30 for primary connections. In practice, the client enterprise paid their monthly phone subscription fee for as many subscriptions as it had, i.e. two for basic connections and up to 30 for primary connections. This principle remains unchanged.

With the introduction of voice over broadband, operators can market an IP telephony service over an analogue connection that already delivers a phone service over the PSTN. To facilitate comparisons over time, we have thus defined an indicator for the number of “lines” as follows:

- for digital connections: the number of subscriptions to the phone service, i.e. two for basic connections and up to 30 for primary connections;
- for analogue connections:
  - PSTN subscriptions;
  - xDSL- based subscriptions with no PSTN subscription;
- for telephony over cable subscriptions, the subscription.

As concerns revenue, the number of flat rate service bundles continues to rise, offering customers the ability to make unmetered fixed national calls and calls to a number of international destinations at no extra charge. Customer invoices cover more and more services for a single price, regardless of the volume of calls made (as it is on mobile), and Internet access and telephony are increasingly indissociable. The average invoice per line now refers to what customers pay each month for their telephony and Internet services. The revenue included is thus:

- revenue generated by access to subscriptions and additional services;
- revenue from calls originating on fixed lines, including IP traffic revenue billed over and above the bundled service flat rate;
- narrowband and broadband Internet access revenue.

Excluded are:

- public payphone and prepaid card revenue;
- revenue generated by other services tied to Internet access, e.g. ISPs' online ad revenue and commissions earned on e-commerce sales;
- VAS and directory assistance services revenue.

1.4 Public payphones and prepaid cards

The public payphone and prepaid card market totalled €240 million and 1.6 billion minutes in 2008. The number of public payphones had been shrinking at a rate of 10 000 units a year, but decreased by only 7 700 in 2008 – which did nothing to offset the steady decline in their use. Revenue dropped by 26.6% while the volume of calls tied to public payphones was down by 35.3% in 2008.

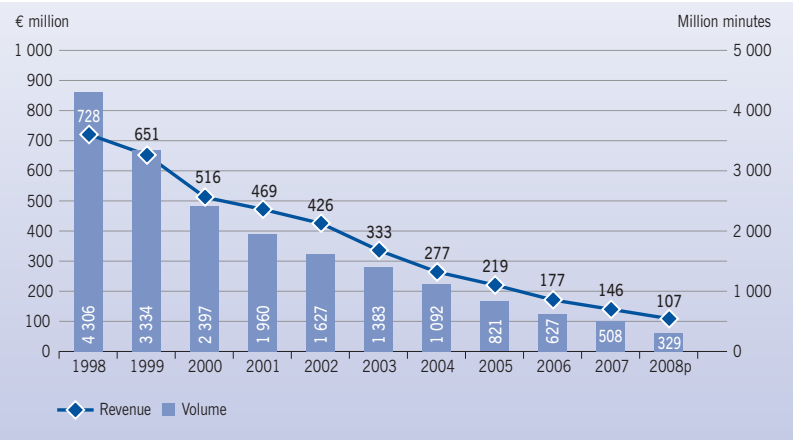
Operators’ prepaid card business decreased by around 10.6% in value in 2008 and by 28.9% in volume.

Public payphones

Million	2004	2005	2006	2007	2008p	Growth
Call revenue (€ million)	277	219	177	146	107	- 26.6%
Call volume (million minutes)	1 092	821	627	508	329	- 35.3%
Number of public payphones as of 31 December (units)	189 298	179 770	169 788	159 799	152 075	- 4.8%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 2005; quarterly surveys for 2006 (estimated figures).

Public payphones



Source: ARCEP.

Prepaid and post-paid fixed telephone cards

Million	2004	2005	2006	2007	2008p	Growth
Fixed telephone card revenue	248	241	207	144	129	- 10.6%
Million calling minutes used via cards	1 941	2 173	2 170	1 723	1 226	- 28.9%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 2005; quarterly surveys for 2006 (estimated figures).

## 2. Internet

### 2.1 The Internet market

#### 2.1.1 Subscriptions

At the end of 2008, Internet subscriptions in France totalled 18.7 million, an 8.3% increase over 2007, with broadband representing 17.7 million or 95% of those subscriptions. But the broadband base was already showing signs of more temperate growth in 2007, something that was confirmed in 2008 with the number of new broadband subscribers increasing by just under 2 million, compared to around 3 million new customers annually between 2003 and 2007.

The number of narrowband connections had dropped below one million by the end of 2008, or 34.8% fewer than in December 2007.

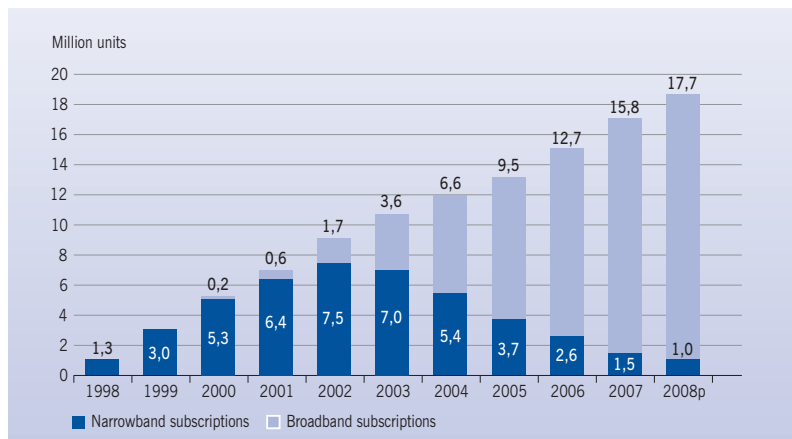
#### Internet subscriptions as of 31/12

Million units	2004	2005	2006	2007	2008p	Growth
Narrowband *	5.377	3.746	2.557	1.496	0.983	-34.3 %
Broadband	6.561	9.471	12.711	15.752	17.691	12.3 %
of which xDSL	6.103	8.902	12.032	14.974	16.803	12.2 %
<b>Total Internet subscriptions *</b>	<b>11.939</b>	<b>13.217</b>	<b>15.268</b>	<b>17.248</b>	<b>18.674</b>	<b>8.3 %</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

*Note: there can be a delay between the delivery of an offer in the wholesale market (LLU or bitstream) and its inclusion in retail market figures. Data comparisons for these different markets may reflect this delay.*

#### Number of Internet subscriptions



Source: ARCEP.

2.1.2 Revenue

Revenue generated by Internet access totalled €5.4 billion in 2008, of which €4.8 billion for broadband. Narrowband experienced an identical 40% decline in subscription volume, revenue and traffic.

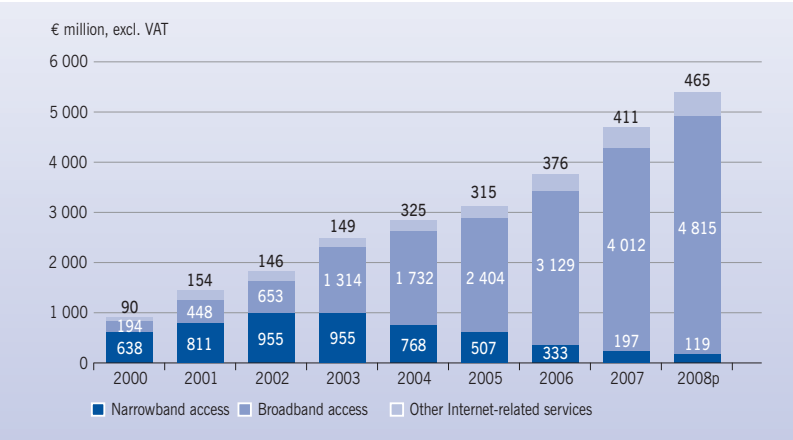
Total Internet revenue

€ million	2004	2005	2006	2007	2008p	Growth
Narrowband access	768	507	333	197	119	- 39.5%
Broadband access	1 732	2 404	3 129	4 012	4 815	20.0%
Other Internet-related services	325	315	376	411	465	13.1%
<b>Total Internet</b>	<b>2 825</b>	<b>3 226</b>	<b>3 839</b>	<b>4 620</b>	<b>5 400</b>	<b>16.9%</b>

Source: ARCEP, EC Observatory – Estimates for 2000 to 2003 data. Annual surveys from 2004 to 2006; quarterly survey for 2007 (estimated figures).

Note: “Other services” refers to related income earned by ISPs on services such as hosting and online advertising revenue. Revenue generated by terminal sales and rental is included under “fixed operator and ISP terminal sales and rental”.

Internet revenue



Source: ARCEP.

Narrowband Internet volumes

Million minutes	2004	2005	2006	2007	2008p	Growth
<b>Total narrowband volumes</b>	<b>54 687</b>	<b>38 233</b>	<b>25 921</b>	<b>15 708</b>	<b>9 806</b>	<b>- 37.6%</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

### 2.1.3 Average monthly consumption per subscription

The average monthly bill for an Internet subscriber in France increased by €0.5, excluding VAT, in 2008 which could be attributed to the fact that all ISPs now apply a VAT rate of 5.5% to all of their Internet flat rate offers, and no longer only to options that also include access to TV over ADSL. The average monthly invoice has evolved very little since the end of 2005, however, after years of steady decrease. It is now at €24, excluding VAT, a month.

The average monthly bill for a narrowband subscriber dropped by 1.3%, even though the average monthly volume has risen by 1.9%.

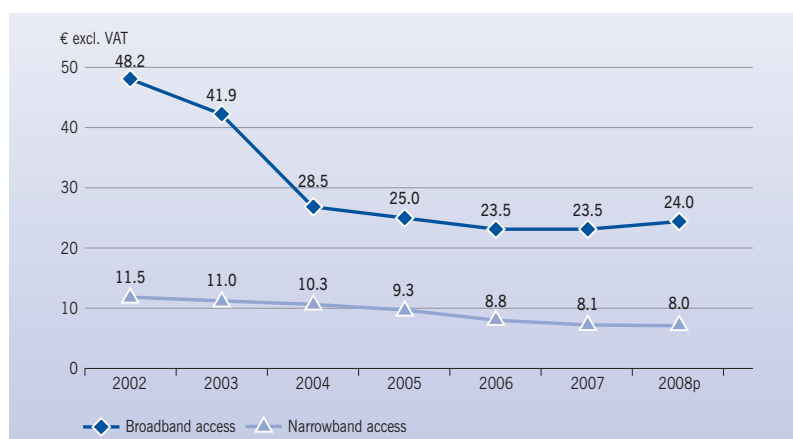
#### Average monthly Internet bill

€ excl. VAT	2004	2005	2006	2007	2008p	Growth
Average monthly bill per narrowband customer	10.3	9.3	8.8	8.1	8.0	-1.3%
Average monthly bill per broadband customer	28.5	25.0	23.5	23.5	24.0	2.1%

Source: ARCEP, EC Observatory - Annual surveys from 1998 to 2007; quarterly survey for 2008 (estimated figures).

The average bill for a narrowband (or broadband) subscription is calculated by dividing the revenue earned on narrowband (or broadband) subscription in Year N by the estimated customer base for Year N, then dividing the result by 12.

#### Average monthly Internet bill



Source: ARCEP.

#### Average monthly consumption per narrowband customer

Hours/month	2004	2005	2006	2007	2008p	Growth
Average monthly volume per narrowband customer	12 h 14	11 h 38	11 h 25	10 h 45	10 h 56	1.9%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Average monthly volume per narrowband subscription is calculated by dividing narrowband volume for Year N by the estimated narrowband customer base for Year N, then dividing the result by 12.

2.2 Broadband access

2.2.1 VoIP subscriptions

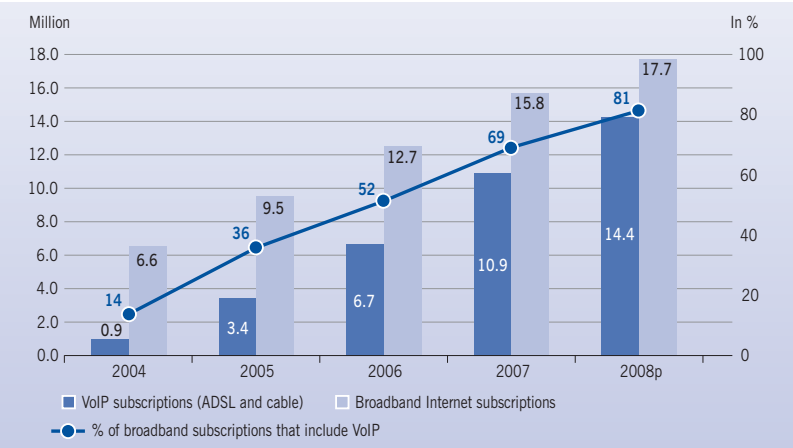
Voice over broadband subscriptions continued to grow in popularity amongst broadband customers in 2008. The flat rates available in the market now virtually systematically combine telephony and broadband access, which explains why, at the end of 2008, 80% of broadband Internet subscriptions, also supported a voice over IP service.

Broadband and Voice over broadband (or VoIP) subscriptions

Million units	2004	2005	2006	2007	2008p	Growth
VoB subscriptions (ADSL and cable)	0.931	3.392	6.651	10.905	14.352	31.6%
Broadband Internet subscriptions	6.561	9.471	12.711	15.752	17.691	12.3%
% of broadband subscriptions that include VoB	14%	36%	52%	69%	81%	17.2%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Broadband and VoIP subscriptions



Source: ARCEP.

2.2.2 TV over ADSL subscriptions

As of December 2008, the number of TV subscriptions had risen by 1.7 million compared to December 2007, to reach 6.2 million. They represent 37% of all ADSL-based Internet access subscriptions.

TV over ADSL subscriptions

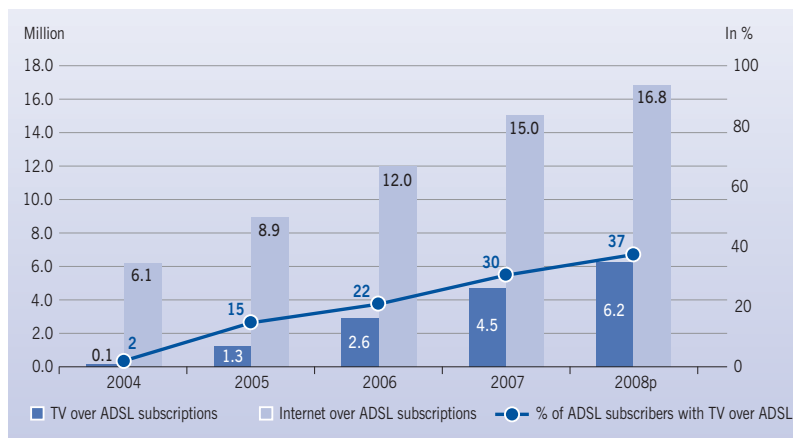
Million units	2004	2005	2006	2007	2008p	Growth
TV over ADSL subscriptions	0.145	1.318	2.593	4.538	6.200	36.6%
Internet over ADSL subscriptions	6.103	8.902	12.032	14.974	16.803	12.2%
% of ADSL subscribers with TV over ADSL	2%	15%	22%	30%	37%	21.8%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Note: this indicator covers subscriptions that include TV over xDSL services that customers have the technical capacity to activate (“eligible” subscriptions) irrespective of the number of accessible channels or the tariff. Taken into account are those subscriptions that were subscribed to separately or as part of a bundled offer that includes access to one or several other services aside from TV (Internet, telephony).



### ADSL and TV over ADSL subscriptions



Source: ARCEP.

## 3. Mobile

### 3.1 Mobile market

#### 3.1.1 Segmentation by type of subscription

Mobile subscriber growth was down slightly in 2008 compared to previous years, with a rate of increase of 4.8%, or 2.6 million new customers, compared to a growth rate of between 7% and 8% over the five previous years. This decrease was felt late in the year especially, with a 40% drop in the number of new subscribers signing up in Q3 followed by a 30% decline in Q4 2008.

The decrease can be fully attributed to the decrease in the number of prepaid cards sold, starting in the first quarter. By Q3 2008, the prepaid customer base had shrunk by 420 000 subscribers compared to 134 000 the previous year. Over the course of the final quarter, which is generally a time of increased subscription, the number of cards sold rose by only around 600 000, compared to double that one year earlier. The results for prepaid cards are poor overall, added to which the volume of active cards is also on the decrease. The share of active prepaid cars is declining as well, having gone from 93% in December 2007 to 91% in 2008.

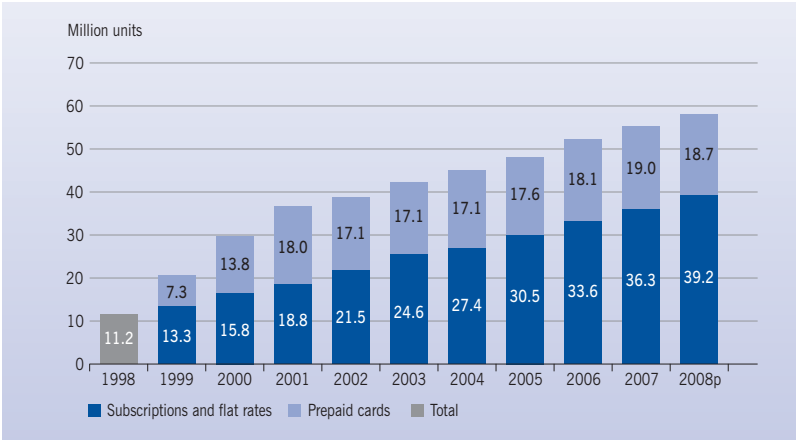
On the other hand, subscriptions and flat rates, which operators are actively encouraging in a bid to secure customer loyalty, are popular with consumers. The number of flat rate subscriptions increased by 2.9 million over the course of the year – a higher rate of increase than in 2007. There were 39.2 million flat rate customers in December 2008, accounting for 68% of mobile customers – a percentage that has been increasing since 2001.

#### Number of mobile service customers as of 31/12

Million units	2004	2005	2006	2007	2008p	Growth
Subscriptions and flat rates	27.420	30.528	33.561	36.309	39.237	8.1%
Prepaid cards	17.124	17.561	18.102	19.028	18.808	-1.5%
of which active prepaid cards	16.409	16.698	17.193	17.673	16.763	-3.8%
<b>Total mobile service customers</b>	<b>44.544</b>	<b>48.088</b>	<b>51.663</b>	<b>55.337</b>	<b>57.972</b>	<b>4.8%</b>

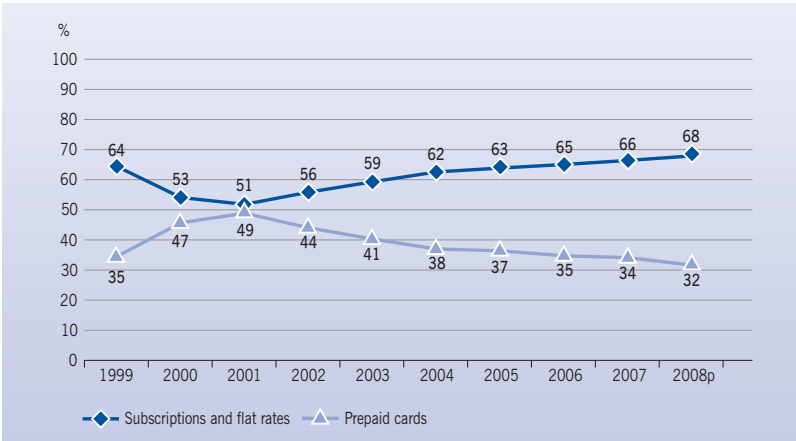
Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Mobile operator customer bases



Source: ARCEP.

Mobile operator customer bases



Source: ARCEP.

3.1.2 Revenue and volume

Mobile services revenue was up 5.6% in 2008, to a total of €18.6 billion. This growth rate is slightly above the rate reported during the past two years.

In 2008, traffic originating on mobile networks topped 100 billion minutes for the first time, but it increased at a more moderate rate than in previous years. Up until 2006, it was undergoing double-digit growth, before dropping to +5.8% in 2007 and to 2.3% in 2008 – with a particularly acute decline in both traffic and customer growth in the second half of the year.

SMS traffic volume, on the other hand, rose at a phenomenal rate of close to 80% in 2008. This market segment, which has been growing at an annual rate of more than 20% for several years, had already undergone a substantial increase in volume in 2007. The market exploded in 2008 following the introduction of unlimited offers by the mobile operators.

The breakdown for revenue and usage mirrors the changes in the customer base: subscriptions and flat rates account for the majority of revenue and traffic. Flat rate

customers generated 87% of mobile operators' income, and account for 92% of calling minutes and 79% of SMS traffic – virtually the same as in 2007.

#### Mobile service revenue by subscription type

€ million	2004	2005	2006	2007	2008p	Growth
Subscriptions and flat rates	12 512	13 854	14 483	15 267	16 085	5.4%
Prepaid cards	2 350	2 346	2 288	2 302	2 471	7.3%
<b>Mobile service revenue</b>	<b>14 862</b>	<b>16 199</b>	<b>16 771</b>	<b>17 569</b>	<b>18 556</b>	<b>5.6%</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

#### Outbound mobile calling minutes by subscription type

Million minutes	2004	2005	2006	2007	2008p	Growth
Subscriptions and flat rates	68 066	74 576	87 054	91 930	93 820	2.1%
Prepaid cards	6 182	7 134	6 972	7 595	7 999	5.3%
<b>Total number of minutes</b>	<b>74 248</b>	<b>81 711</b>	<b>94 026</b>	<b>99 525</b>	<b>101 819</b>	<b>2.3%</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

#### SMS volume by subscription type

Million messages	2004	2005	2006	2007	2008p	Growth
Subscriptions and flat rates	-	-	11 168	15 223	27 183	78.6%
Prepaid cards	-	-	3 881	4 013	7 213	79.7%
<b>Total number of P2P SMS sent</b>	<b>10 335</b>	<b>12 597</b>	<b>15 050</b>	<b>19 236</b>	<b>34 396</b>	<b>78.8%</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

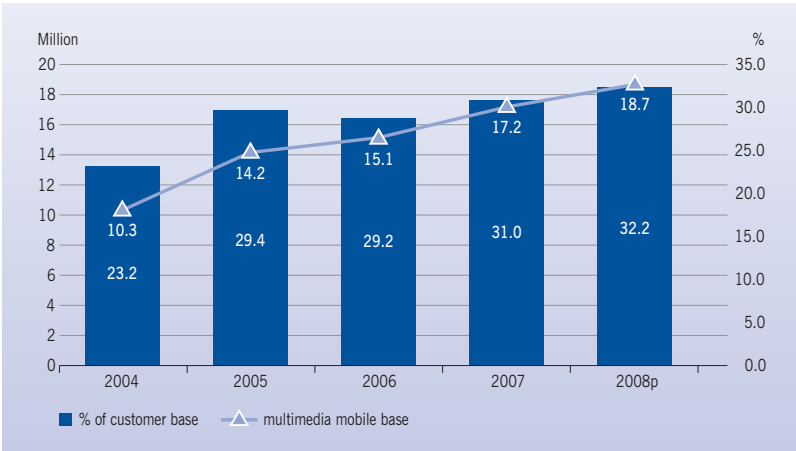
### 3.1.3 Mobile multimedia services

18.7 million customers used multimedia services in December 2008, 1.5 million more than in 2007. Close to two thirds of all customers now use these services (e-mail, MMS, operators' portals and websites), regardless of the type of connection they have.

The number of users for the services available on 3G mobile networks doubled over the course of the year to reach 11.4 million by the end of 2008, while the number of active 3G users increased rapidly as well, no doubt due to the development of mobile data solutions and the release of more compatible handsets in the second half of the year. The number of users grew by 3.9 million between June and December, compared to an increase of 1.7 million in the first six months of 2008. These users now account for close to 20% of mobile operators' customers.

The number of Internet only SIM cards grew at a similar rate in 2008, to reach close to a million by year end. These SIM cards, which are used solely for connecting to the Web when on the move (through a PCMCIA card, a 3G or 3G+ USB key, etc.) cannot be used to make phone calls.

Active multimedia mobile base (Activity in December)



Source: ARCEP.

Multimedia base, active 3G base and Internet cards

Million	2004	2005	2006	2007	2008p	Growth
Mobile multimedia base	10.324	14.154	15.079	17.163	18.712	9.0%
Active 3G base	-	-	-	5.885	11.439	94.4%
Number of Internet/data only SIM cards	-	-	-	0.491	0.997	102.9%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Notes:

- The active multimedia subscriber base is defined as the group of prepaid and post-paid customers who used a WAP, i-mode, MMS or email multimedia service at least once during the previous month (text messages excluded from calculations), and regardless of the supporting access technology (CSD, GPRS, UMTS...). Scope: Metropolitan France and the overseas “départements”.
- The active 3G base is defined as the number of customers who have accessed a mobile service (voice, videophony, mobile TV, data transfer, etc.) that uses 3G radio access technology, some time in the past three months (either transmission or reception).
- The number of exclusive Internet SIM cards is defined as the number of SIM cards sold by mobile operators (in the form of subscriptions, flat rates or prepaid cards), to be used solely for accessing the Internet (PCMCIA cards, 3G/3G+ USB keys). These cards cannot be used to make voice calls.

3.1.4 Mobile number portability

Mobile number retention

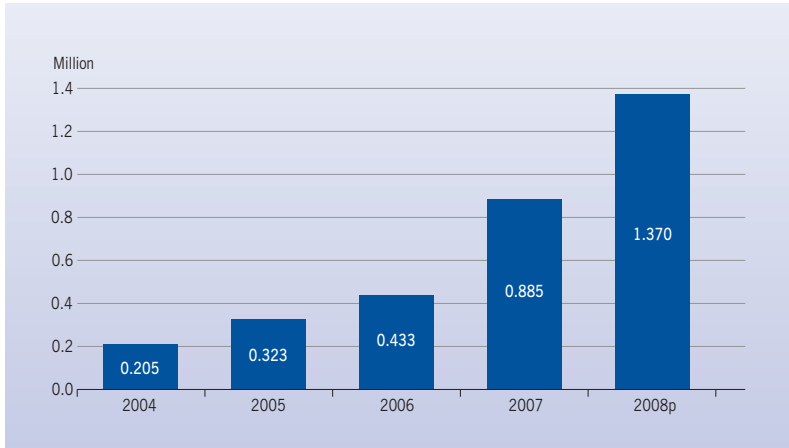
Million units	2004	2005	2006	2007	2008p	Growth
Total numbers ported during the year	0.205	0.323	0.433	0.885	1.370	54.9%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Note: figures for ported numbers refer to the number of finalised porting procedures (ported numbers activated by the recipient operator) during the year in question. Scope: Metropolitan France and the overseas “départements”.

1.37 million numbers were ported in 2008, or roughly 55% more than the previous year. Growth was higher in 2007 as the process was reduced to a maximum 10 days starting in May of that year. This continued to have an impact in early 2008, although the second half of the year also brought a healthy growth rate of around 25%.

### Mobile numbers ported during the year



Source: ARCEP.

### 3.2 Revenue by service

Voice call revenue accounted for €15.5 billion of the total €18.6 billion in income earned by mobile operators, and still far exceeds data transport revenue. Its growth rate has nevertheless been dwindling over the years, increasing by only 2.2% in 2008, compared to +3.6% in 2007. On the other hand, data transport revenue (€3.1 billion) is back on an upward trajectory (+27%) compared to the two previous years, during which it had increased by 12.9% and 11.7%. The growing popularity of text messaging and new services such as mobile Internet access has spurred a rise in revenue: in all, mobile revenue has increased by close to €1 billion, of which two thirds come from data services.

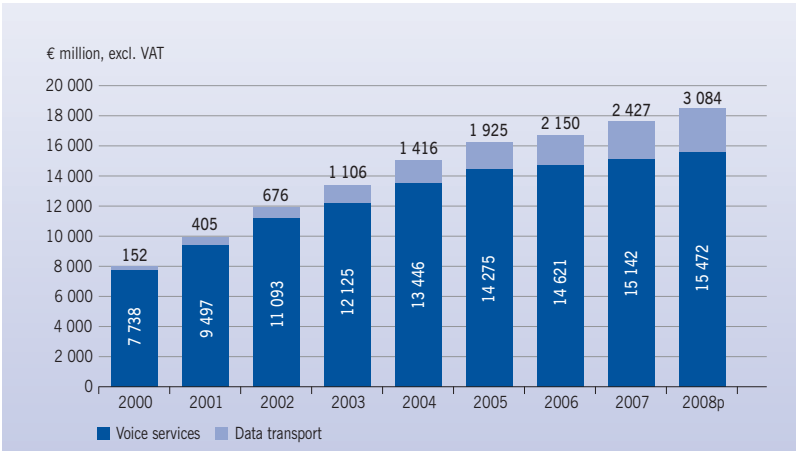
#### Mobile service revenue

€ million	2004	2005	2006	2007	2008p	Growth
Voice services	13 446	14 275	14 621	15 142	15 472	2.2%
Data transport	1 416	1 925	2 150	2 427	3 084	27.0%
<b>Mobile service revenue</b>	<b>14 862</b>	<b>16 199</b>	<b>16 771</b>	<b>17 569</b>	<b>18 556</b>	<b>5.6%</b>

Data transport as % of total revenue	10%	12%	13%	14%	17%	<b>20.3%</b>
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Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Mobile operator revenue (retail market)



Source: ARCEP.

3.2.1 Mobile voice services

Totalling €15.5 billion in 2008, revenue generated by voice services rose by 2.2% during the year, slightly less than in 2007. The decline in revenue became more acute over the course of the year, with an annual rate of growth that even tipped into the negative in Q4 (-0.4% from the year before), mirroring the drop in calling volume. Only national calling minutes rose during the year: by 2.2%, for a corresponding increase in minutes of 2.1% (on-net, off-net and national mobile-to-fixed calls). Revenue from international calls dropped slightly, although traffic increased by 12% in 2008. Roaming out revenue was also down, no doubt due to the decrease in roaming prices inside the EU (Eurotariff).

Mobile calling minute revenue, by call destination

€ million	2004	2005	2006	2007	2008p	Growth
National calls	12 029	12 653	12 912	13 344	13 692	2.6%
International calls	535	608	667	736	730	- 0.8%
Roaming out	881	1 013	1 042	1 062	1 050	- 1.1%
<b>Outbound mobile call revenue</b>	<b>13 446</b>	<b>14 275</b>	<b>14 621</b>	<b>15 142</b>	<b>15 472</b>	<b>2.2%</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Traffic originating on mobiles exceeded 100 billion minutes for the first time ever in 2008, but increased at a lesser rate than in previous years. The growth rate went from 15% in 2006 down to 5.8% in 2007, due to a sharp drop in the rate of increase for on-net traffic, and to 2.3% in 2008.

The decreased growth rate for on-net traffic carried through to 2008, totalling only 0.8% after having increased by 4.9% in 2007 and by 24% in 2006 and close to 30% in 2005. Very popular with users, high volume offers favour calls to other customers of the same mobile operator (i.e. on-net). On-net traffic had been increasing consistently by over 20% since 1998 but, in 2007, the growth rate dropped with each quarter, going from 8.2% in Q1 2007 to only +2.8% in Q4 2007. This trend carried through to 2008, with on-net traffic shrinking by 4.3% compared to the year before, as of Q4 2008. The introduction of high-volume offers in 2006 for calls to all operators came to compete with on-net-centric offers and has spurred a rise in off-net calls for just over two years. For the second year running, the percentage of total mobile calls that were on-net decreased in 2008: down to 52%.

Calls to other mobile operators' customers (off-net) has increased substantially over the past two years, even if the growth rate in 2008 was lower than in 2007: 7.3% compared to +14.1% in 2007. Off-net traffic represents 27.1 billion minutes, or 27% of all mobile calling minutes.

On a downwards slide since 2004, calls from mobiles to fixed lines decreased by a further 1.3% in 2008 – accounting for only 18% of mobile calls.

International calls rose substantially again this past year (+12.5%), while roaming out traffic grew by 4.1% – with each one representing 1.5% of total mobile traffic.

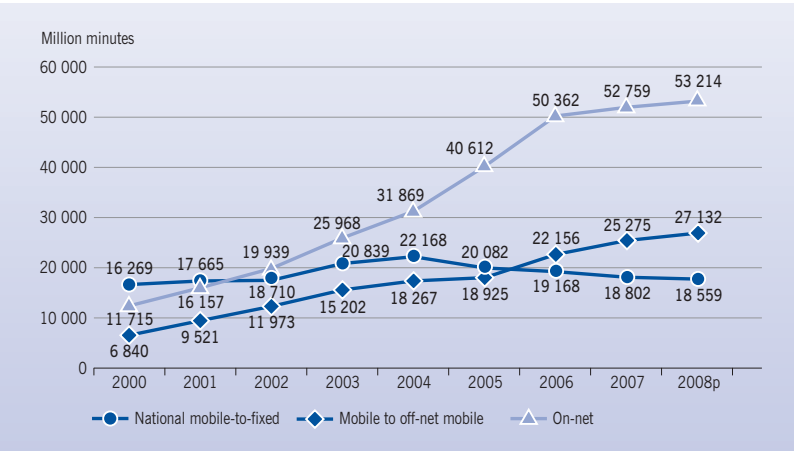
#### Mobile call volumes, by destination

Million minutes	2004	2005	2006	2007	2008p	Growth
National mobile-to-fixed calls	22 168	20 082	19 168	18 802	18 559	- 1.3%
On-net calls	31 869	40 612	50 362	52 759	53 214	0.9%
Calls to off-net mobile networks	18 267	18 925	22 156	25 275	27 132	7.3%
International calls	959	999	1 160	1 366	1 537	12.5%
Roaming out	985	1 093	1 180	1 323	1 378	4.1%
<b>Outbound mobile call volume</b>	<b>74 248</b>	<b>81 711</b>	<b>94 026</b>	<b>99 525</b>	<b>101 819</b>	<b>2.3%</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

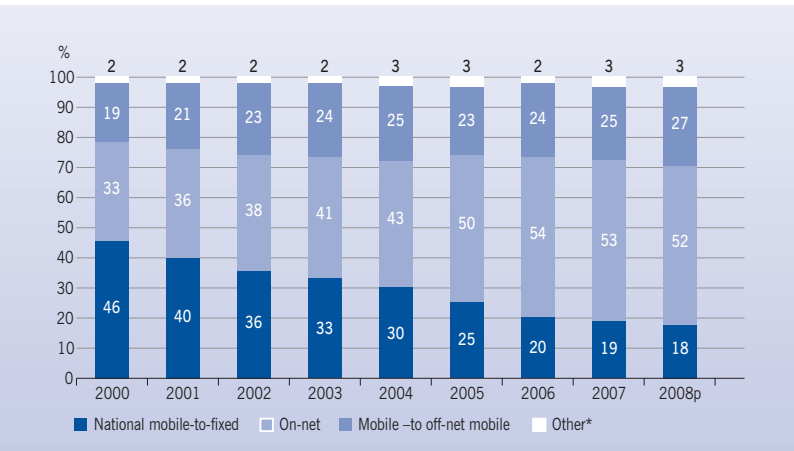
Note: calls to voice mail are included in on-net traffic figures. They accounted for just under 8% of on-net traffic in 2007.

Mobile national call volume by destination



Source: ARCEP.

Mobile call volume by destination



Source: ARCEP.

\*Other: calls to international destinations and roaming out.

Roaming out refers to calls placed from abroad by customers of French mobile operators.

3.2.2 Mobile data

Revenue generated by mobile data services rose by €660 million during the year to €3.1 billion – with just under a third of that growth due to a 15.2% rise in text messaging revenue to €1.9 billion. The income generated by other data services (multimedia access, mobile Internet, etc.) is increasing at a higher rate (+51.7%) and is responsible for two-thirds of the rise in data transport revenue in 2008. Revenue generated by multimedia services and mobile Internet access accounted for 39% of total data revenue and 6% of total mobile services revenue.



After a tremendous increase in the number of text messages sent in 2007 (+4.2 billion messages for the whole of 2007, of which 1.6 billion in the fourth quarter alone), 2008 was marked by even livelier growth. The increase became more substantial as the year wore on, going from around 50% in the first quarter to double that by year end. In all, 34.8 billion text messages were sent in 2008, compared to 19.5 billion in 2007.

### Mobile data transport revenue

€ million	2004	2005	2006	2007	2008p	Growth
<b>Data transport</b>	<b>1 416</b>	<b>1 925</b>	<b>2 150</b>	<b>2 427</b>	<b>3 084</b>	<b>27.0%</b>
of which person-to-person messaging (SMS, MMS)	1 102	1 358	1 483	1 640	1 889	15.2%
of which other data transport	314	567	666	787	1 194	51.7%

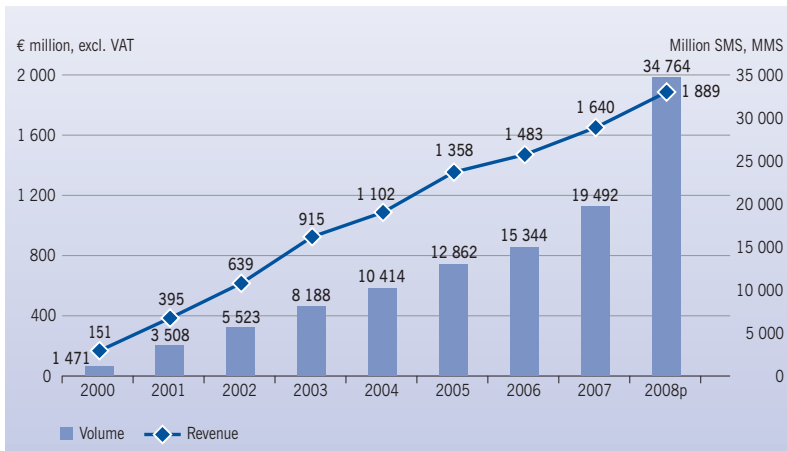
Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

### Number of person-to-person messages sent

Millions	2004	2005	2006	2007	2008p	Growth
Number of P2P SMS	10 335	12 597	15 050	19 236	34 396	78.8%
Number of P2P MMS	79	265	294	256	368	43.6%
<b>Total person-to-person SMS and MMS sent</b>	<b>10 414</b>	<b>12 862</b>	<b>15 344</b>	<b>19 492</b>	<b>34 764</b>	<b>78.3%</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

### Person-to-person messaging



Source: ARCEP.

### 3.3 Segmentation by type of customer

The consumer segment accounts for the vast majority of mobile operators' customers: 86% to be exact. They spend only slightly less time on the phone than enterprise customers, and have a slightly lower average invoice per SIM card as they consume three quarters of the number of minutes and revenue. On the other hand, the consumer clientele sends more text messages, accounting for 9 out of every 10 SMS sent, or 31.2 billion of 34.4 billion text messages sent in 2008.

For several years now, the number of “enterprise” cards has been growing at a faster rate than consumer SIM cards. The development of new markets – whether dedicated specifically to the business population, such as M2M cards, or adapted to businesses’ needs in terms of mobility, such as data cards that enable Internet access – is helping to sustain business market growth. There were 900,000 M2M cards in use in December 2008 (+570,000 in one year) and 600,000 Internet cards being used by enterprises (+180,000 compared to 2007). These developments in the marketplace, combined with a drop in calling minutes (-4.0% in the enterprise segment) could signify that some of businesses’ voice calls are being replaced with data-based communication.

### Mobile customer numbers by type of account

Million units	2004	2005	2006	2007	2008p	Growth
<b>Number of customers</b>	<b>44.544</b>	<b>48.088</b>	<b>51.663</b>	<b>55.337</b>	<b>57.972</b>	<b>4.8%</b>
Consumer	38.720	41.680	44.625	47.724	49.819	4.4%
Business	5.824	6.408	7.038	7.613	8.153	7.1%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

### Mobile service revenue by type of customer

€ million	2004	2005	2006	2007	2008p	Growth
<b>Revenu des services mobiles</b>	<b>14.862</b>	<b>16 199</b>	<b>16 771</b>	<b>17 569</b>	<b>18 556</b>	<b>5.6%</b>
Consumer	11 204	11 590	11 978	12 936	14 129	9.2%
Business	3 657	4 610	4 793	4 632	4 427	-4.4%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

### Mobile service volume by type of customer

Million minutes	2004	2005	2006	2007	2008p	Growth
<b>Volume de communications mobiles</b>	<b>74 248</b>	<b>81 711</b>	<b>94 026</b>	<b>99 525</b>	<b>101 819</b>	<b>2.3%</b>
Consumer	53 018	56 833	67 448	75 682	78 937	4.3%
Business	21 230	24 877	26 578	23 843	22 882	-4.0%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

*Note: the segmentation by type of customer can differ from one operator to the next depending on whether certain categories (tradesmen, liberal professions, etc.) are considered consumers or businesses. A certain caution should therefore be exercised in the interpretation of these elements.*

*The segmentation of the number of customers presented here corresponds to revenue and volume breakdowns depicted in the above tables. They differ from the quarterly figures published by the Mobile indicator monitor (SIM). The number of “enterprise” customers factored into these figures includes subscriptions to “business offers” which operators do not necessarily include in the enterprise category.*

### 3.4 Average consumption

The average monthly invoice for a mobile customer is roughly the same as it was in 2007 (€27.3, excl. VAT, for 2008, or €0.10 less than in 2007), after having decreased steadily since 2005 due to the combination of a healthy rise in customer numbers of 7% to 8% a year, and a less dynamic rise in mobile service revenue (+3.5% in 2006

and +4.8% in 2007). The diminished rise in the number of SIM cards, especially in late 2008 (+4.8%) and the increased rate of progress for mobile market revenue (+5.6%) curbed the decrease in the average invoice, at least temporarily. The development of mobile Internet access offers (either over a mobile handset or via access cards, either 3G USB keys or PC cards) helped spur a rise in revenue. It should also be noted that invoice figures presented here exclude VAT, which means that offers that include access to a TV offer, which include a VAT rate of 5.5% on a portion of the flat rate, automatically helped maintain the before-tax level of customer invoices.

The volume of voice calls was down by 3.4% compared to 2007, or by 5.3 minutes per customer. Setting aside the increase in the number of cards that cannot be used for voice calls, the drop in customer consumption is less dramatic: only 2.8 minutes between 2007 and 2008. The number of SMS being sent rose substantially in 2008, following the introduction of unlimited offers, with customers each sending an average of over 20 additional text messages a month. In all, mobile customers spend an average 2 hours and 29 minutes talking on the phone, and send 51 SMS a month.

Customers with a subscription, which account for 68% of all mobile users, spend an average €35.5, excluding VAT, a month. Their monthly calling minutes and spending dropped by 5.6% in 2008, or by 12 minutes – which meant a 2.6% drop in spending (–€1.1, excl. VAT) – while text messaging volumes rose by 65.1% (around 24 additional SMS a month). These customers spend an average 3 hours and 35 minutes a month on voice calls and send an average 60 SMS.

Customers with prepaid cards consume much less: an average 35 calling minutes and 32 SMS a month, or six times less time on voice calls and half the number of text messages than customers with a subscription. The average monthly invoice for a prepaid card customer is €10.9, excl. VAT, €0.70 more than in 2007.

#### Average monthly consumption, per mobile customer

€, excl VAT, minutes or units a month	2004	2005	2006	2007	2008p	Growth
Average monthly customer bill (€, excl. VAT)	28.7	29.1	28.0	27.4	27.3	-0.3%
Average monthly volume, per customer (minutes)	143.4	147.0	157.1	155.0	149.7	-3.4%
Average number of SMS sent per month, per customer	20.0	22.7	25.1	30.0	50.6	68.7%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

*N.B.: the average monthly phone bill per mobile customer is calculated by dividing mobile telephony revenue (voice and data revenue, including roaming out, and excluding incoming call revenue) for Year N by the estimated average customer base for Year N and dividing the result by 12. This indicator, which includes neither interconnection revenue nor advanced-services revenue, is distinct from the traditional average revenue per user (ARPU) indicator.*

*The average volume of monthly mobile traffic per customer is calculated by dividing the traffic volume (including roaming out) for Year N by the estimated average customer base for Year N, then dividing the result by 12.*

*The average number of SMS per customer is calculated by dividing the number of SMS for Year N by the estimated average customer base for Year N, then dividing the result by 12.*

Additional details on average monthly customer consumption indicators

Spending does not include M2M cards (number of cards and corresponding revenue).

The number of minutes and SMS is calculated excluding M2M and data only cards.

Using these indicators helps limit the impact of increased use of non-voice cards on consumer voice traffic figures.

Mobile customers' average monthly consumption

€ excl. VAT, minutes or units per month	2004	2005	2006	2007	2008p	Growth
Average monthly customer invoice (€, excl. VAT)	-	-	-	27.4	27.6	+ 0.5%
Average number of monthly calling minutes per customer	-	-	-	157.0	154.2	- 1.8%
Average number of SMS sent per customer	-	-	-	30.3	52.1	71.7%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

⇒ no impact on the average invoice in 2007, compared to total market figures. In 2008, however, an increase in the invoice when excluding M2M cards, but decreased when including M2M cards.

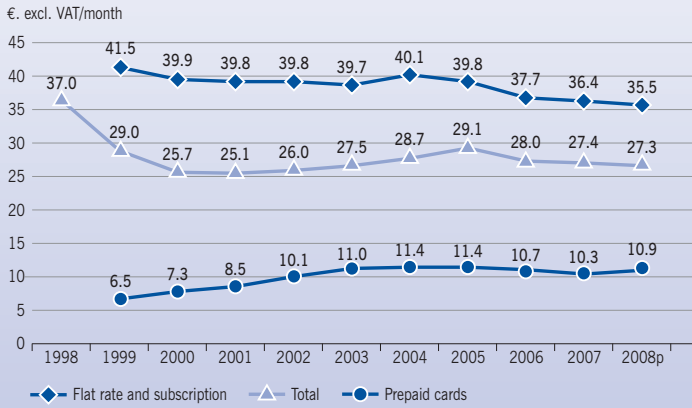
⇒ Also little impact on per-minute traffic in 2007. This traffic decreased in 2008 but at a lesser rate (-1.8% compared to -3.4% when factoring in data and M2M cards).

Average monthly customer consumption, by subscription type

Flat rates	2004	2005	2006	2007	2008p	Growth
Average monthly customer invoice (€, excl. VAT)	40.1	39.8	37.7	36.4	35.5	-2.6%
Average number of monthly calling minutes per customer	218.3	214.5	226.4	219.3	207	-5.6%
Average number of SMS sent per customer	-	-	29.0	36.3	60.0	65.1%
Cards						
Average monthly customer invoice (€, excl. VAT)	11.4	11.3	10.7	10.3	10.9	5.5%
Average number of monthly calling minutes per customer	30.1	34.3	32.6	34.1	35.3	3.6%
Average number of SMS sent per customer	-	-	18.1	18.0	31.8	76.7%

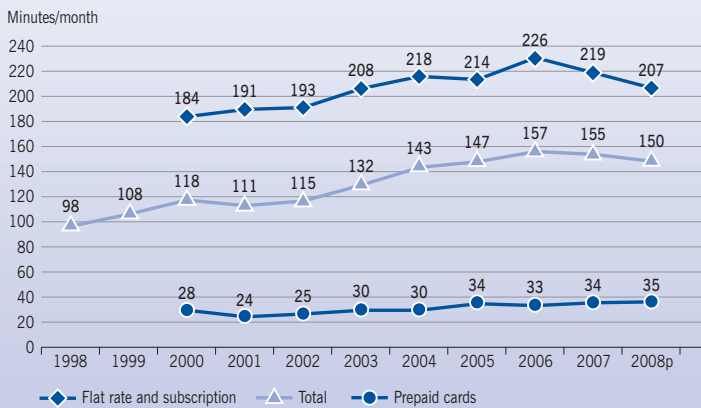
Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

## Average monthly bill per mobile customer



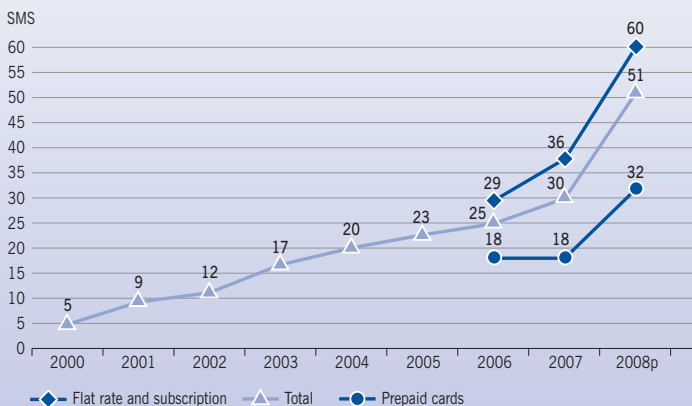
Source: ARCEP.

## Average monthly traffic per mobile customer



Source: ARCEP.

## Average monthly SMS per mobile customer



Source: ARCEP.

4. Value-added services

4.1 Value-added services (excluding directory assistance)

Value-added services generated €2.5 billion in 2008, a 6.5% decrease compared to 2007. Income from voice services and telematics (€1.9 billion) dropped by 11.8%, after having declined by 7.1% in 2007, while revenue generated by advanced data services (€578 million) continues to rise by around €100 million a year.

The income derived from billing for value-added service calls originating on fixed operators' networks dropped by 16.7%, no doubt due to the decline in telematics service revenue, which is decreasing by around €100 million a year, and not offset this past year by voice services revenue.

Mobile customers' use of value-added voice services decreased slightly (by -3.4%) to €750 million euros. For the first time ever, mobile calls generated more revenue for value-added services in 2008 (€1.3 billion) than calls originating on fixed lines (€1.1 billion).

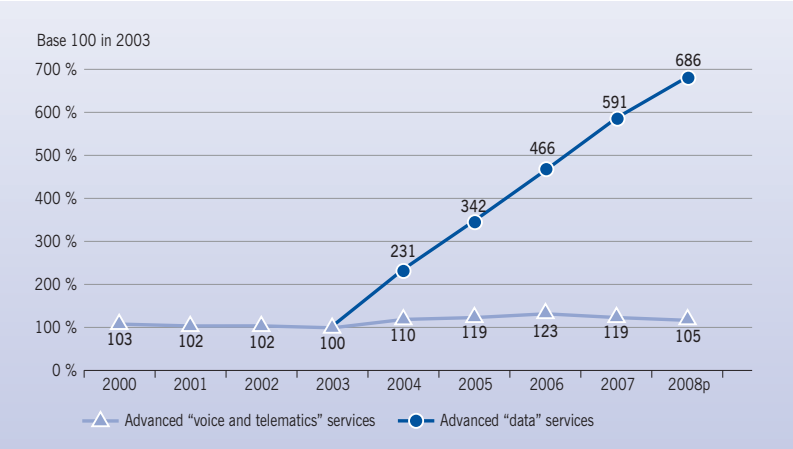
Value-added service revenue

€ million	2004	2005	2006	2007	2008p	Growth
Value-added "voice and telematic" services	1 949	2 127	2 181	2 127	1 875	- 11.8%
originating on fixed networks	1 314	1 401	1 394	1 350	1 125	- 16.7%
originating on mobile networks	635	726	787	777	750	- 3.4%
Advanced "data" services	194	288	393	498	578	16.1%
Total value-added service revenue	2 143	2 415	2 573	2 625	2 453	- 6.5%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Note: value-added data services include "gallery" kiosk services, alert services, chat rooms, weather, TV game shows, astrology, ring tone downloads, etc.

Growth of value-added service revenue (excluding directory assistance services)



Source: ARCEP.

Traffic to value-added services decreased once again in 2008: by 1.3%, down to 12.5 billion minutes. The volume of calls originating on fixed lines has dropped slightly, while calls from mobiles has increased. Voice calls also include freephone services, which represented around 1.5 billion minutes in 2008.

The number of surcharged messages rose by 5.7% during the year, to 700 million messages.

#### Value-added “voice and telematic” service volumes

Million minutes	2004	2005	2006	2007	2008p	Growth
Originating from fixed customers	10 270	10 906	10 594	10 941	10 738	- 1.9%
Originating from mobile customer	1 253	1 506	1 590	1 706	1 749	2.5%
<b>Total volume of calls</b>	<b>11 420</b>	<b>13 184</b>	<b>12 184</b>	<b>12 647</b>	<b>12 487</b>	<b>- 1.3%</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

#### Number of calls to “voice and telematic” services

Million calls	2004	2005	2006	2007	2008p	Growth
Originating from fixed customers	-	-	-	4 128	4 197	1.7%
Originating from mobile customers	-	-	-	1 706	663	-3.1%
<b>Total volume of calls</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4 812</b>	<b>4 860</b>	<b>1.0%</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

#### Value-added “data” service volumes

Million messages	2004	2005	2006	2007	2008p	Growth
Number of messages (SMS+ . MMS+)	450	631	631	662	700	5.7%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

### 4.2 Directory assistance services

The volume of calls to directory assistance services continued to drop in 2008: by 12.1%, to 121 million calls for the entire year. The decrease was particularly substantial for calls from fixed lines, which meant that the share of directory assistance calls coming from mobiles increased to seven out of every ten calls in 2008 – compared to two-thirds of all calls in 2007 and just over half of the calls in 2006.

The revenue these calls generate has also decreased, albeit less dramatically (-3.3%).

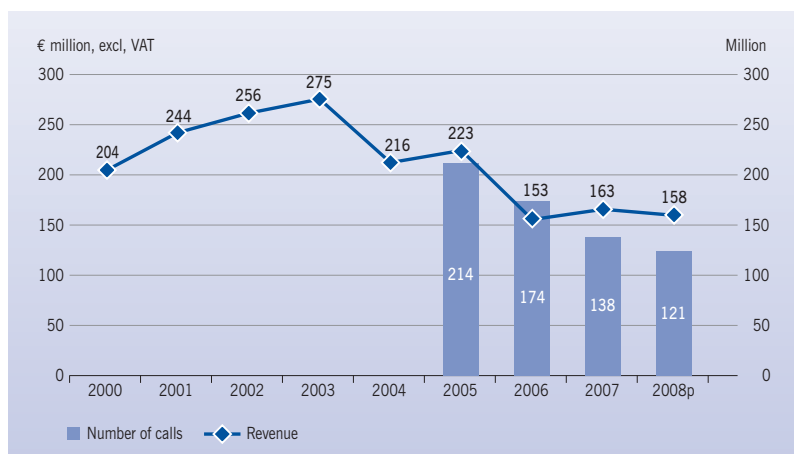
## Directory assistance services

	2004	2005	2006	2007	2008p	Growth
Local loop operator revenue (€ million)	216	223	-	-	-	-
Alternative operator revenue (€ million)	-	-	153	163	158	-3.3%
Number of completed calls (million)		214	174	138	121	-12.1%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

Note: included in directory assistance services are: old directory assistance numbers, both fixed (12, 3200, 3211, 3212) and mobile (612, 712, 222), which were in service until 3 April 2006, new directory service numbers with the 118xyz format, in service since November 2005, and short numbers that provide access to services such as reverse directories (3288, 3217, 3200) and international directories (3212).

## Directory assistance services



Source: ARCEP.

## 5. Capacity services: leased lines and data transport

The revenue generated by capacity services is on the decline overall. Contrary to the situation in 2007, leased line revenue was up in 2008 (+5.4% compared to 2007), whereas data transport revenue was down by 6%.

### Leased line and data transport revenue

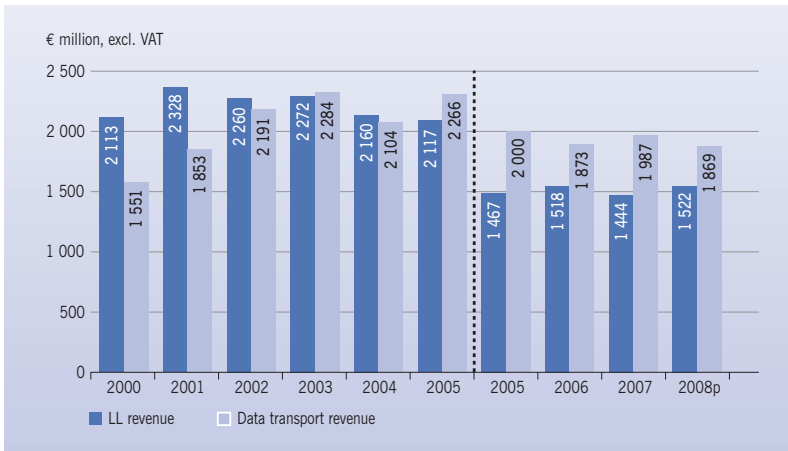
€ million	2004	2005	2006	2007	2008p	Growth
Leased lines, old series	2 160	2 117	-	-	-	-
Leased lines, new series		1 467	1 518	1 444	1 522	5.4%
Data transport*, old series	2 104	2 266	-	-	-	-
Data transport*, new series		2 000	1 873	1 987	1 869	-6.0%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

\* Source: ARCEP/INSEE branch survey on electronic communications for the 2000 to 2003 data; ARCEP, EC Observatory- Annual surveys for 2004 and 2005, quarterly survey for 2006 (estimated figures).



## Leased line and data transport revenue



Source: ARCEP.

## 6. Other services

### 6.1 Hosting and call centre management services

#### Hosting and call centre management revenue

€ million	2004	2005	2006	2007	2008p	Growth
Hosting and call centre management revenue	25	22	36	38	25	-34.6%

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

### 6.2 Terminals and equipment

The revenue that operators earned on the sale and rental of terminals rose by 16.6% in 2008, comparable to the 17.5% increase in 2007, to reach €3 billion. Three quarters of this income was generated by mobile operators' equipment sales – a percentage that is increasing year after year. In 2008, strong sales for touch-screen handsets, especially in the second half of the year, contributed substantially to this increase.

#### Terminal and equipment sales and rental revenue

€ million	2004	2005	2006	2007	2008p	Growth
Fixed operators and ISPs	755	722	646	724	748	3.4%
Mobile operators	1 567	1 680	1 513	1 813	2 210	21.9%
<b>Terminal and equipment revenue</b>	<b>2 322</b>	<b>2 402</b>	<b>2 159</b>	<b>2 537</b>	<b>2 958</b>	<b>16.6%</b>

Source: ARCEP, Electronic Communications (EC) Observatory – Annual survey, 1998 to 2007; quarterly surveys for 2008 (estimated figures).

## C. Consumption and usage in France

2008 was marked by an uptake in fixed telephony equipment in households, spurred by once again lively growth of residential Internet access. Mobile equipment levels are also rising, to the extent that close to two thirds of adults in France are now equipped with both a fixed and a mobile phone. The emergence of broadband on fixed networks and of digital terrestrial television (DTT) is creating major shifts in the way that viewers are accessing their TV programmes.

### Surveys

This data presented here derive from surveys performed by CREDOC and Médiamétrie.

The CREDOC survey, which was conducted on behalf of ARCEP and CGIET (formerly CGTI), describes the equipment individuals own and how they use it. This survey is conducted in person in the month of June with a sample of 2 200 people aged 12 and older. It provides estimates on equipment levels and individuals' consumption habits.

Performed jointly by Médiamétrie and GfK, "*La référence des équipements multimédia*", is a quarterly survey conducted on a representative sample of 6,000 persons aged 15 years and older who were interviewed in person concerning the equipment in their homes. This survey essentially provides estimates on household equipment levels (percentage of households equipped), but also enables estimates on individual equipment levels.

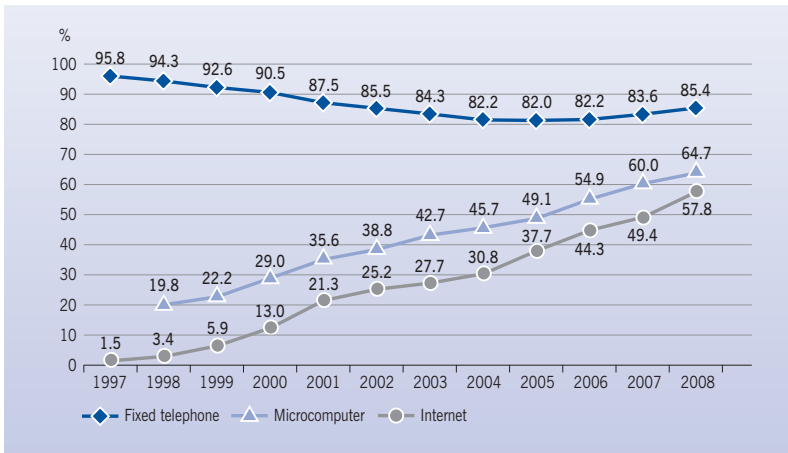
Complementary use is made of these two types of survey: a survey of individuals is needed to address questions concerning personal equipment, such as mobile phones and where users access the Internet, while a survey of households make it possible to measure equipment tied to the home, such as fixed telephony and television.

## 1. Household equipment

### 1.1 Fixed telephony equipment levels on the rise

After close to a decade of steady decline and three years of relative stagnation, fixed telephony equipment levels in households has been on the rise since mid-2007 – climbing to 85.4% by the end of 2008. The emergence of broadband services is now providing an incentive for households that had done away with their fixed network access in the second half of the 1990s to reinstall a connection.

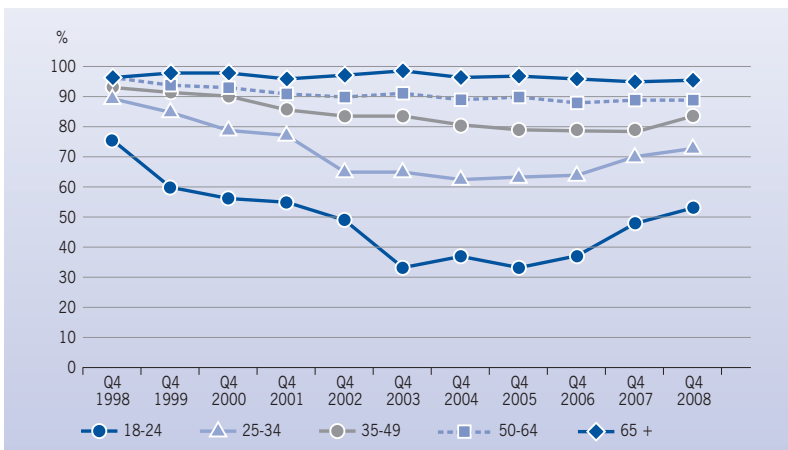
## 1. Household equipment



Source: "La référence des équipements multimedia" – Médiamétrie / GfK.

The revival of fixed telephony equipment, spurred by the appeal of broadband services delivered over landline networks, namely Internet access, telephony and TV, is occurring among all of the age groups that had previously contributed to the decline. The first to reinstall a fixed telephony connection, starting in mid-2007, were households whose head is under 35 years of age. In 2008, the take-up spread to older households as well: equipment levels amongst 35 to 49-year olds, which had dropped below 80% in the early 2000s, is increasing steadily and is now back up over the 80% mark.

### Residential fixed telephony equipment rate, by age of the head of the household



Source: "La référence des équipements multimedia" – Médiamétrie / GfK.

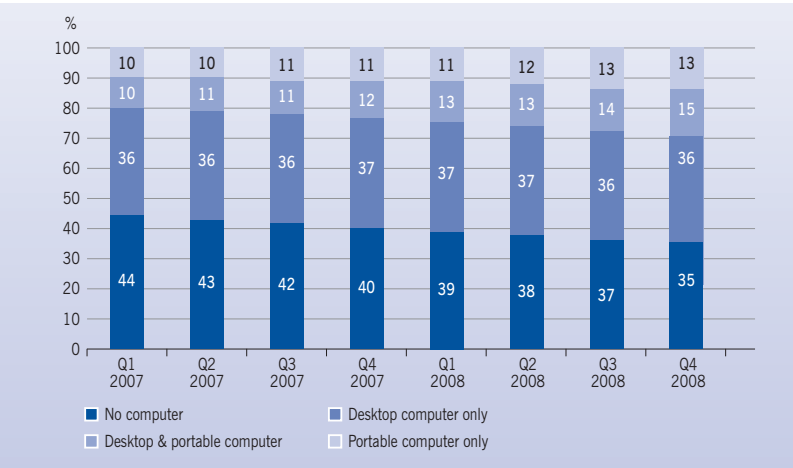
There are very few households in the 18 to 24-year old category: at that age, a large percentage of young people still live with their parents, so it is their parents' age that is taken into account. The 18 to 24-year old category accounts for around 0.9 million households, while the 25 to 34-year old category accounts for 3.7 million households.

1.2 A computer in 65% of French households

Computer equipment levels in French households has been increasing at a steady, unflagging rate of 5 points a years since the end of 2006. Close to 65% of the country's households were equipped with a computer by the end of 2008. Age remains the most discriminating factor, with young adult households being the chief growth drivers once again in 2008 – the vast majority of them (85%) being now equipped with a computer at home. In the age groups immediately above them, equipment levels are increasing, but only at the average pace, which means the gap with younger users still exists. Equipment levels amongst the country's oldest citizens, i.e. those 75 years of age and up, which represent more than three million households, remained unchanged in 2008 – totalling only 13% at year end.

The number of households equipped with a laptop computer continues to increase: while 65% of all households have a computer, only 36% have only a desktop PC/desktop PCs and no laptop. 28% of households had at least one laptop computer at the end of 2008, or five percent more than the previous year. More and more, the family computer is becoming portable, both inside and outside the home.

Overall household microcomputer equipment levels



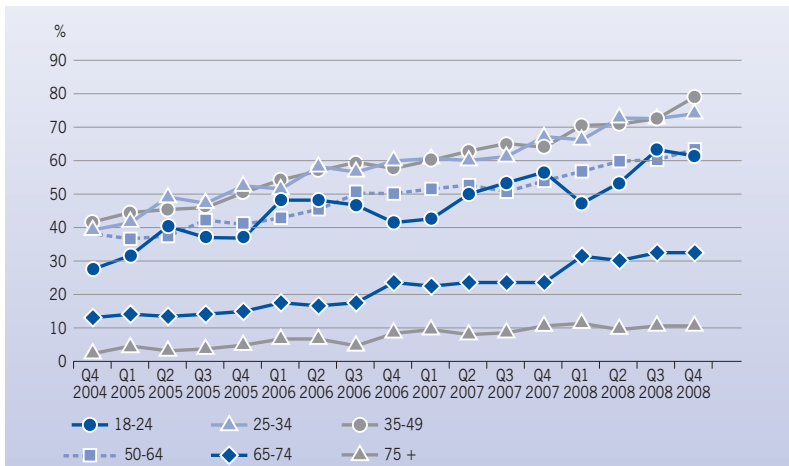
Source: "La référence des équipements multimedia" – Médiamétrie / GfK.

### 1.3 More than half of all households connected to the Internet

The rise of the Internet access rate amongst households continued on through 2007 and into 2008, according to the Médiamétrie-GfK survey: 57.8% of French households were equipped with Internet access at the end of 2008.

But there are still sizeable disparities between age groups: between the end of 2006 and the end of 2008, the increase in Internet equipment levels was approximately 30% for households of all ages, which means that older households have not caught up, so inequalities remain.

### 1.3 More than half of all households connected to the Internet

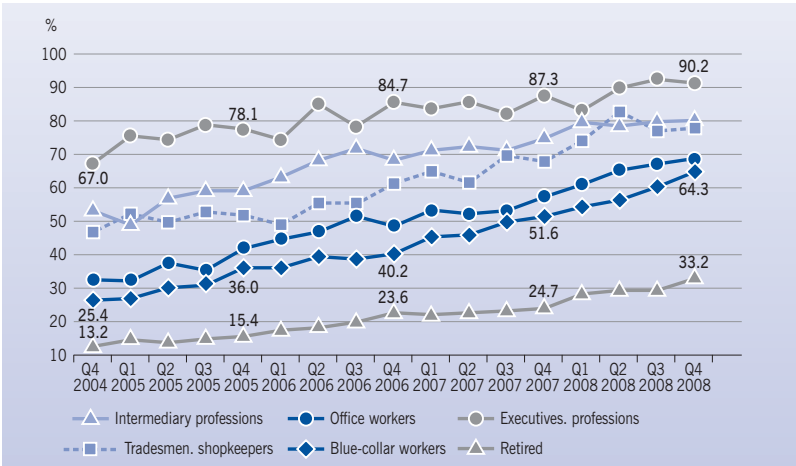


Source: "La référence des équipements multimedia" – Médiamétrie / GfK.

On the other hand, disparities in domestic Internet equipment levels between the different socio-economic groups do appear to be gradually disappearing. The greatest increase in new Internet connections in 2008 was amongst households whose head was a blue-collar or office worker: while the number of Internet households headed by executives increased by only 3% (as the rate is now close to 90%, there can be very little increase), the rate of growth amongst households headed by office and blue-collar workers totalled 20%. The gaps between the different social categories are far from having disappeared, but disparities in equipment rates are being steadily erased.

In almost all cases and categories, computer equipment goes hand in hand with subscribing to Internet access. Amongst households equipped with a computer, only 10% were not connected to the Internet at the end of 2008, compared to 18% one year earlier. The greatest decrease in the number of computers that were not online was amongst the lowest income households: at the end of 2007, 22% of blue-collar households equipped with a computer did not have an Internet subscription – a percentage that had shrunk to 12% by the end of 2008. Gaining access to the Web is now the prime incentive for buying a computer.

Residential Internet equipment rate, by socio-economic category of the head of the household



Source: "La référence des équipements multimedia" – Médiamétrie / GfK.

Households in the "agricultural worker", "student" and "other/no profession" categories are not represented in this graph as their numbers are too small (0.4, 0.5 and 1.9 million, respectively) for the survey to obtain meaningful results.

2. Individual equipment

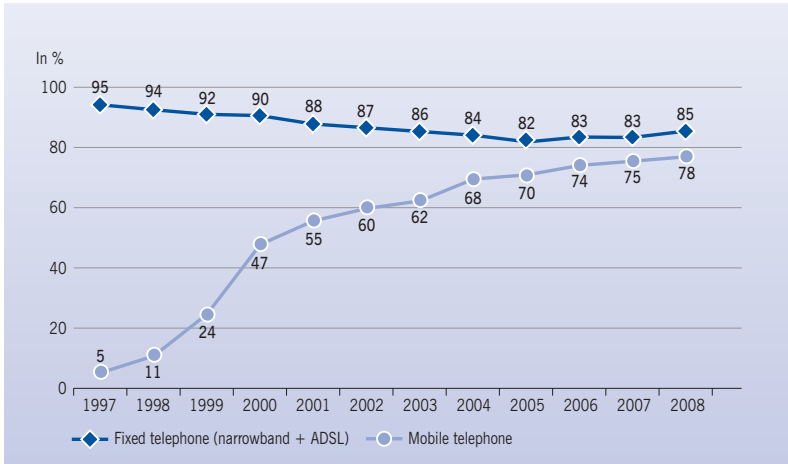
2.1 Fixed and mobile telephone equipment levels back on the rise

If the landline phone and the computer constitute equipment tied to the home and so to the household, such is not the case with a mobile phone, which is a personal device. The rate of cellular phone penetration is therefore measured compared to the entire population and not the number of households.

As of June 2008, 85% of adults in France had at least one fixed telephone line in their home, so individual fixed telephony equipment levels are naturally evolving at the same rate as household equipment. After having decreased steadily up to 2005, residential fixed equipment levels remained stagnant from 2005 to 2007, before rising in 2008. Meanwhile, individual mobile phone equipment levels rose by three points in a year, with 78% of the country's adults equipped as of June 2008.

### Percentage of adults equipped with a fixed or mobile phone

- People 18 years of age and over -



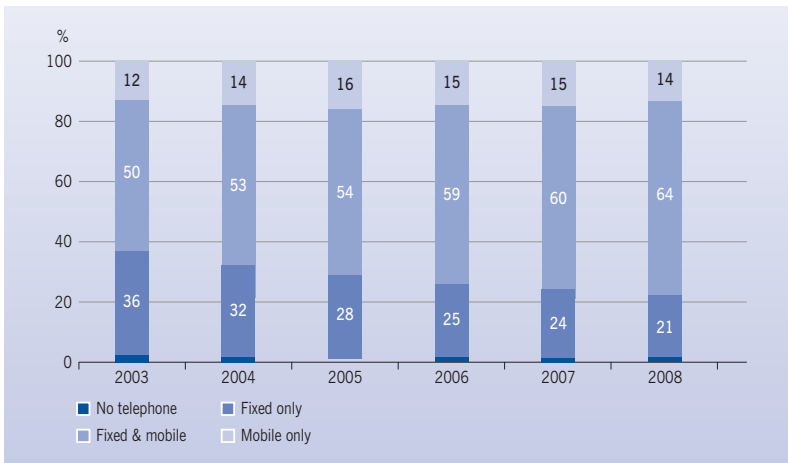
Source: CREDOC surveys of living standards and aspirations in France ("Conditions de vie et aspirations des Français").

Dual fixed-mobile equipment continues to rise, and is tending to become the norm as older generations of users are becoming mobile phone owners and fixed equipment rates are back on an upwards trajectory: two thirds of all adults have both a fixed and mobile phone, as do three quarters of young adults.

The proportion of people who have only a mobile has levelled off at around 15%, with most of them being young people, people who live alone, or those with a low income.

### Mobile and fixed telephone equipment levels since 2003

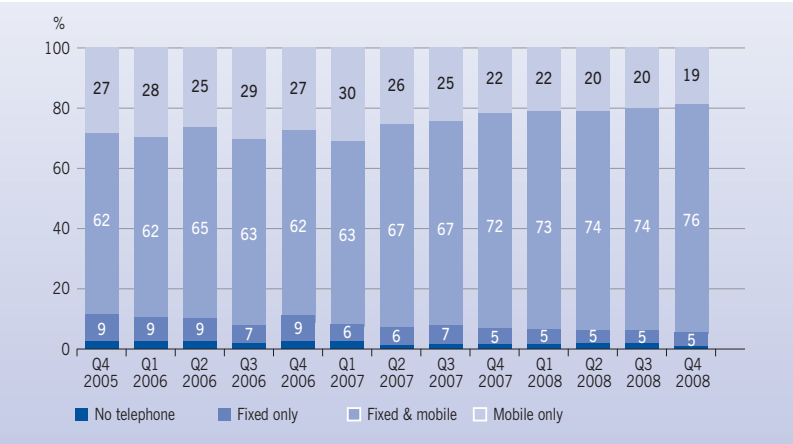
- People 18 years of age and over -



Source: CREDOC surveys of living standards and aspirations in France ("Conditions de vie et aspirations des Français").

The swift rise in equipment levels amongst young adults is one of the main contributors to dual equipment rates. They were the first to embrace the mobile phone phenomenon: in 2005, this was the category that had the largest percentage of mobile-only phone owners (close to 30%). In 2007 and 2008, it was also this group that contributed the most to the success of broadband Internet. These two services have become indispensable, together and no longer in an alternative fashion: dual equipment levels have shot up in the past three years amongst users between the ages of 25 and 34, going from “only” two thirds of them in mid-2006 to three quarters by the end of 2008.

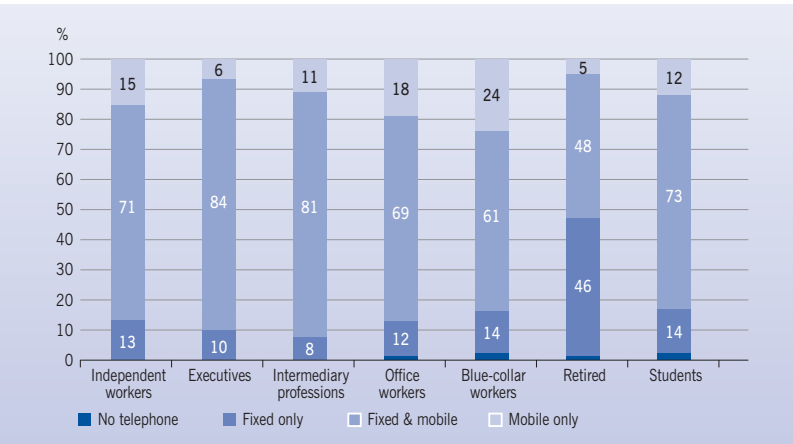
Fixed and mobile telephone equipment levels amongst 25 to 34-year-olds



Source: “La référence des équipements multimedia” – Médiamétrie / GfK.

The type of telephony services being adopted still varies according to people’s lifestyle and financial status: not all social categories can afford both fixed and mobile equipment, with mobile only equipment levels still high amongst those with the lowest income, especially blue-collar and office workers (24% and 18%, respectively).

Fixed and mobile telephone equipment levels by socio-economic category - People 12 years of age and over -



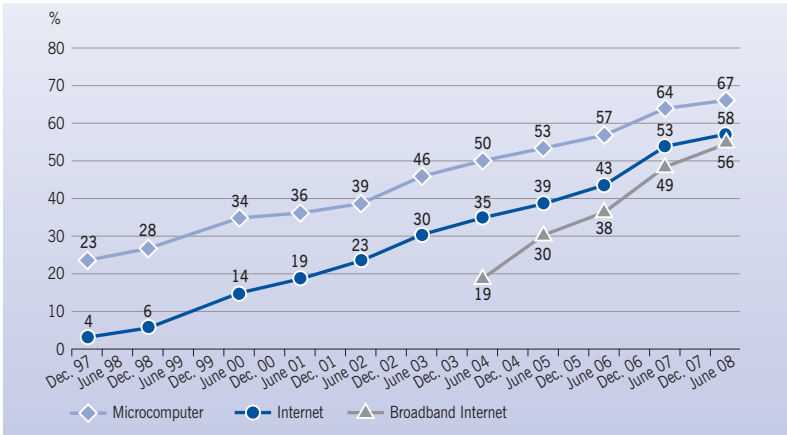
Source: CREDOC surveys of living standards and aspirations in France (Conditions de vie et aspirations des Français).



## 2.2 Residential Internet access levels increasing significantly once again

### Computer and Internet connection equipment in households

- People 18 years of age and over -



Source: CREDOC surveys of living standards and aspirations in France ("Conditions de vie et aspirations des Français").

Computer equipment levels rose by three points between June 2007 and June 2008, with two thirds of all adults now reporting a computer at home. Having Internet access at home is cited as the main reason for buying a computer, which explains why the number of new Internet subscriptions rose by five points during that same period, to 58% of the country's adults. The percentage of computers not connected to the Web is decreasing every year.

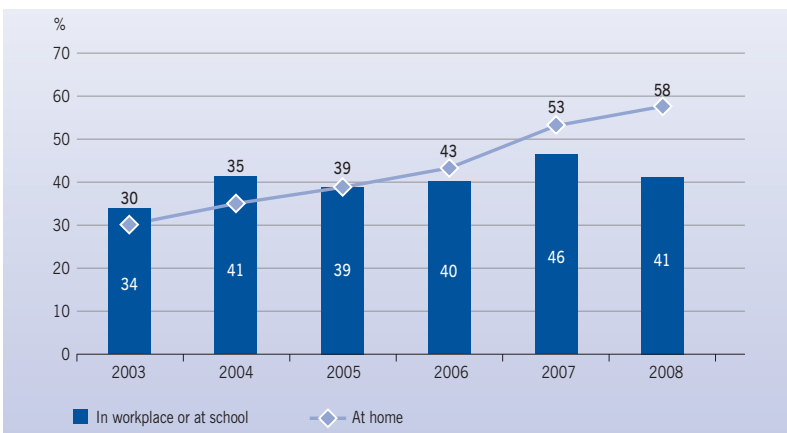
Narrowband access has virtually disappeared, with the rate of broadband access becoming synonymous with the rate of Internet access.

The growth of Internet connections is being spurred chiefly by residential users. While having access to the Web in the workplace, which depends heavily on a person's job and their sector of activity, is increasing very slowly, a growing number of teenagers have access to the Internet at school although actual use of it, which is necessarily shared between the students, is still relatively infrequent.

### Internet access

Scope: at home, people 18 years of age and over -

- In the workplace or at school: 18 years and over, in the workforce or student -



Source: CREDOC surveys of living standards and aspirations in France ("Conditions de vie et aspirations des Français").

2.3 Means of accessing television evolving rapidly

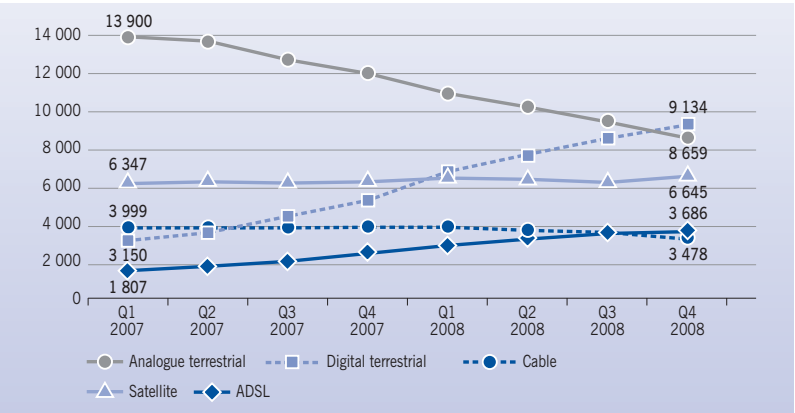
The way that people access TV has been shaken up by the introduction of TV over ADSL, by the analogue terrestrial service being steadily replaced by digital terrestrial and by the proliferation in the number of channels available on these various broadcasting media.

Television reception over a classic terrestrial antenna is diminishing quickly: at the start of 2006, close to 14 million households were accessing their TV programmes this way, but that number had decreased to 8.6 million by the end of 2008. Digital terrestrial television (DTT) is gradually taking its place: at the end of 2008, 9 million households were accessing the channels being broadcast over DTT, compared to only 3 million one year earlier.

More and more households have signed up for ADSL, primarily thanks to the popularity of triple play bundles: 3.7 million households were accessing their TV programme via ADSL at the end of 2008.

By diversifying, the number of ways of accessing TV programmes are also multiplying within the home. Households that subscribe to an ASDL access offer that also includes television often continue to use a former means of accessing TV as well. At the start of 2006, 26 million households accounted for 29 million TV connections, or an average 1.16 connections per household. By the end of 2008, this average totalled 1.24 connections.

Number of TV households by broadcasting medium



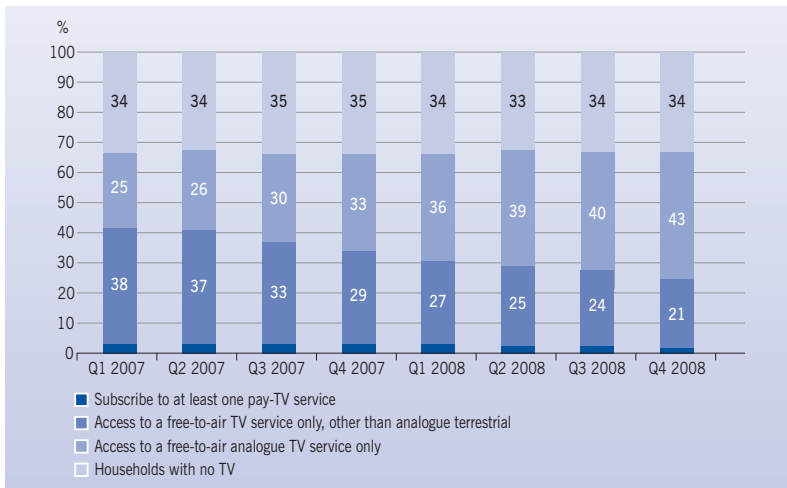
Source: "La référence des équipements multimedia" – Médiamétrie / GfK.

This graph provides estimates of the number of connections to the TV service for each type of broadcasting technology. The number of connections does not correspond to the number of households as some households access their programmes via several types of connection.

The number of households that access their TV programmes only over the analogue terrestrial service is decreasing very rapidly, accounting for 38% of households at the start of 2007, and only 21% by the end of 2008. In addition to the development of TV over ADSL, the prospect of the upcoming switch-off of the analogue signal is steering new TV sales to televisions equipped to receive the digital terrestrial service.

Despite the swift pace of these technological changes, the propensity of households to pay for their TV programmes is not changing: a third of households were subscribing to a pay-TV service at the end of 2008 – a proportion that has not changed in two years.

### Household TV equipment and programme access levels



Source : "La référence des équipements multimedia" – Médiamétrie / GfK.

A pay-TV service refers here to channels that consumers are billed for explicitly, such as pay-TV channels, cable subscriptions or channels billed on top of an Internet subscription. Channels included in service bundles and basic cable channels are considered as being free.

D. European benchmarks

1. Elements of comparison by electronic communication service

1.1 Broadband

The northern European Union countries (Denmark, the Netherlands, Finland and Sweden) are among the world leaders in terms of broadband access, with penetration rates of more than 30% of the population. France maintains a good position (ranking 9th in Europe), just behind Germany and the UK.

Broadband markets in European Union Member States at the end of September 2008 (EU-27)

Member State	Broadband penetration rate: per inhabitant, per country*	Total number of broadband lines	Number of fully, unbundled lines (broadband + telephony)
Germany	27.5 %	22 691,250	7 900 000
Austria	21.1 %	1 746,039	274 815
Belgium	27.3 %	2 868 092	47 137
Bulgaria	10.4 %	795 500	-
Cyprus	16.8 %	128 429	16 858
Denmark	37.5 %	2 035 114	205 270
Spain	20.1 %	8 807 039	653 610
Estonia	24.2 %	325 002	6 700
Finland	30.8 %	1 616 354	351 981
France	27.0 %	17 008 000	4 574 000
Greece	12.7 %	1 411 561	490 774
Hungary	15.8 %	1 591 788	10 377
Ireland	20.3 %	856 375	16 805
Italy	19.0 %	11 160 248	2 685 816
Latvia	16.1 %	370 360	471
Lithuania	16.7 %	567 663	473
Luxembourg	28.2 %	129 698	8 810
Malta	24.1 %	97 556	-
Netherlands	36.3 %	5 935 000	459 000
Poland	10.1 %	3 848 377	240 099
Portugal	16.3 %	1 719 464	309 607
Czech Republic	16.3 %	1 770 184	40 348
Roumania	10.2 %	2 265 154	1 661
UK	28.1 %	16 941 500	1 448 407
Slovakia	10.6 %	569 256	0
Slovenia	19.8 %	396 954	44 888
Sweden	31.0 %	2 806 000	187 000
Total/Average	22.4 %	110 457 957	19 974 907

\* in accordance with the calculation method used by the European Commission: total number of connections divided by the population, and multiplied by 100.

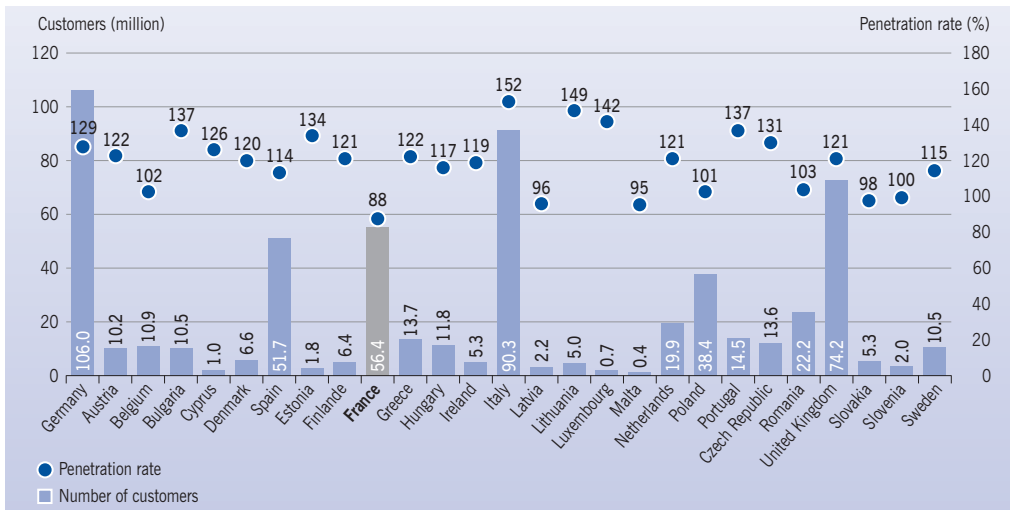
Source : ECTA, 2008.

## 1.2 Mobile telephony

### 1.2.1 Penetration rate

The Baltic countries and Italy are home to the highest rates of mobile telephony penetration (ranging from 142% to 152%), while France is reporting the lowest penetration rate in Europe.

#### Number of mobile telephony customers and penetration rates in European Union countries

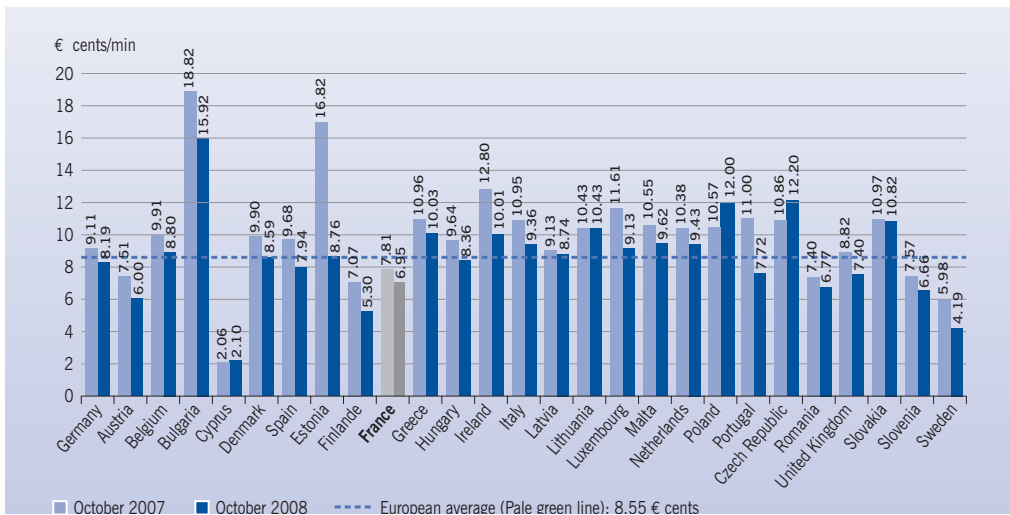


Source: ARCEP.

### 1.2.2 Call termination

In 2008, France had one of the lowest mobile voice call termination tariffs in the European Union (6.95 €-cents), below the EU average of 8.55 €-cents. Cyprus (2.10 €-cents), Sweden (4.19 €-cents) and Finland (5.30 €-cents) are the countries where mobile voice call termination tariffs are at their lowest.

#### Wholesale price of mobile voice call termination in the European Union in 2007 and 2008

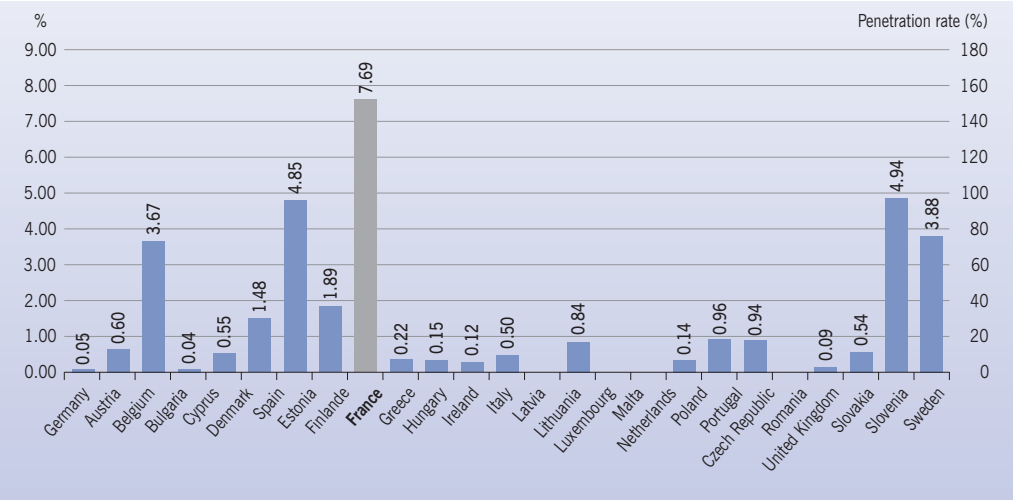


Source: ARCEP.

1.3 IPTV

Internet TV is becoming increasingly popular, thanks to triple play and quadruple play bundles. The trend is at its most visible in France, where close to 8% of the population were accessing TV programmes via the Web in July 2008. IPTV services have also made real strides in Slovenia, Estonia, Sweden and Belgium.

Percentage of the population that subscribes to an IPTV service in the European Union (July 2008)



Source: 14th European Commission report.

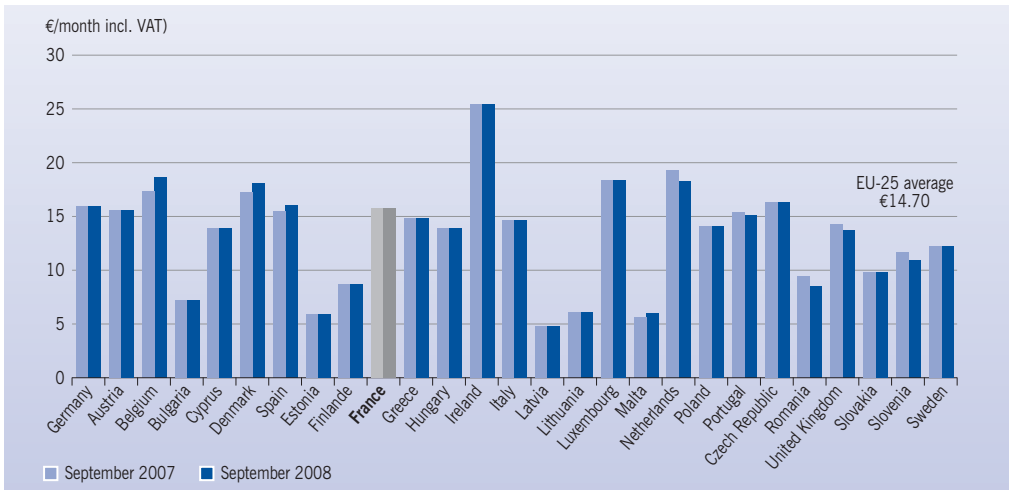
2. Tariff benchmarks

1.4 Subscriptions

1.4.1 Residential subscriptions

At €16, the price of a monthly residential subscription in France was slightly above the European average of €14.7/month, including VAT, in September 2008. Ireland, Belgium and Luxembourg are home to the highest prices.

### Incumbent carrier's monthly subscription tariff for residential customers (€/month incl. VAT)

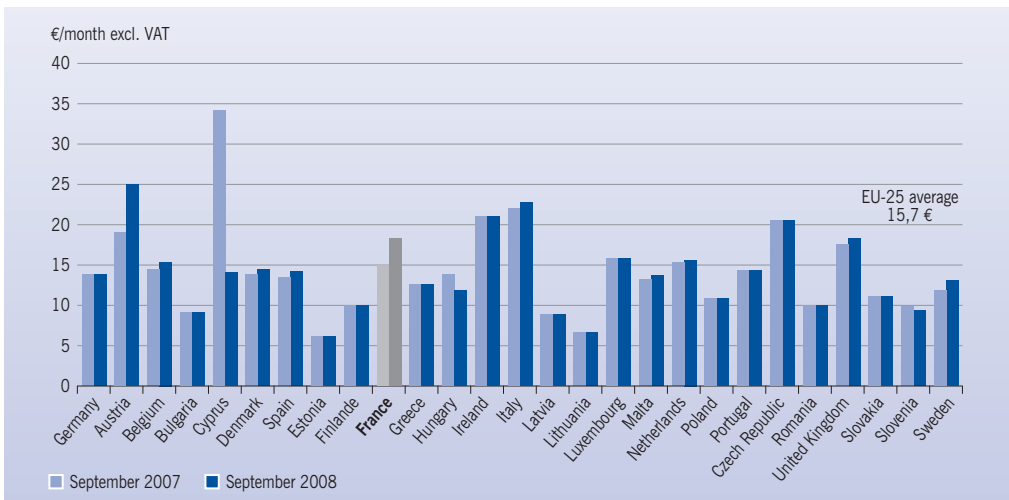


Source: 14th European Commission report.

#### 1.4.2 Business subscription

At €17.80/month, excl. VAT, the price of a business subscription in France is above the European average. Austria, Italy and Ireland are home to the highest tariffs.

### Incumbent carrier's monthly subscription tariff for business customers (€/month excl. VAT)



Source: 14th European Commission report.

1.5 Mobile calls

The European Commission compared the price of the flat rate packages marketed by the two largest mobile operators in each European country, and employed the OECD tariff baskets to rank the different offerings.

For light usage consumers in 2008, the lowest prices were to be found in Austria, Lithuania and Estonia, while the UK was home to the highest prices for this category of user.

For consumers who make average use of their phone, Spain, Malta and Ireland had the highest prices, while operators in Lithuania, Estonia and Austria offered the lowest prices.

Lithuania, Estonia and Austria are home to the most attractive offers for heavy users, while operators in Spain, Ireland and Malta charged the most for heavy mobile usage.

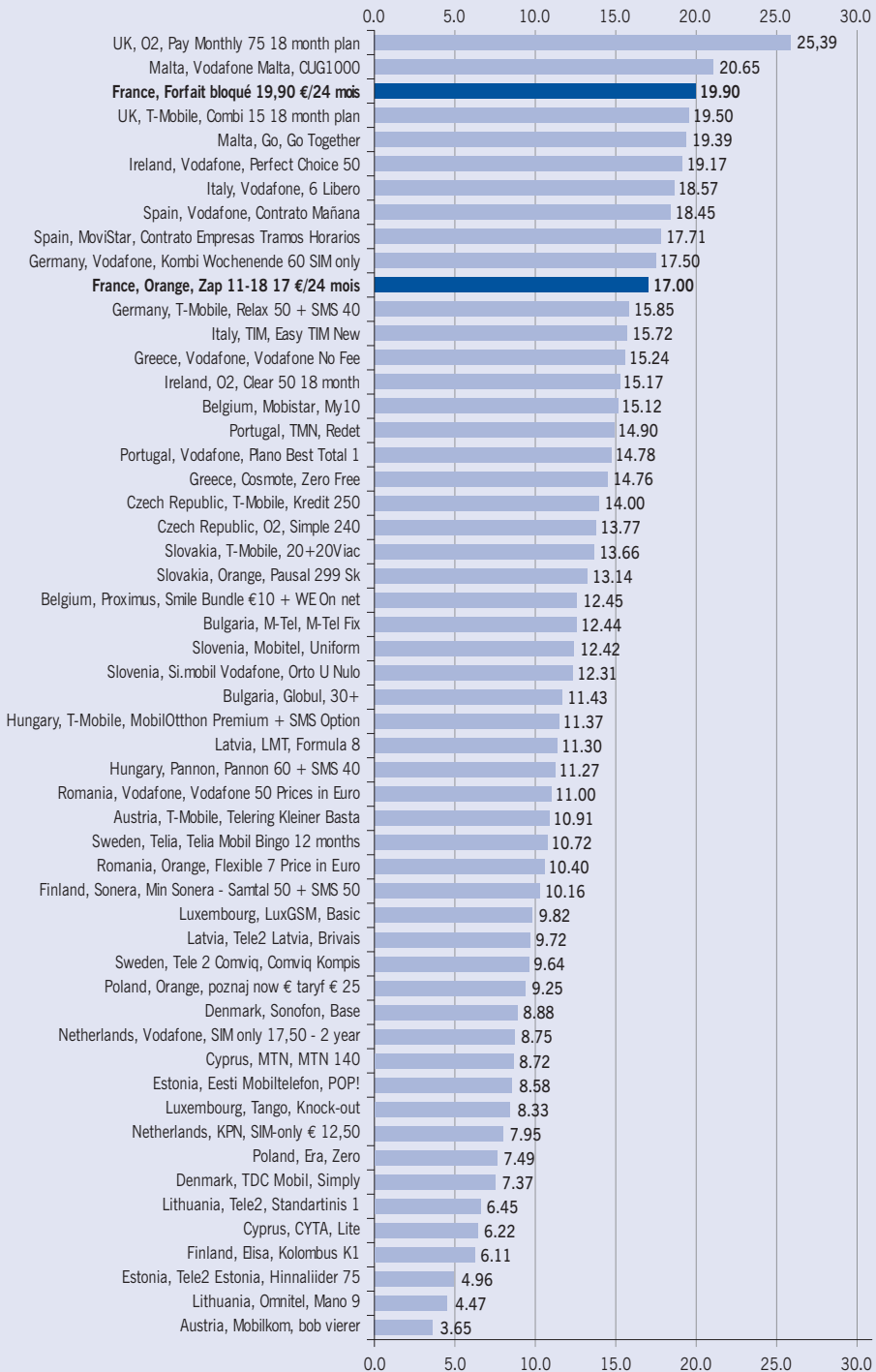
Gaps between the highest and lowest prices in Europe, by mobile consumption level

	Highest prices	Lowest prices	Price range in France
Light usage (30 outgoing calls/month + 33 SMS)	€25.39/month, incl. VAT (the UK)	€3.65/month, incl. VAT (Austria)	€17 – 19.90/month, incl. VAT
Average usage (65 outgoing calls/month + 50 SMS)	€37.99/month, incl. VAT (Spain)	€5.43/month, incl. VAT (Lithuania)	€29.77 – 29.90/month, incl. VAT
Heavy usage (140 outgoing calls/month + 55 SMS)	€68.83/month, incl. VAT (Spain)	€9.84/month, incl. VAT (Lithuania)	€47.44 – 48.04/month incl. VAT

Source: 14th European Commission report.

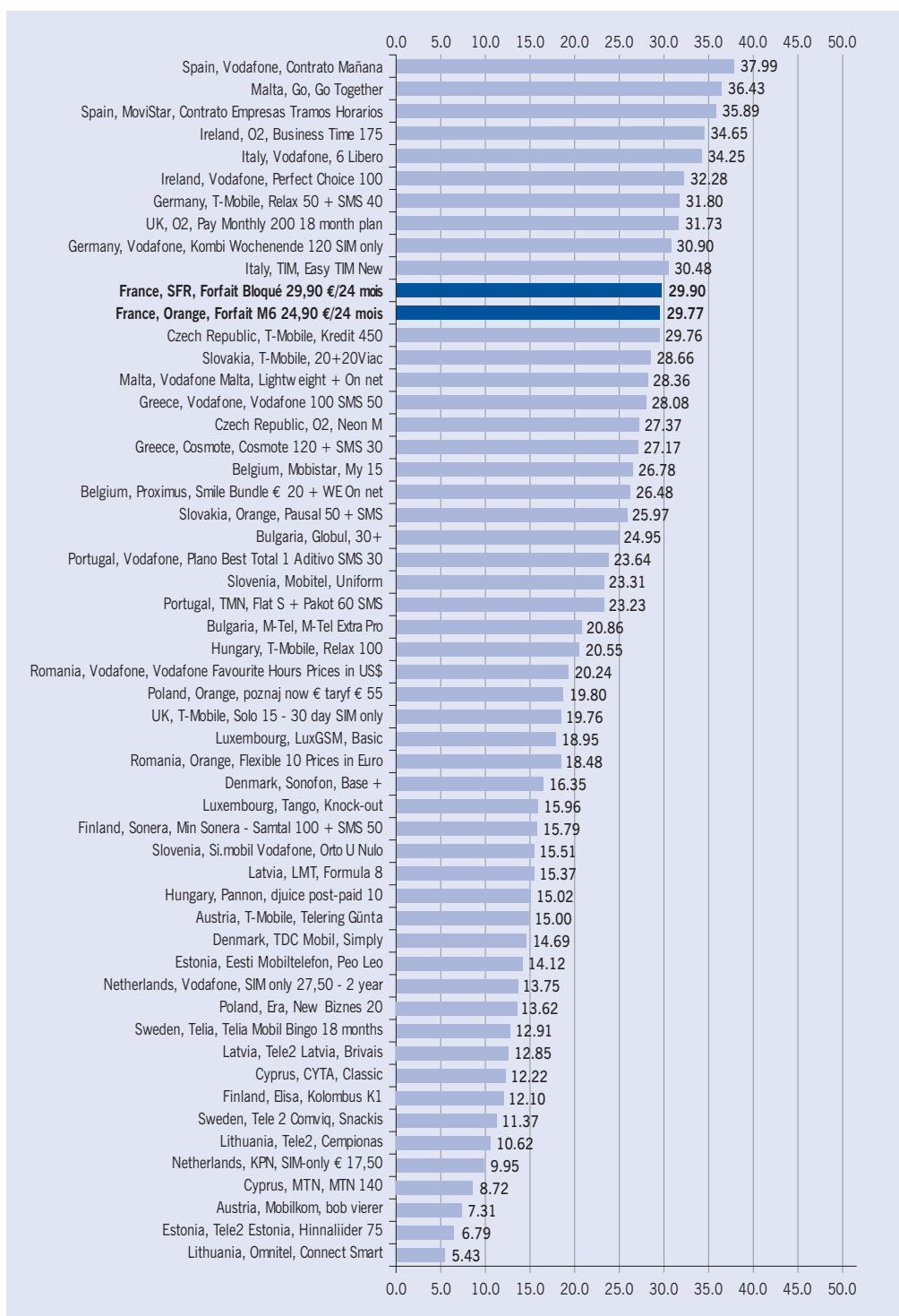


## Monthly price of light mobile usage (€/month, incl. VAT)



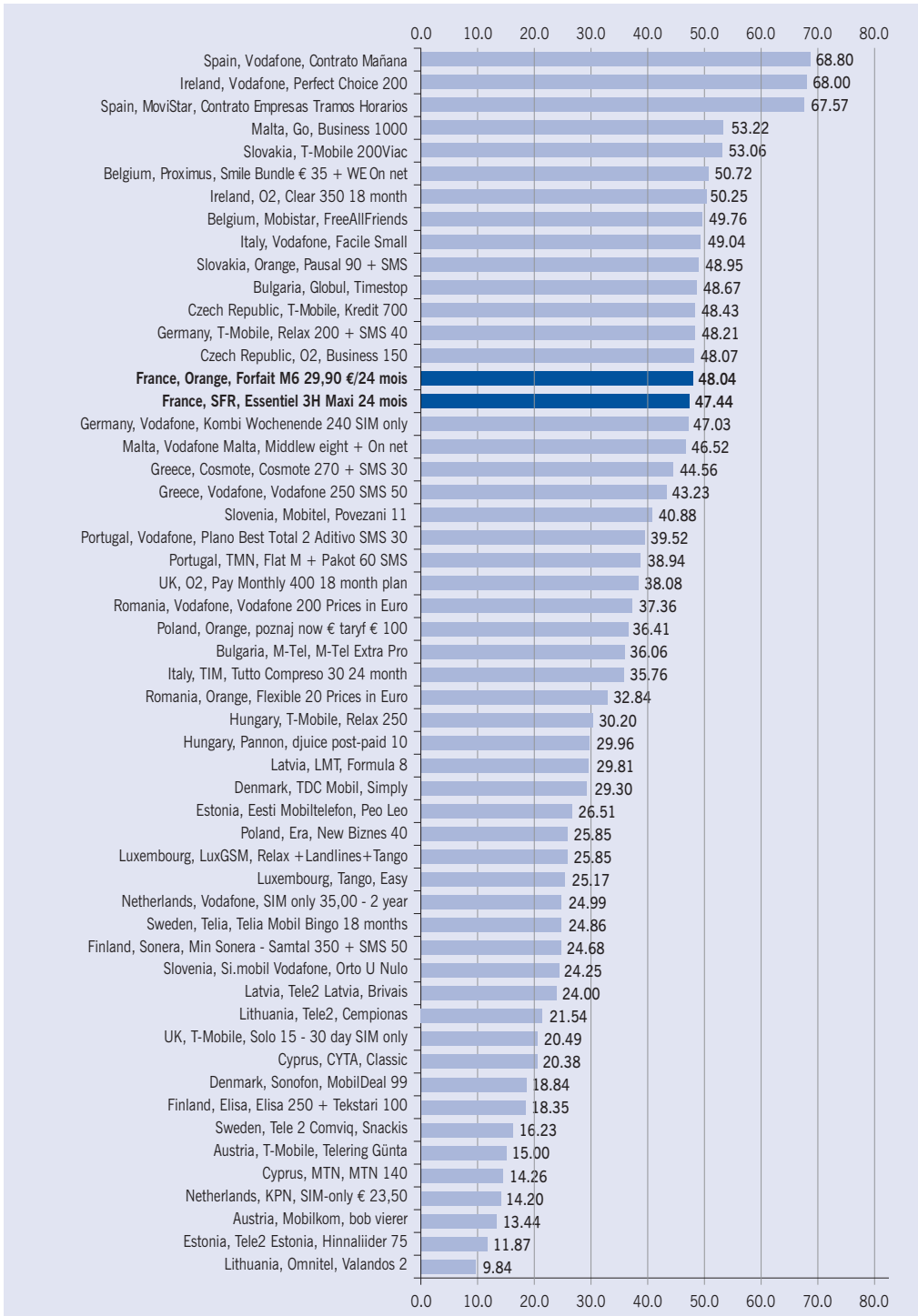
Source: 14th European Commission report.

## Monthly price of average mobile usage (€/month, incl. VAT)



Source: 14th European Commission report.

## Monthly price of heavy mobile usage (€/month, incl. VAT)



Source: 14th European Commission report.

