The International Communications Market 2008

1 Overview

Contents

1.1 Introduction and summary

1.1.1 Introduction

This is Ofcom's third International Communications Market Report. It aims to provide a statistically-driven international comparative context for the UK communications sector.

The report provides an overview of the communications industries in a range of countries:

- It draws comparisons between the UK and six large comparator countries – France, Germany, Italy, the US, Canada and Japan.

- Where possible, we have included data from another five countries – Poland, Spain, the Netherlands, Sweden and the Republic of Ireland.

- We have also repeated last year's analysis of communications markets in Brazil, Russia, India and China. Because their economies are at a different stage of development to the other 12 comparator countries, and because full datasets are harder to come by, we have set out these four countries in a separate chapter at the end of the report.

1.1.2 Data and methodologies

Data in this report cover the 2007 calendar year. We show trends using a five-year historical time series where possible.

All currency conversions use the average market exchange rate during 2007, as provided by the IMF. We have opted to convert data from every year at this fixed rate, so that currency fluctuations do not obscure market trends. The exception to this methodology is in the international price benchmarking analysis (Section 1.X), where we have used purchasing power parity adjusted exchange rates. All figures are nominal unless otherwise stated.

The document draws on a combination of desk research and discussions with industry bodies, operators, regulators and commentators. The data were gathered with the support of consultancy firm IDATE, which has attempted to verify sources and provide market estimates where data are incomplete. Telecoms pricing consultancy Teligen built a bespoke model to enable our analysis of comparative international pricing and populated it with specifically-sourced tariff data. Comparisons between data in this report and its predecessors will not always be possible, owing to changes in definitions over time, in the method of collecting data and due to the availability of new data sources. Similarly, some UK data published in this report may not be directly comparable with data published in other Ofcom reports, such as the UK Communications Market Report.

Thanks are due to Screen Digest, Informa, PriceWaterhouseCoopers, EuroBarometer, the European Audiovisual Observatory, the World Advertising Research Centre, Execution Research, Médiamétrie/Eurodata and the Canadian regulator CRTC for the permissions they have given us to use their data.

We endeavour to ensure that data in this report are comprehensive and the most accurate currently available. However, with a document so wide in scope, and with reliance on third parties for some data, there will always be omissions and occasional inaccuracies. Comments and feedback on this report are welcomed at market.intelligence@ofcom.org.uk.

The information set out in this report does not represent any proposal or conclusion by Ofcom in respect of the current or future definition of markets and/or the assessment of licence applications or significant market power or dominant market position for the purposes of the Communications Act 2003, the Competition Act 1998 or other relevant legislation.

1.1.3 Report structure

This report is divided into seven chapters:

- The Overview (this section) **(page 19)** provides a report summary. It then goes on to examine:
    - how the UK communications industry compares with the main comparator countries in this report;
    - the UK communications consumer, in an international context; and
    - the regulatory landscape within which communications service providers operate.
- **Comparative international pricing (page 53)** compares the typical prices people pay across our main comparator countries, for a range of different 'baskets' of communications services.
- **Converging communications markets (page 87)** examines recent market trends, industry characteristics and consumer behaviour across a range of converged devices and services.
- **The television (page 137), telecommunications (page 183)** and **radio (page 243)** sections each describe a range of recent market developments, analyse the industry (typically focusing on revenue trends), and conclude with a consideration of consumer behaviour.
- **Emerging markets (page 265)** considers the communications markets of Brazil, Russia, India and China.

The remainder of this section summarises each chapter's main findings.

1.1.4 Overview (page 9)

1.1.4.1 The UK industry in context (page 23)

<u>Communications market revenue reached £876bn in 2007 – the UK accounted for 4.4% (£39bn) as the fourth largest market behind the US, Japan & Germany</u>

- Global communications market revenue totalled £876bn in 2007, up 6.1% year-on-year.
- Revenue is concentrated among a comparatively small number of developed nations. The seven main comparator countries in this report (the UK, France, Germany, Italy, the US, Canada and Japan) accounted for £440bn (50%) of the total. Telecoms remained the largest of the three sectors, making up 68% (£300bn) of the total, followed by TV (28% or £122bn) and radio (4% or £18bn).
- The UK communications sector accounted for 4.4% (£39bn) of the worldwide total, ranking fourth in the world (after the US, Japan and Germany). Per head of population, the UK generated £636 in 2007, second only to the US with £698. The UK figure was up by a quarter in five years, second only to Italy (30%) and Canada (27%).

- The UK's television industry (at £10.4bn) was the third largest among the bigger comparator countries in this study (after the US and Japan), while the telecoms (£26.9bn) and radio (£1.3bn) industries both ranked fourth, after the US, Japan and Germany.

1.1.4.2 UK advertisers spend a greater proportion of their budget on the internet than any other nation – 19% of all display advertising in 2007

- TV and radio's share of advertising spend varies by country. TV spend alone accounts for the majority of total spend in Italy; when combined with radio, the same is true of Poland and Spain. In the UK, spend on television and radio combined accounted for just under one third of all display advertising in 2007.

- With the exception of the Republic of Ireland and France, TV advertising's share of spend either remained stable or fell during 2007. In the UK, it fell by 0.9 percentage points in 2007, the second largest reduction behind Canada (-1.1 percentage points)

- UK advertisers allocate a greater proportion of their budgets to the internet than in any other country - 19% in 2007. Advertisers in Sweden ranked second with 17%, followed by the US with 13%. The most significant shift in advertising spend during 2007 was into UK internet-based advertising; its share of total spend rose by 4 percentage points.

- During 2008 equity valuations for some communications market operators fell, as did market indices. While generalisations are difficult to make, when these reductions are corrected for overall market movements, some telecommunications stocks appear to have outperformed the market, while some television channel businesses appear to have performed less well.

1.1.4.3 The UK consumer in context (page 31)

<u>The UK leads the main comparator countries in digital television and DVR take-up and ranks second in mobile penetration</u>

- Take-up of digital technologies has risen year-on-year across all the larger comparator countries in this study.

- Homes in the UK were the most likely to have a main television set connected to a digital decoder in 2007, with an estimated 86% connected by the end of the year (up 9 percentage points). Homes in the US ranked second, with 70% (up 9 percentage points) followed by the French with 66% (up 13 percentage points – the fastest growing main comparator country in 2007).

- The UK ranked second, behind Italy, for the number of live mobile connections per 100 of population (121 and 154 respectively). UK take-up rose by 6 percentage points year-on-year, behind Italy (16 percentage points), Germany (14) and the US (7); the UK's lead over Germany on this measure narrowed to 3 percentage points (from 11) during 2007.

- Residential and small/medium sized enterprise (SME) broadband take-up in the UK totalled 60 connections per 100 households in 2007, up by 10 percentage points on the year. It ranked third behind the US (61%, up 12 percentage points year-on-year) and Canada (66%, up 6 percentage points).

- More people in the UK own and use a DVR (30%) than in any other of the larger comparator countries. Twenty-one per cent of Italians make the same claim, alongside 20% of people in the US and Canada. DVRs were less popular in Germany (11%) and Japan (13%).

- Consumers' use of different communications devices varies by gender. In many countries women were significantly more likely than men to use a fixed line phone on a weekly basis. Men were more likely than women to claim weekly use of a games console or portable music player.

- Recent research into the resilience of telecommunications expenditure in the UK, France, Germany and Italy suggests that consumers may be less inclined to trim their mobile, fixed line and broadband spend than other areas of discretionary spend.

1.1.4.4 The regulatory landscape (page 41)

National regulatory authorities – proliferation connected to market liberalisation

- The tendency towards liberalising communication markets has increased the number of national regulatory authorities from 12 to 148 worldwide over 20 years.

- Convergence has prompted institutional reform in a number of countries, with many regulators around the world, including Australia, Canada, Italy, Finland, the UK, the US, and most recently, South Korea, now being responsible for pan-communications sector regulation. There is also increased regulatory cooperation with the development of cross-country networks

Regulatory developments centred on promoting competition and protecting consumers

- Negotiations on a revised European regulatory framework for electronic communications networks continued during 2008. There has been broad support for proposals which strengthen consumer protection, but other issues, such as the introduction of a veto power for the European Commission or a European Agency, have proved controversial.

- In telecommunications markets, the regulatory issues currently under consideration across some of the comparator countries include the regulatory approach to next generation access networks, functional separation (whereby certain network elements of the incumbent operator are placed in a separate business unit to allow competing service providers to access essential network infrastructure on non-discriminatory terms), and consumer protection (e.g. international roaming and mobile call termination rates).

- Audio-visual regulation is also undergoing significant changes. In Europe, the AVMS Directive will shape the future of commercially-funded PSB, potentially opening up new revenue. Across the world, NRAs are examining how converging markets and new media technologies will influence the future direction of public service broadcasting, and dealing with the challenges created by the rise in online content distribution.

1.1.5 Comparative international pricing (page 53)

- Our comparative international pricing takes account of the growing tendency of consumers to take a bundle of communications services from a single provider. It also accounts for the equipment costs that consumers can incur in signing up to new communications services.

- We consider five different baskets of communications services in this analysis.
    - Basket 1 is representative of a low-use household with basic needs ('free' TV and a fixed telephone line).
    - Basket 2 builds on these basic needs with a broadband connection.
    - Basket 3 represents a mobile 'power user', using mobile for voice and broadband, and taking entry-level pay-TV.
    - Basket 4 combines a fixed line with several mobile handsets, a fixed broadband connection and entry-level pay-TV.
    - Basket 5 represents the highest-spending type of household, with low use of fixed telephony, two mobile handsets, fixed-line broadband and premium-level pay-TV.
- The analysis considers single service offers, weighted by the comparative market shares of the leading providers of fixed voice, mobile voice, broadband and television. Further analysis also examines the 'best bundled offer' available to satisfy the needs of each consumption basket; the summary, set out here, should be read in conjunction with that fuller analysis.
- Benchmarking the **fixed voice** services available, using the weighted average comparison, reveals that that the UK is more expensive for the lowest-use basket than France, Germany and Italy, owing to high line rental charges. The UK offers the cheapest fixed-line service in the fourth basket, while in France and Germany the equivalent fixed-line service is considerably more expensive.
- In **mobile**, using the same weighting methodology, services are cheaper in the UK in every basket except the low-usage one, where the Italian offer is cheapest. In general, the UK and Italian tariffs are lower than those in the other comparator countries.
- With **fixed-line broadband**, consumers in the UK and France benefit from the cheapest weighted average tariffs. But comparisons require caution, since single-service offers are not easy to come by in each country.
- Like-for-like comparisons in **television** are difficult, owing to the different types of channels and content available from country to country. 'Free' TV is most expensive in Germany and the UK, where licence fees are high; conversely, there is no licence fee in the US or Spain. Basic pay-TV is cheapest in Italy, Germany and the UK. For premium-level content, prices in the US are highest, followed by those in the UK and Spain.

1.1.6 Converging communications markets (page 87)

1.1.6.1 Consumers are taking advantage of mobile-enabled services in increasing numbers

- Mobile broadband has grown in popularity across several comparator countries during 2007, driven by broadband-capable HSPA availability of more than 70%

across Europe and increasing take-up of datacards and 'dongles'. In the UK HSDPA covers 87% of the population.

- The growth of mobile broadband connectivity has created a thriving market for music downloads to mobile phones. It accounts for over half of all digital music revenue per head in France and Italy, and 90% of the total in Japan; in the UK the figure stands at just under 30%.

- Mobile social networking has also taken off in the UK and the US, with application developers adapting interfaces to suit mobile screens – 0.8m UK and over 4 million US mobile subscribers now access social networking sites on their phones.

- But mobile TV has had a mixed year, with commercial deployments in the Netherlands and the US counterbalanced by the closure of a planned German service based on DVB-H. There is no broadcast-based mobile TV service in the UK (though subscriber-based streamed services are available).

1.1.6.2 Growing broadband take-up has encouraged UK and US broadcasters to launch free-to-view content aggregators that are proving increasingly popular

- The BBC, Channel 4, ITV, Five and Sky in the UK and News Corporation/NBC in the US (through Hulu) have each launched sites offering access to their television shows.

- Concurrently, individuals' consumption of free-to-air online TV shows has grown rapidly across several comparator countries - in the UK by 69% since 2006.

- Some of these services are free-to-view and advertiser funded. But others have adopted a pay-per-view model and typically charge a fee. Online TV and video content revenue per head in 2007 stood at £1.70 in the US, £0.98 in the UK and £0.55 in Canada. The UK experienced the highest growth since last year at 182%.

1.1.6.3 Total broadband connections increased by 21 % across our comparator countries in 2007

- The growing popularity of TV and film-based content delivered over the web has been facilitated by growing take-up of fixed-line broadband. At the end of 2007, there was almost one fixed broadband connection for every four people in our comparator countries, and growth in the use of mobile broadband services is increasing.

- Access to broadband not only drives up the average time spent online, but also shifts the pattern of services that consumers typically use when online. Internet use was highest in the US, where the average internet user spent over 15 hours a week online in August 2007.

- Games and video dominate Google search terms – the fastest-rising search terms are exclusively concerned with user-generated content sites like 'Facebook' and 'Dailymotion'.

- With the rising popularity of social networking sites, our research suggests that people are increasingly using social networking sites to stay in touch with other people, rather than using email or instant messenger services. At least half of all UK and Canadian adults use the internet for social networking.

1.1.7 Television (page 137)

1.1.7.1 Digital television take-up is rising rapidly across our comparator countries as digital switchover dates approach…

- Analogue terrestrial television is disappearing across Europe; take-up fell by 13 percentage points (pp) in France, 11pp in Spain, 9pp in the UK and 8pp in Italy during 2007. In the UK, France, Spain and Italy, digital terrestrial television was the preferred platform choice when switching over to digital.

- Digital television take-up on main sets was greatest at the end of 2007 in the UK (86% of households, up 9 percentage points(pp)), followed by the US (70%, up 9pp), France (66% up 13pp) and Japan (65% up 8pp). Analogue terrestrial TV transmission have already ceased in the Netherlands and Sweden – they will soon disappear in the US when nationwide switchover occurs in February 2009.

1.1.7.2 …yet pay television services continue to attract subscribers – despite the emergence of newer subscription-free digital television services…

- Pay-TV take-up rose during 2007 across the comparator countries, although the rate of consumer adoption varied significantly, from 0.1% of households in the Netherlands to 10% in Poland.

- The majority of households in the Netherlands, Sweden, the US, Canada and, to a slightly lesser extent, Ireland and Germany, took pay-TV in 2007. For the first time, in 2007, the majority of people in Poland took a pay TV service (and French households crossed the same threshold in 2006). UK pay-TV take-up stood at 47% in 2007, up by 2 percentage points.

1.1.7.3 … with revenues boosted by the growing popularity of 'add-ons' such as high-definition television and digital video recorders

- Across ten of our comparator countries in 2007, there was an installed base of 28 million digital video recorders (DVRs), up by 52% year-on-year. The US, the UK and France accounted for 96% of that total – 73% in the US, 13% in the UK and 10% in France. Among European countries, DVR take-up is highest in the UK.

- An estimated 9 million subscribers in 2007 paid for high-definition (HD) services across the UK, France, Germany, Italy, the US and Canada. Subscribers in the US and Canada accounted for 87% (7.9 million) of the total; UK subscribers make up the majority of the 1.2m HD subscribers in Europe.

1.1.7.4 The growing popularity of subscription services meant that advertising share of total industry revenue fell below 50% for the first time in 2007

- Global television industry revenue reached an estimated £166bn in 2007, up by 6% on 2006 and by nearly one-third since 2003. Advertising was the largest component of the total, at £81bn, although for the first time it didn't account for the majority of total television revenue.

- The Italian TV industry expanded by an average of 9.4% p.a. in the five years to 2007; the Canadian market grew by an average of 6% over the same period and the US market by 5.9%. The UK industry grew by 4.8% over the same period.

1.1.8 Telecommunications (page 183)

1.1.8.1 More mobile connections than fixed lines in every comparator country in 2007

- The number of mobile connections overtook fixed lines in Canada for the first time in 2007. This meant that there there were more mobile connections than fixed lines in all of the comparator countries by the end of 2007. People in Poland and Italy had the highest proportion of mobile telephony connections at the end of 2007, at 80% and 78% respectively, while in the UK the figure was 69% (up by 2 percentage points since 2006).

- Despite the growing sophistication of handsets and the services supported by mobile network operators, SMS (text messaging) had remarkable growth in many countries in 2007**,** with SMS use growing by 142% in the US and 137% in Canada, and 90% in Poland. In the UK the volume of SMS messages grew by 36%.

- As a result of growing take-up of mobile services, total mobile revenues were higher than those from fixed voice and broadband combined in all the comparator countries covered. Mobile revenue averaged 54% of the total revenues in the report and ranged from 42% in Sweden to 63% in Poland. Mobile revenue share was highest in Poland at 63%, and lowest in Sweden at 42%, while in the UK the figure was 56%.

1.1.8.2 Fixed-line penetration falling, broadband growth slowing

- Over the five years to 2007 the total number of fixed lines in the nations covered by the report fell by 2% to 428 million, although installed lines did increase in Germany and the Republic of Ireland. Fixed lines fell by 1% in the UK, to 34 million.

- But in most countries the majority of voice calls still originate on fixed lines – but only just. Among the nations where separate outgoing call volumes data were available, an average of 54% of voice calls originated on fixed-line networks in 2007, down from 72% in 2002. The UK figure fell from 76% to 60% over the same period.

- The pressures on fixed operators in voice markets were echoed in the broadband market during 2007, with narrowband migration beginning to near completion, and competition emerging among mobile broadband providers.

- Broadband connection growth averaged 37% a year across the comparator countries between 2002 and 2007; it was highest in the Republic of Ireland (166%) and lowest in Canada (19%), while in the UK it was 63%.

- Growth in broadband take-up is slowing among our comparator countries; across our comparator countires the total number of broadband connections grew by 21% in 2007, down from 24% a year earlier. In the UK, growth slowed to 20% compared to 31% in 2006.

- Although broadband revenues were the fasting-growing element of telecoms revenue in 2007 (growing by an average of 36% a year in the previous five years) broadband contributed only 11% of telecoms revenue in the same year.

1.1.9 Radio (page 243)

1.1.9.1 Radio listening – feeling the effects of growing broadband penetration

- Radio listening in 2007 was highest in Poland and the Republic of Ireland, at around 30 hours per head per week. Among the North American and Western European countries the average is nearer 20 hours per head per week. In Spain and Japan this falls to less than 15 hours per head per week spent listening to radio.

- But converging distribution networks and devices are reshaping how consumers choose to listen to content that has traditionally only been available through a broadcast-based network.

- More than a third (37%) of French people claim to use their internet connection to access live radio services. In Italy, the UK, and Germany around a third of internet users claim to listen online, with a quarter of internet users in the US and Canada. But in Japan, just 17% of internet users listen to live radio online – probably reflecting generally lower levels of radio listening there.

- Online distribution also allows people to listen to audio service on demand rather than live. More than a third in Italy, Canada, the US, and in the UK claim to download audio (e.g. music tracks and podcasts), although this activity is less popular in Germany, with just under one in five making the same claim.

- While the internet offers a new distribution channel for radio services, it can also be a substitute service for some. Of the seven large comparator countries surveyed, on average almost one in four people (23%) said they were listening to less radio, whilst around 13% said they were listening to more radio, since getting access to the internet at home. Within the nations, a third of people in Japan and France said they listened to less radio, while one in five in Italy claimed to listen to more.

1.1.9.2 Radio operators in the seven main comparator countries generated £19bn

- The seven main countries included in this study account for around £19bn, or 79%, of world radio revenues. Total world radio revenues reached £23.6bn in 2007, up by £0.3bn on last year. The US accounted for 45% (£10.6bn) of the total; the UK generated a further 5% (£1.3bn).

- Some radio markets experienced a fall in advertising revenue in 2007.The US (-5.1%), France (-2.1%) and Japan (-3.8%) all lost revenue.

1.1.10 Emerging markets (page 265)

- BRIC countries accounted for 42% of the world's population and had a combined telecoms, TV and radio industry revenue of over £120bn in 2007, just 14% of global revenue. Telecoms revenue grew by an average of 48% across the BRIC countries between 2004 and 2007, driven largely by mobile services, which made up over half (£53bn) of the telecoms revenue generated in the four countries in 2007.

1.1.10.1 Mobile penetration in Russia exceeded that of the UK for the first time in 2007, and Chinese operators activated more than 88 million new mobile connections

- BRIC countries added over 216 million new mobile subscriptions in 2007, a 17% increase on the additions made in 2006. The largest ever reported annual increase in new mobile connections in a country occurred in China in 2007 (88.2 million), while there were a further 84 million new connections in India.

- Take-up of mobile services has been rapid in the BRIC countries - outpacing rising fixed-line take-up. Mobile adoption grew most rapidly in Russia, with penetration growing from 12% in 2002 to 123% in 2007; it now exceeds UK mobile take-up (121%).

1.1.10.2 Fixed-line broadband take-up remains low, with mobile devices offering more extensive broadband reach among BRIC nations

- Fixed-line broadband take-up among BRIC countries is low, averaging three connections for every 100 people, compared to 26 in the UK. In India only three people in every 1000 had a fixed broadband subscription at the end of 2007 – up from 2 in every 1000 in 2006.

- The mobile platform has shown greater success in extending the reach of broadband among BRIC countries – an estimated 60 million people own an internet-enabled mobile.

1.1.10.3 Television and radio services mainly distributed over analogue platforms; adoption rising quickly

- The growth in China's TV market illustrates the capacity of the Chinese communications market to develop. In the four years to 2007 it grew by 20 million households, compared to just 0.6m in the UK.

- Since 2002 television revenue across the BRIC countries has grown at an average annualised rate of 19%, compared to 5% in the UK. Despite being the smallest country (£2.4bn revenue), Russia's TV industry grew fastest (up by nearly one-third since 2005), driven by rising income levels and the growing take-up of pay-TV services.

- The Russian radio market is the largest among the BRIC nations, at just over £300m in 2007 (compared to £1.3bn in the UK), overtaking China, with revenues of just under £300m, during the year. India was the fastest-growing radio market from 2003 to 2007, expanding by an average of 52% per annum, albeit from a smaller base.

1.2 The UK communications industry in context

1.2.1 Summary

This section puts the UK communications industry into an international context, by comparing the revenue characteristics of its telecommunications, television and radio sectors with those of the main comparator countries in this report (France, Germany, Italy, the US, Canada and Japan). The key findings are:

- Global communications market revenue totalled an estimated £876bn in 2007, up 6.1% since 2006. The UK industry ranks fourth in the world (behind the US, Japan and Germany) and accounts for 4.4% (£39bn) of the total.

- Revenue generated by the seven main comparator countries in this report amounted to £440bn in 2007, up by 3.5% since 2006. Telecommunications accounted for 68% (£300bn, up by 3.4%) of this total, with TV making up a further 28% (£122bn, 4.4%) and radio the remaining 4% (£19bn, -0.1%).

- The UK's telecoms sector generated £27bn in revenue during 2007, up by 5.8% on the year – the second fastest-growing telecoms sector after Canada among our main comparator countries. The UK's TV industry added a further £10bn (up by 4.3%) while radio contributed £1.3bn (up by 2.5% - the fastest-growing in 2007 after Canada and Italy).

- Since 2002, the Italian TV sector grew fastest across sectors and across our main comparator countries, expanding at an average yearly rate of 9.4%; the Canadian TV market grew by 6.0% p.a. and the US by 5.9% p.a.; the UK ranked fourth with 4.8%. In the telecoms sector, the Canadian market grew fastest (6.2% p.a.) followed by the UK (5.1% p.a.). The Canadian radio sector was also the fastest growing, at 4.9% p.a., followed by Italy (4.4% p.a.); the UK radio market rose by 1.8% over the same period.

- Per head of population, UK revenue stood at £636 in 2007, up 5% on the year, behind the US with £698 (which grew by 3.7% over the same period). Over the last five years, UK revenue per head has risen by 25% – above the average of all our main comparator countries (18%); third, behind Canada (29%) and Italy (30%).

- Television and radio's share of total advertising spend varies significantly across our comparator countries. TV advertising spend accounts for a majority of all spend in Italy, and, when combined with radio, the same is true of Poland and Spain. With the exceptions of the Republic of Ireland and France, TV's share of total advertising spend either remained flat, or fell, during 2007. In the UK, television and radio advertising spend accounted for 30% of all spend in 2007, down by one percentage point year-on-year.

- UK advertisers were the most likely to invest their advertising budgets online during 2007 - the internet took a 19% share of all advertising spend. Sweden ranked second with 17%, followed by the US with 13%. Growth in the internet's share of spend was also highest in the UK, rising by 4 percentage points since 2006.

- The reference period for this report runs until the end of 2007. Since then, markets have faced economic uncertainty and financial market instability. Communications market equity price trends over the past twelve months show that some telecommunications stocks have outperformed their relevant market index; not all television channel businesses have fared so well.

1.2.2 Communications sector revenues

1.2.2.1 UK communications revenue ranks 4th in the world with 4.4% of the global total

In 2007, the revenue generated by companies participating in the telecommunications, television and radio sectors reached £876bn, up by 6.1% on the year and by up 5.6% p.a. on average over the last five years.

Telecommunications industries accounted for 78% (£687bn) of the total, down from 79% in 2002, having grown by 6.2% over the last 12 months, ahead of the five year average growth rate of 5.2%. Television accounted for a further 19% (£166bn), up by 6.2% during 2007, having risen by 7.3% since 2003. Radio accounted for the remaining 3% (£24bn) and experienced the lowest growth rate of the three industries in 2007 at just 1.4%, below the average annual growth of 3.6% since 2002.

The UK's communications sector accounted for 4.4% (£39bn) of global revenue in 2007, proportionally higher than its share of population, which stood at around 1.0%. It ranked fourth by revenue, behind the US, which generated 24.0% of the total (£210bn), while accounting for 4.6% of the world population. Japan generated 8.0% (£70bn) with just 1.9% of the global population, while Germany accounted for a further 4.8% (£42bn) – while making up just 1.2% of the world's population (Figure 1.1).

Figure 1.1 Global communications revenue

Revenue (£bn)

Source: Ofcom calculations based on Ofcom (UK), IDATE (telecommunications) with the remaining data taken from PWC Global Entertainment and Media Outlook 2008 - 2012
Notes: Data calculations and interpretation are solely Ofcom's responsibility. Ofcom has used an exchange rate of $2.001 to the pound, representing the OECD average for 2007.

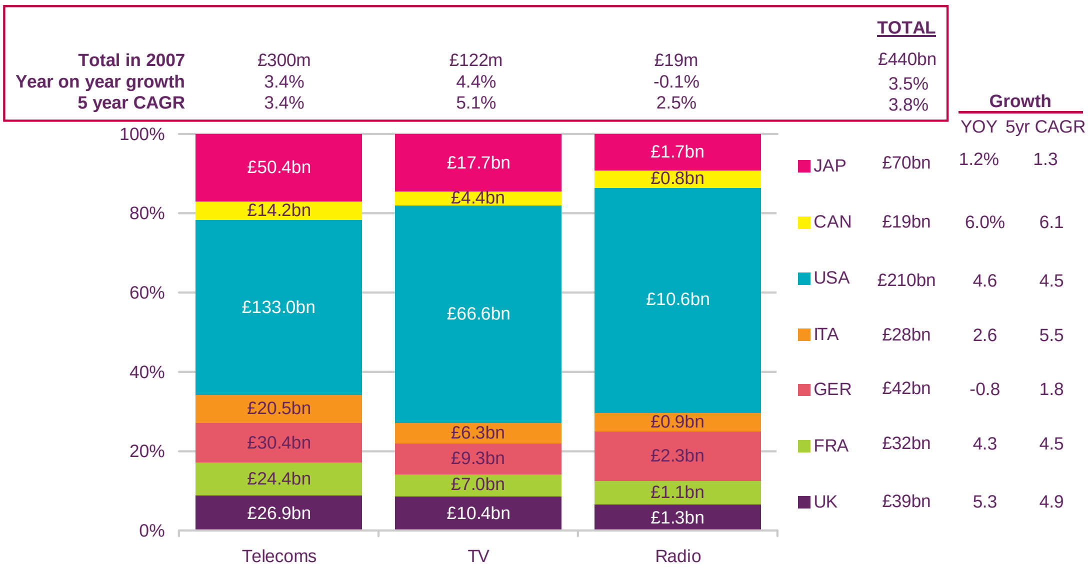
1.2.2.2 The UK TV market ranks third by revenue; telecoms and radio ranked fourth

Telecommunications revenue in the seven largest comparator countries totalled £300bn in 2007, accounting for 50% of the global total. It rose by 3.4% over the year, tracking the five year average growth rate. The US accounted for 44%, or £133bn, of the telecoms industry total, with Japan contributing a further 17% (£50bn) and Germany making up a further 10% (£30bn), just ahead of the UK with 9% (£27bn).

Television industry revenue was concentrated among a smaller number of countries than telecoms income. The three largest accounted for 78% of total television revenue (against 71% for telecoms) with the US contributing 55% (£67bn), Japan contributing a further 15% (£18bn) and the UK 8% (£10bn). TV industry revenue among the seven main comparator countries expanded by 4.4% in 2007, ahead of both telecoms and radio.

Radio industry revenue was as concentrated as television, with the US accounting for 57% of the £18.7bn total in 2007 (driven by a large free-to-listen sector, coupled with a satellite subscription service) and Germany generating a further 12% (£2.3bn) – with public funding making a substantial contribution. Japan added a further £1.7bn (9%), ahead of the UK radio industry, ranked fourth with £1.3bn (Figure 1.2).

Figure 1.2 Communications revenue, by sector, among larger countries: 2007



Source: Ofcom calculations based on Ofcom (UK), IDATE (telecommunications and TV) with the radio data taken from PWC Global Entertainment and Media Outlook 2008 - 2012
Notes: Data calculations and interpretation are solely Ofcom's responsibility. Ofcom has used an exchange rate of $2.001 to the pound, representing the OECD average for 2007.

1.2.2.3 Italian television revenues grew fastest between 2002 and 2007; Canada's three sectors all exhibited strong growth over the period

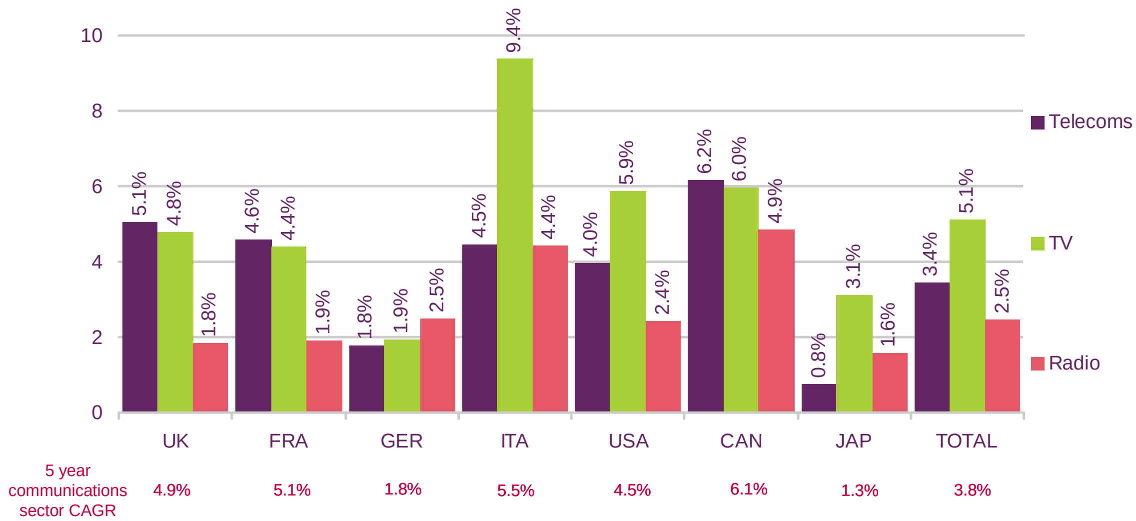
Over a five-year time horizon, television revenue in Italy grew fastest, averaging 9.4% per annum, driven by expanding subscriber revenue from pay-TV services such as Sky Italia and Fastweb. Television industries in the UK, France, the US and Canada all achieved five-year average growth rates of between 4.4% and 6.2%. The Japanese and German television industries grew more slowly over the same time period; in Japan revenue expanded at an average annual rate of 3.1%, while in Germany the challenge of persuading households to migrate from a basic set of low-cost free-to-view channels was manifest, with revenue growing by just 1.9% over the last five years.

In the telecommunications sector revenues in the five years to 2007 grew fastest in Canada, expanding by an average of 6.2% per year, followed by the UK (5.1%) and France (4.6%). In common with their TV industries, the German and Japanese telecoms industries experienced the smallest average annualised rates of growth, at 1.8% and 0.8% per annum respectively.

Growth among radio industries was more subdued. It averaged 2.5% over the last five years, rising as high as 4.9% in Canada and 4.4% in Italy. But among the remaining larger comparator countries, revenues grew by 1.6% - 2.5%, with the UK's radio sector expanding by 1.8% over the period (Figure 1.3).

Figure 1.3 Five year average growth rates across communications industries

Communications sector growth rates (% per.annum.)



Source: IDATE for telecommunications/TV and PWC Global Entertainment and Media Outlook 2008 – 2012 for radio
Notes: Data calculations and interpretation are solely Ofcom's responsibility.

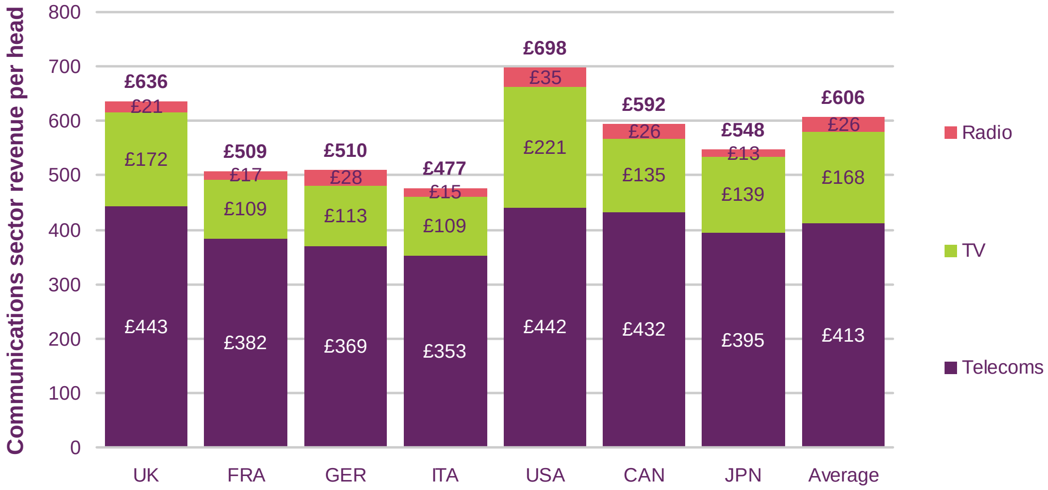
1.2.2.4 UK communications revenue per head totalled £636 in 2007 - second to the US (£698)

Accounting for differences in population size reveals that the UK generated £636 of communications industry revenue per head of population in 2007, just behind the US with £698; Canada followed with £592 and Japan with £548. The UK's ranking relative to other countries is explained both by the strength of its telecommunications and television industry revenues, and by the presence of a substantial element of public funding; but its radio industry generated per-capita revenue broadly in line with the average among the larger countries in this study (although below that of the US, Germany and Canada) (Figure 1.4).

Figure 1.4 Communications revenue, by sector, per head: 2007

Growth since 2002

	UK	FRA	GER	ITA	USA	CAN	JPN	Average
Total	25%	21%	10%	**30%**	19%	**29%**	7%	18%
Telecoms	**26%**	21%	9%	24%	16%	**29%**	4%	15%
TV	25%	21%	10%	**56%**	27%	**28%**	16%	25%
Radio	8%	7%	13%	**24%**	8%	**22%**	8%	10%



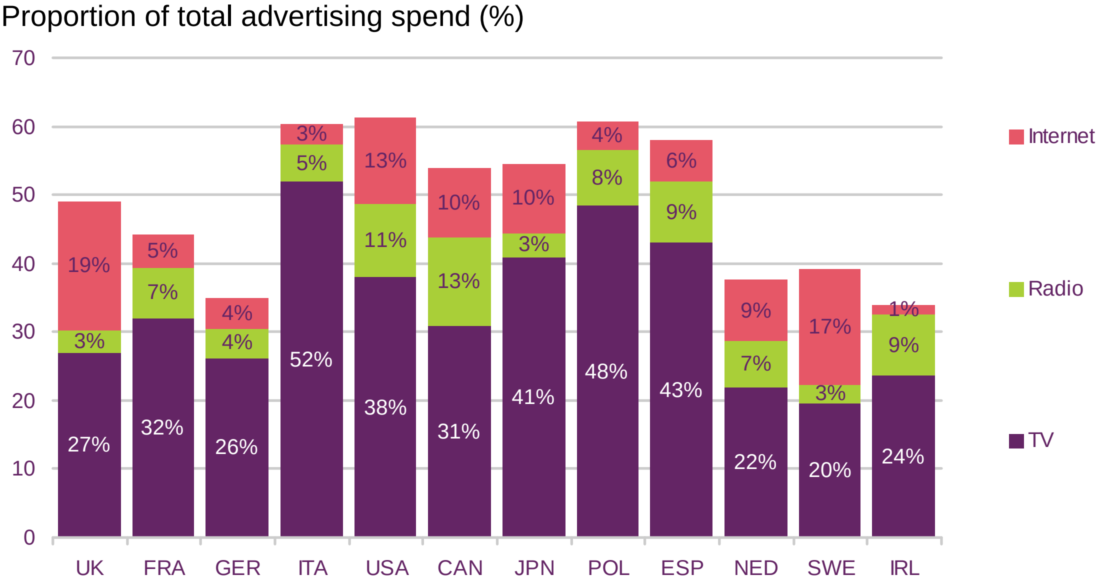
Source: Ofcom calculations based on Ofcom (UK), IDATE (telecommunication and TVs) with radio data taken from PWC Global Entertainment and Media Outlook 2008 - 2012
Notes: Data calculations and interpretation are solely Ofcom's responsibility. Ofcom has used an exchange rate of $2.001 to the pound, representing the OECD average for 2007.Growth rates in bold denote that it ranks first or second in that sector.

1.2.2.5 UK internet share of total advertising spend highest among comparator countries

Advertising forms an important funding stream in both the television and radio industries, although its importance to both media varies substantially across our comparator countries. In the UK, television and radio combined accounted for nearly one-third of all advertising expenditure in 2007, 90% of which was taken by television and the remainder by radio. But elsewhere, broadcasters commanded a higher share of total spend. In three instances – Italy, Poland and Spain - they accounted for a *majority* of all advertising spend in 2007. In the US, Canada and Japan, they received between 40% and 50% of total spend, while in the remaining countries (France, Germany, the Netherlands, Sweden and the Republic of Ireland) they accounted for between a fifth and two fifths of all spend.

Internet advertising expenditure also accounts for a growing proportion of total spend. In the UK, it commanded nearly one in every five pounds of advertising expenditure in 2007 – the highest proportion among the comparator countries. 17% of Swedish advertising spend was dedicated to the internet in the same year, followed by US advertisers with 13% (Figure 1.5).

Figure 1.5 Proportion of advertising spend allocated to TV, radio and internet



Source: World Advertising Trends 2008, published by World Advertising Research Center

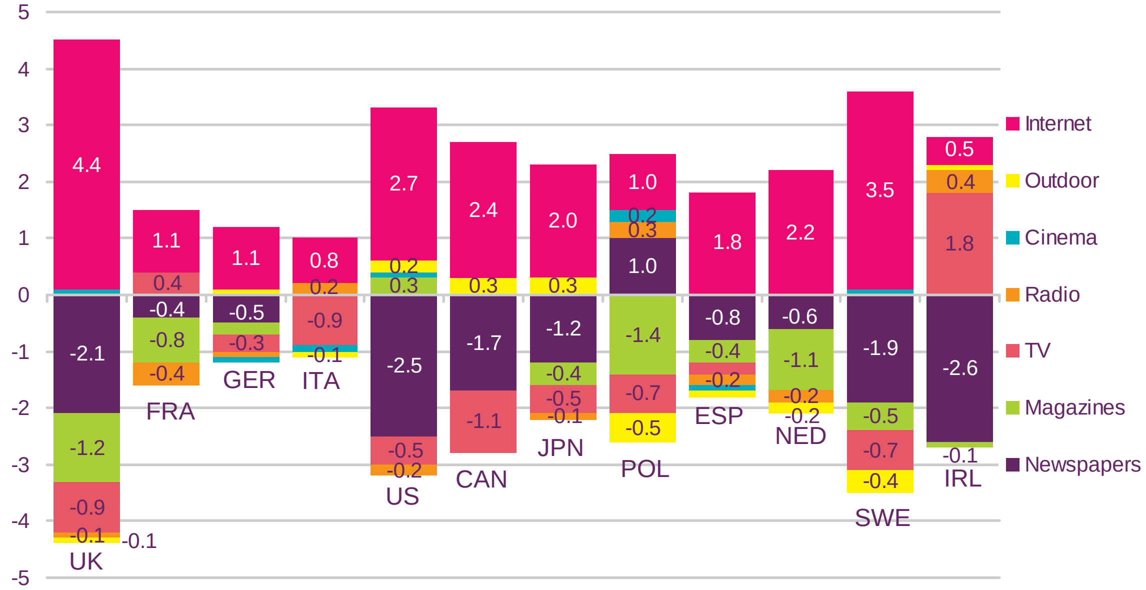
1.2.2.6 The internet's share of advertising spend grew fastest in the UK and Sweden during 2007

Since 2006, advertisers have allocated an increasing proportion of advertising spend to the internet. This reallocation took place fastest in the UK and Sweden, where the internet's share of total spend rose by 4.4 and 3.5 percentage points respectively. In the US, the internet's share of total spend rose by 2.7 percentage points, while it rose by around 2.4 and 2.2 percentage points in Canada and the Netherlands respectively. Among the remaining comparator countries, spend on internet advertising rose by 2 percentage points or less over the year.

Broadcasting's share of advertiser spend fell in most countries - with the exceptions of the Republic of Ireland and France, where TV's share rose by 1.8 and 0.4 percentage points respectively (Figure 1.6).

Figure 1.6 Change in market shares of advertising segments, 2006 - 2007

Change in share of total advertising spend (percentage points)



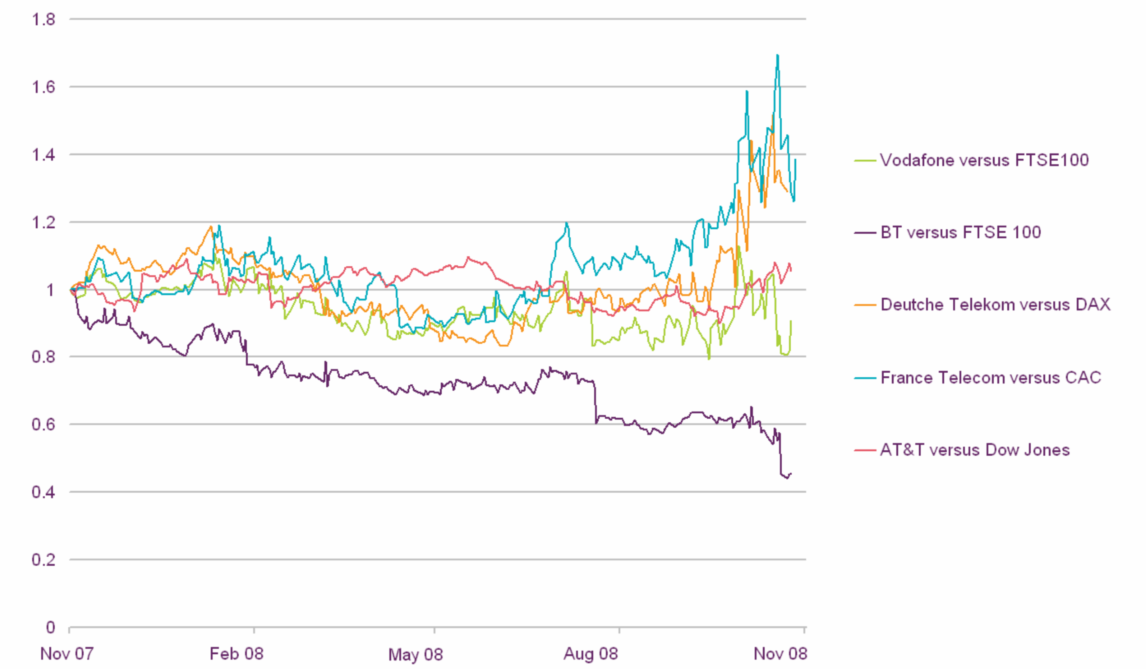
Source: World Advertising Trends 2008, published by World Advertising Research Center

1.2.2.7 The communications market in 2008

The reference period for this report runs to the end of 2007. During 2008, concerns arising from reduced liquidity in the world's financial markets, coupled with growing concerns about the possibility of a recession, have affected the value of communications sector equities.

But the impact has not been felt equally across all sectors. While generalisations are difficult to make, some but not all telecoms stocks outperformed their respective country indices (Figure 1.7).

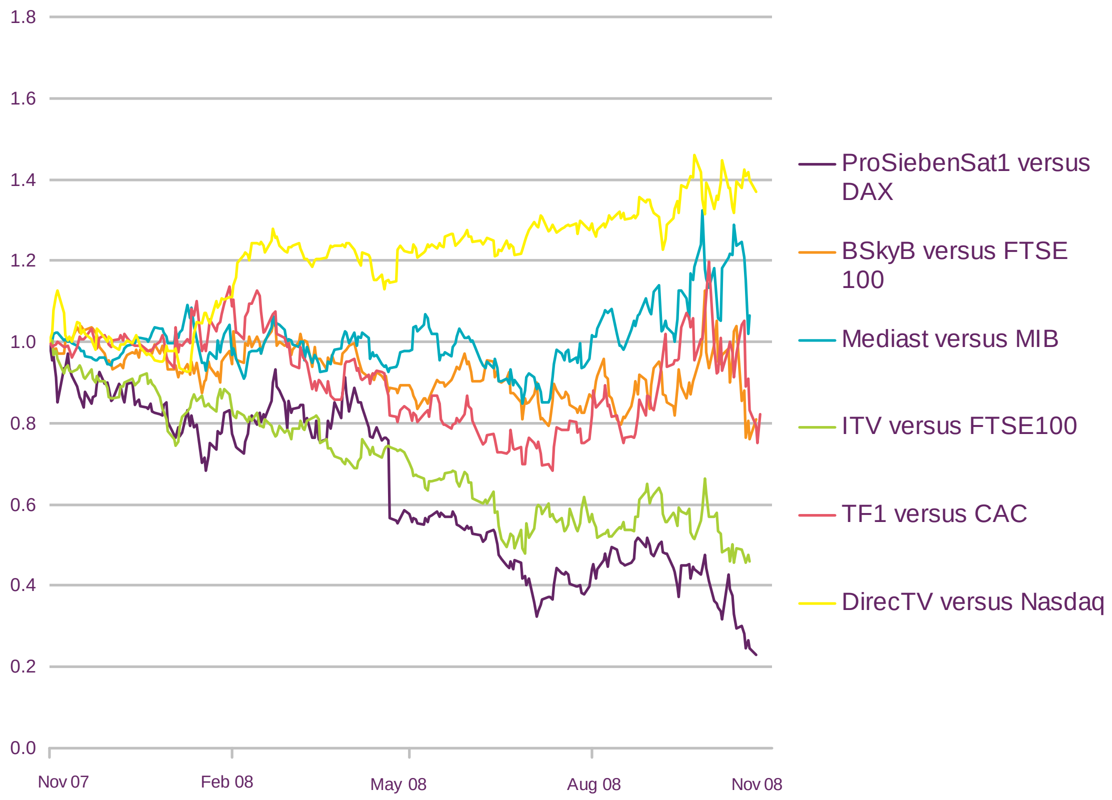
Figure 1.7 Telecommunications equity price trends versus market indices



Source: Ofcom calculations based on Yahoo! Finance data.

By contrast, some of those businesses which manage television channels have fared less well. In making comparisons between individual equities and market indices, it must be borne in mind that the equity itself may form part of the index and therefore, comparisons between the two should be made with caution and regarded as indicative only (Figure 1.8).

Figure 1.8 Media equity price trends versus market indices



Source: Ofcom calculations based on Yahoo! Finance data.

1.3 The UK communications consumer in context

1.3.1 Summary

This section compares the consumption characteristics of consumers across the main comparator nations in this report. Its main findings are that:

- By the end of 2007, TV households in the UK were the most likely to have connected a digital decoder to their main set, with 86%[1] of sets converted (up 9 percentage points since 2006). Homes in the US ranked second (70%, up 9 pp) with France third (66%, up 13 pp) – overtaking Japan, where conversions reached 65% of households in 2007.

- The UK ranked second for mobile phone connections, behind Italy (121 and 154 connections respectively per 100 population); Germany ranked third with 118 connections per 100. Take-up in Italy rose by 16pp and in Germany by 14pp, compared to 6ppin the UK. As a result, the gap between take-up in the UK and Germany narrowed from 11 connections per 100 in 2006 to just 3 in 2007.

- There were 60 residential/SME broadband connections in the UK for every 100 households in 2007; the UK ranked third behind Canada with 66 connections per 100 and the US with 61. Growth was highest in the US and Germany, with an additional 12 broadband connections per 100 households; the UK ranked second with France with 10 additional connections per 100.

- Ofcom research suggests that more people in the UK own and use a DVR (30%) than in any other of the large comparator countries; 21% of Italians make the same claim, as do 20% of people in the US and Canada. DVRs are least popular in Germany (11%) and Japan (13%).

- Our research also suggests that take-up of games consoles rose substantially in 2007, with significant increases in the UK, Germany, Italy and the US; this resulted in a majority of people for the first time having access to a console in the UK, Italy and the US.

- Women were more likely than men in the UK, France, Canada and Japan to claim that they used a fixed-line phone ‘weekly’. But there was no difference between men and women’s claims of ‘weekly use’ of mobiles except in Japan (where women were more likely to claim ‘weekly’ use). Men were more likely than women to say they used console/computer games on a weekly basis in the UK, Italy, the US, Canada and Japan.

1.3.2 Take-up of communications services

1.3.2.1 UK ranks second for mobile penetration and first for DTV take-up

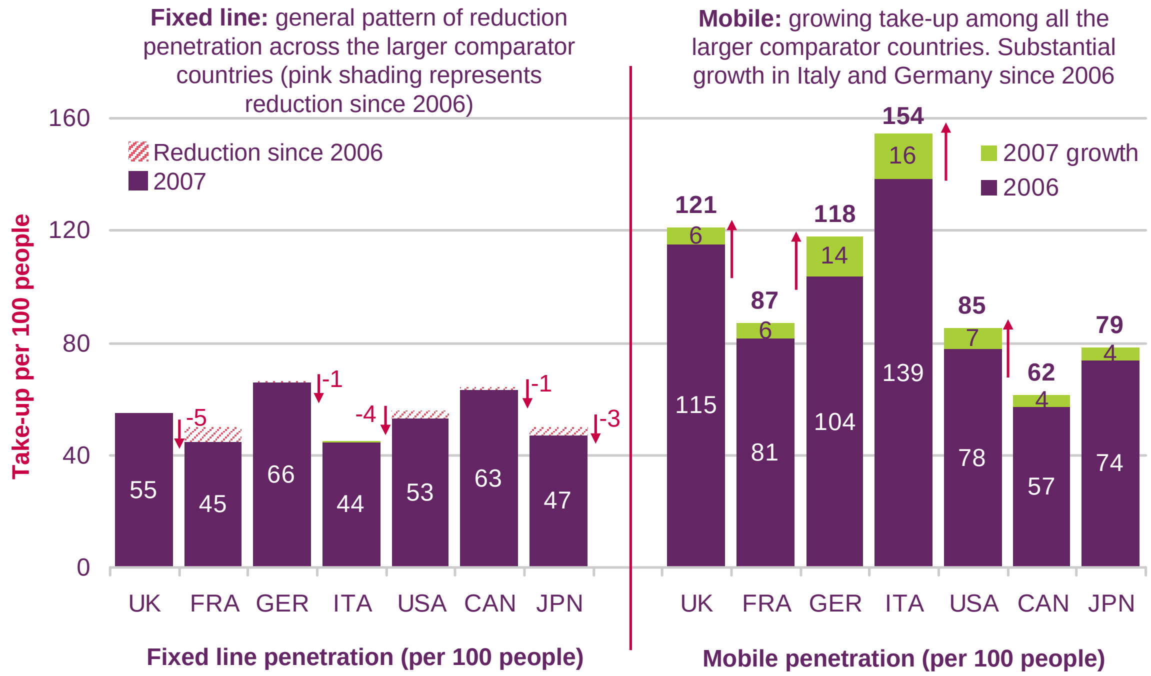
The UK is one of three countries in 2007 where, on average, each consumer had more than one active mobile connection. In Italy there were 154 live connections for every 100 people, 121 in the UK and 118 in Germany. This may be explained by the greater tendency of

[1] For the latest digital television take-up figures for the UK, please see http://www.ofcom.org.uk/research/tv/reports/dtv/

consumers in these countries to take pre-pay mobiles. In France, the US and Japan, there were fewer active connections – between eight and nine for every ten consumers – while Canadians were the least likely to own a mobile (six in ten). Take-up grew across all of the larger comparator countries in 2007, with the largest increases among consumers in Germany and Italy, and substantial rises in the UK, France and the US.

Take-up of fixed-line services told a different story in 2007. It fell in all of the larger comparator countries except the UK, where it remained largely static. Connections fell furthest in France (by 5 percentage points) and in the US and Japan (by 3 percentage points) (Figure 1.9).

Figure 1.9 Take-up of fixed and mobile connections, 2006 - 2007

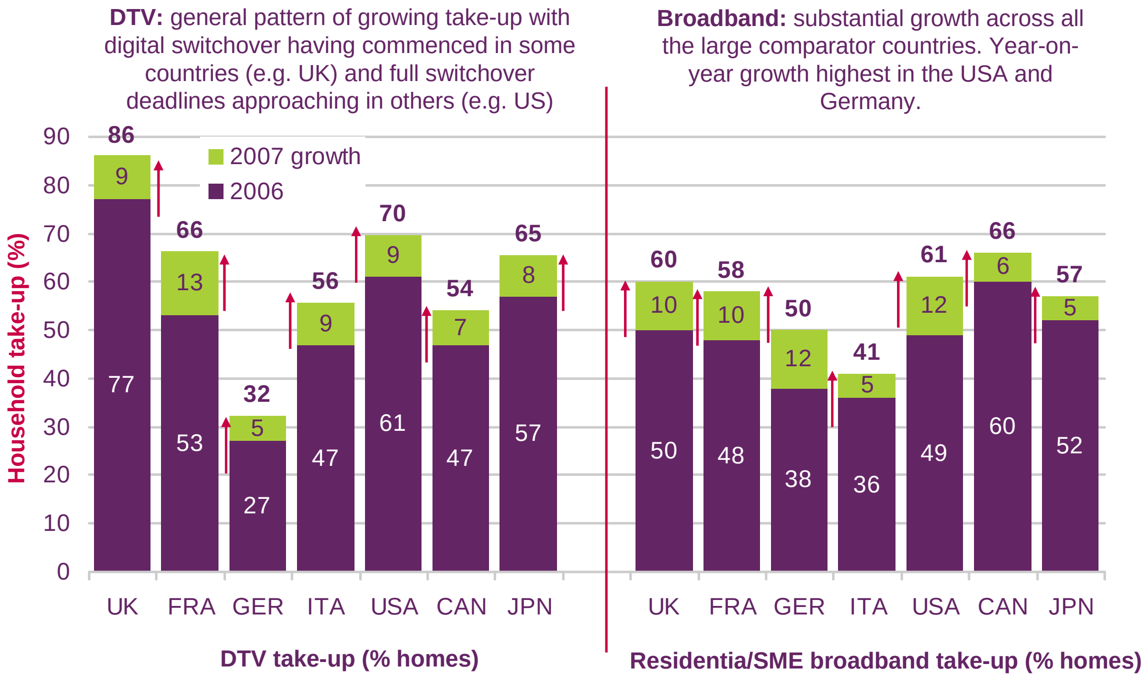


Source: Ofcom calculations based on IDATE data
Notes: Figures may not exactly sum to the totals, owing to rounding errors

Eighty-six per cent of UK households had digital television (DTV) at the end of 2007 – more than in any of the other large comparator countries. Households in the US ranked second, with seven in ten taking a digital television service, while over six in ten households in Japan and France had converted to digital by the end of 2007. Levels of DTV take-up are probably influenced by the different digital switchover (DSO) dates that policy-makers have set. The US will be the first large country in this study to switch fully to digital TV when its analogue terrestrial transmissions cease nationwide in February 2009. Take-up grew fastest in France, with an additional 13% of households migrating to a digital platform during 2007; 9% of households migrated in the UK, Italy and the US.

There was less difference in residential/SME broadband take-up among the larger comparator countries, ranging from 41% in Italy to 66% in the Canada. The US ranked second with take-up of 61%, followed by the UK with 60% and France with 58%. Growth in take-up was highest in the US and Germany, with a further 12 connections per 100 households during 2007; the UK and France ranked second on growth, with an additional 10 per 100 households (Figure 1.10).

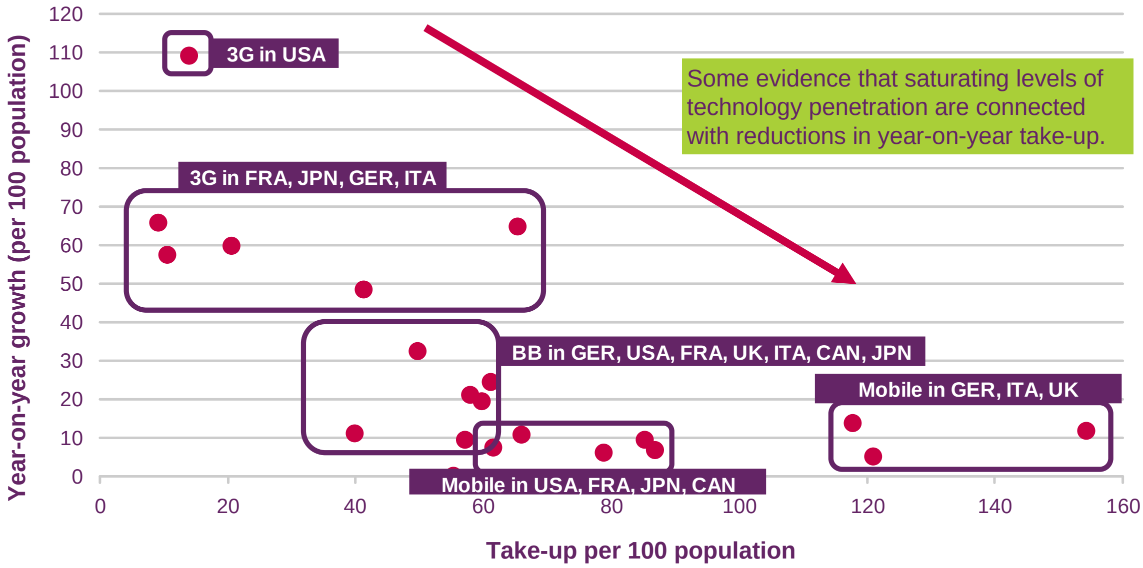
Figure 1.10 Take-up of DTV and broadband (includes residential take-up and SMEs), 2006 - 2007



Source: Ofcom calculations based on IDATE data
Note: The broadband penetration figure includes residential and connections to SMEs. The figures will therefore over-state residential take-up and should not be compared to DTV take-up nor to UK residential broadband penetration figures published elsewhere.

Patterns of technology adoption in 2007 show that as markets saturate, year-on-year rates of adoption tend to fall. Figure 1.11 illustrates that 3G handset take-up rose significantly over 2007 while overall levels of take-up remain comparatively low. By contrast, rates of broadband adoption were typically lower in 2007, while levels of adoption were higher. Finally mobile, as a well-established technology in all the larger countries in this study, benefited from high levels of take-up in 2007, but lower annual increases in take-up (Figure 1.11).

Figure 1.11 Technology take-up versus year-on-year increases in adoption



Source: Ofcom calculations based on IDATE data
Note: The broadband penetration figure includes residential and connections to SMEs. The figures will therefore overstate residential take-up and should not be compared to DTV take-up nor to UK residential broadband penetration figures.

1.3.2.2 People more likely to own and use a DVR in the UK than in the US, France, Germany, Italy, the US and Japan

Along with digital television and broadband, take-up of a range of additional digital devices is also high, and rising, among our larger comparator countries. According to our consumer research, DVD player ownership exceeded eight in ten individuals in the UK, France, Italy, the US and Canada. But take-up was lower in Germany and Japan, at 73% and 72% respectively. Year-on-year, DVD player take-up fell by 3 percentage points while it rose by 8 percentage points in Japan.

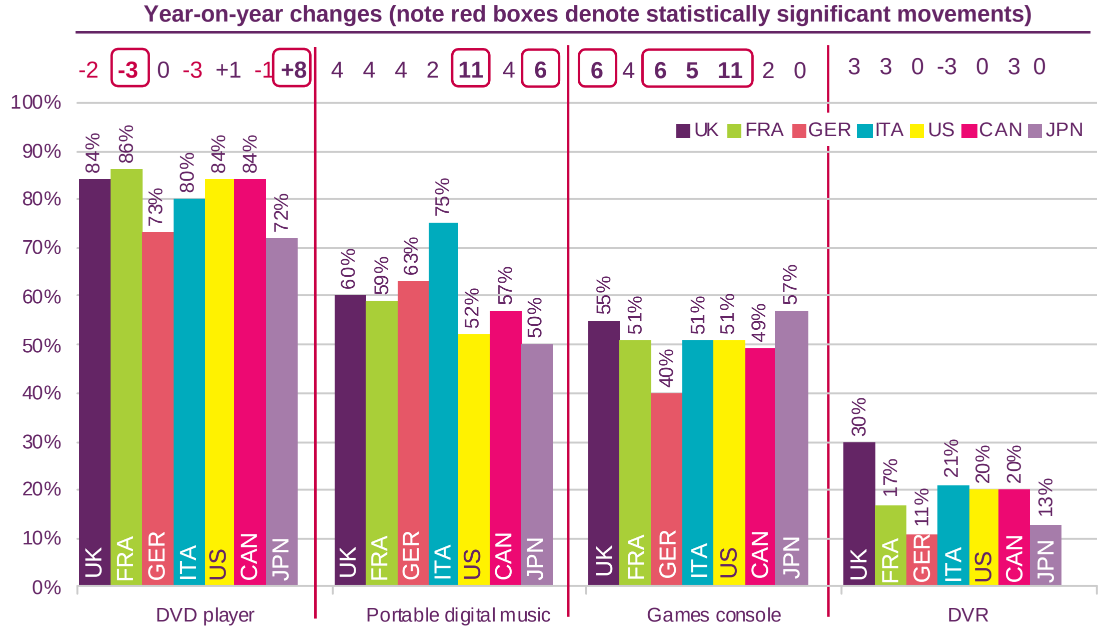
Portable music devices were most popular in Italy, with three quarters of individuals owning one, possibly explained by high levels of mobile take-up, since many handsets now include an integrated music player. A majority of individuals in all of the larger comparator countries claimed to own a portable music device. This represented a threshold moment for consumers in the US and Japan where, for the first time, the majority claimed to own and use a portable music device during 2007, following a rise in take-up over the year of 11 and 6 percentage points respectively.

Games consoles were owned by the majority of individuals in the UK, France, Italy, the US and Japan, where take-up ranged between 51 and 57%. For the first time in 2007, a majority of respondents claimed ownership of a games consoles in the UK, Italy and the UK thanks to increases in penetration of 6, 5 and 11 percentage points respectively.

Just under one-third of people with access to the internet in the UK claimed to own a DVR in 2007, higher than any of the other large comparator nations – possibly fuelled by the wide availability of these devices across digital television platforms (e.g. Sky+ on pay-satellite, V+ on cable and Freeview+ on DTT). Take-up stood at 21% in Italy, 20% in the US and Canada, and 17% in France; it was substantially lower in Japan (13%) and Germany (11%) (Figure 1.12).

Figure 1.12 Device ownership and use among internet users, 2006 - 2007

Proportion of individuals (%)



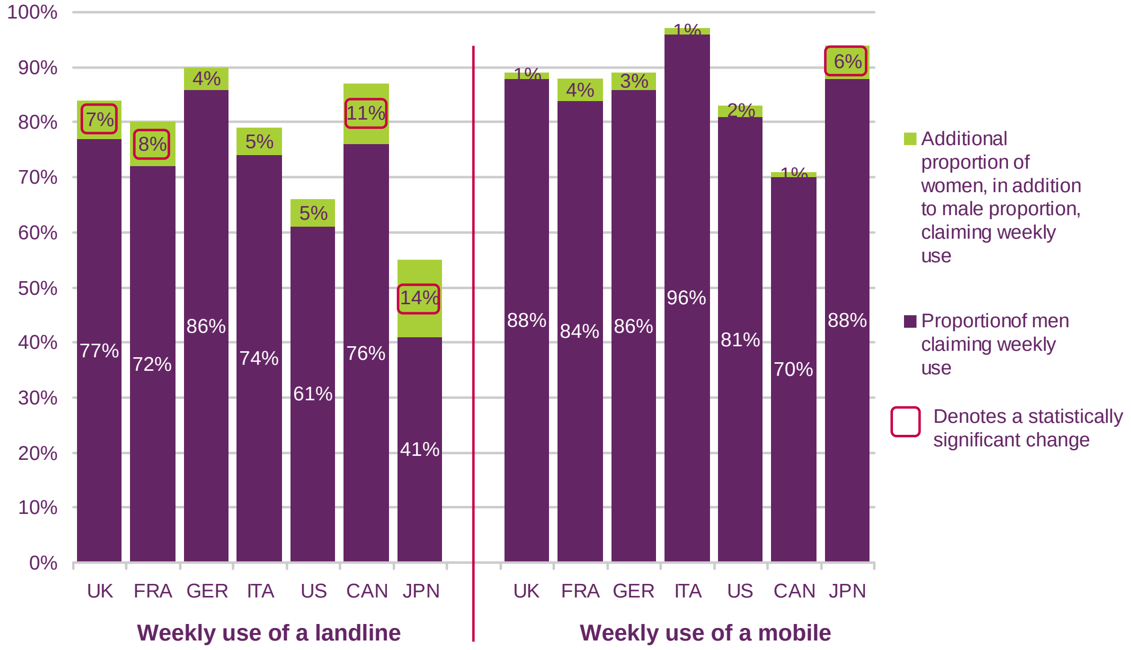
Source: Ofcom's Understanding International Communications Behaviour research, October 2008
Question: "Which of the following devices do you own and personally use? Select all that apply"
Base: All adults aged 18+ using the internet (UK=1001, France=1000, Germany=1002, Italy=1003, USA=1010. Canada = 1000, Japan = 1003).
Note: As the questions were answered online these results may not reflect the attitudes of a representative sample of the whole population.

1.3.2.3 Women more likely to use fixed lines on a weekly basis; men more likely to play console/PC games on a weekly basis

Our online consumer research highlights some statistically significant differences between men and women about which communications technologies they claim to use frequently. Women are more likely than men to claim weekly use of a fixed-line phone in the UK, France, Canada and Japan – but there is no significant difference between the sexes in mobile use, except in Japan where 94% of women used mobiles on a weekly basis compared to 88% of men (Figure 1.13).

Figure 1.13 Proportion of male and female internet users using fixed-line or mobile on a weekly basis

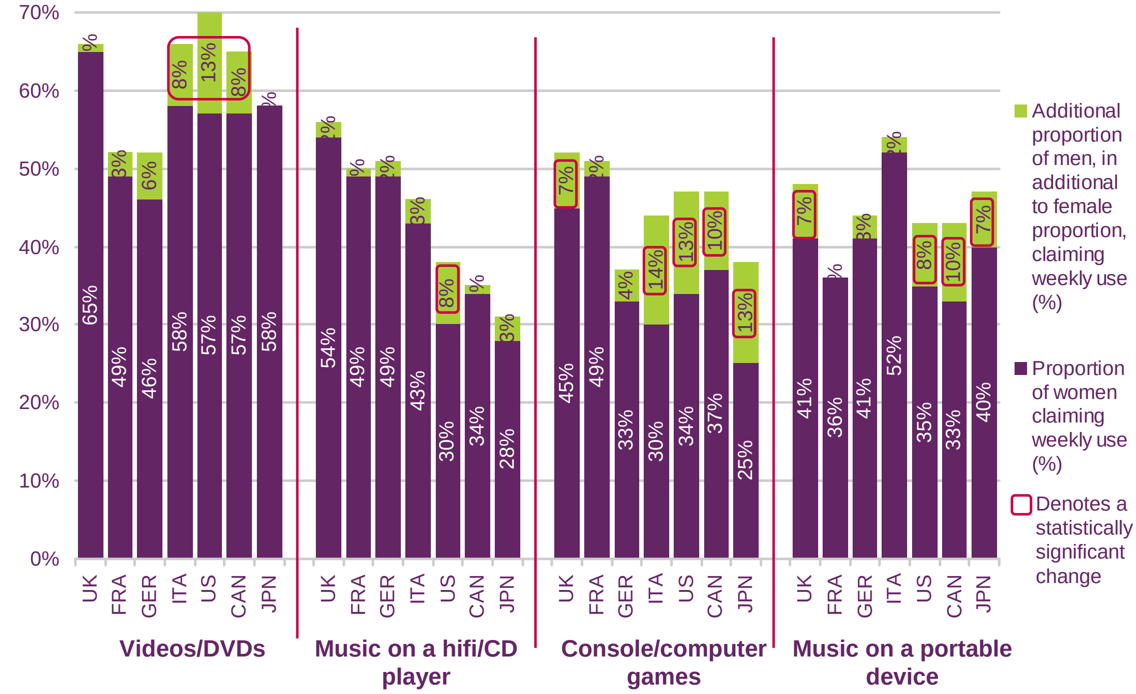
Proportion of individuals (%)



Source: Ofcom's Understanding International Communications Behaviour research, October 2008
Question: "Which of the following do you regularly do (at least once a week)? Select all that apply."
Base: All adults aged 18+ using the internet (UK=1001, France=1000, Germany=1002, Italy=1003, USA=1010. Canada = 1000, Japan = 1003).
Note: As the questions were answered online these results may not reflect the attitudes of a representative sample of the whole population.

There are other technologies which appear to appeal more to men. In Italy, the US and Canada, men were more likely than women to claim to watch DVDs/videos on a weekly basis. Men in the UK, Italy, the US, Canada and Japan were also more likely to claim they played computer/console games in 2007; portable music devices were more likely to be used weekly by men in the UK, the US, Canada and Japan (Figure 1.14).

Figure 1.14 Proportion of men and women using gaming and audio-visual devices on a weekly basis



Source: Ofcom's Understanding International Communications Behaviour research, October 2008
Question: "Which of the following do you regularly do (at least once a week)? Select all that apply."
Base: All adults aged 18+ using the internet (UK=1001, France=1000, Germany=1002, Italy=1003, USA=1010. Canada = 1000, Japan = 1003).
Note: As the questions were answered online these results may not reflect the attitudes of a representative sample of the whole population.

1.3.3 Consumers' spend on communications services

1.3.3.1 Consumer spend on telecommunications services could be relatively resistant to an economic downturn

According to research conducted by Execution Research in September 2008, spending on telecoms services could be relatively resistant to the economic downturn, with evidence that consumers regard spending on mobile phones, fixed-line phones and broadband internet as relatively non-discretionary.[2]

Execution's survey of 8,000 consumers in the UK, France, Germany and Spain found that overall, 56% of respondents said they were intending to spend a little or a lot less across 14 categories of discretionary expenditure in the next 12 months; 38% said they would spend the same and 6% more. Responses were very similar across the four countries, with consumers in France and the UK marginally more likely to cut discretionary spending than those in Germany and Spain.

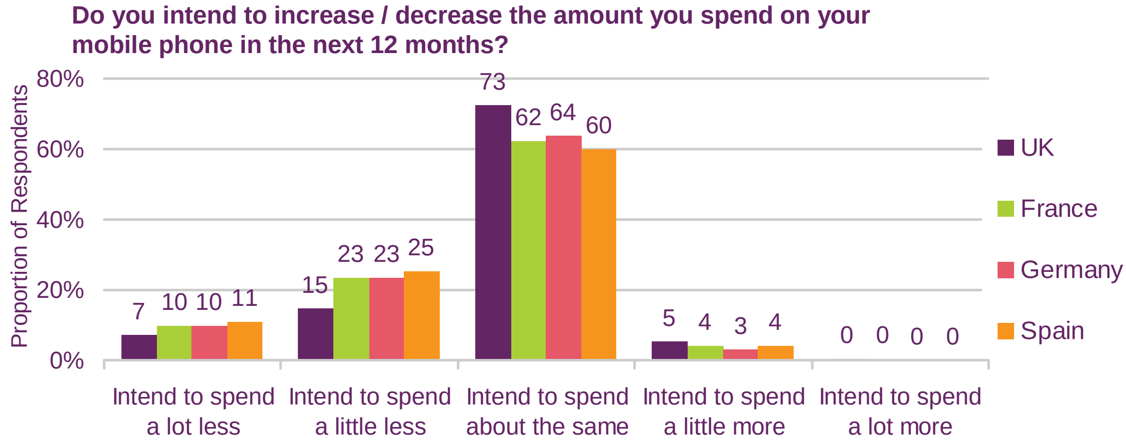
But only 31% of consumers across the four countries said they intended to spend less on their mobile phones. The UK's mobile market appears to be particularly resilient, with only 22% of consumers intending to reduce expenditure on mobile telephony (Figure 1.15).

[2] The analysis below is based on research conducted and published by Execution Research Ltd, in the report *Telecoms – Mobile is Defensive but not Immune,* 27 October 2008.

In part, this may be due to UK consumers believing they receive reasonable value for money. When asked to rate the value for money they believed they were getting from their mobile operator on a scale of 0 (very poor value for money) to 10 (excellent value for money), around 60% of consumers in the UK and Germany gave a score of 7 or higher, compared to around 50% of consumers in France and 20% of consumers in Spain.

But as consumers grow increasingly conscious of their spending during an economic downturn, some may seek better deals by going ‘SIM-only’ (i.e. keeping their existing handset at the end of a contract period, typically in return for a lower line rental). In the UK, 20% of mobile consumers said they were considering going SIM-only (43% of consumers were not, and 37% had never heard of SIM-only). In Germany, 31% of mobile consumers said they were considering a SIM-only tariff (Figure 1.15).

Figure 1.15 Consumers intentions on mobile telephony spending

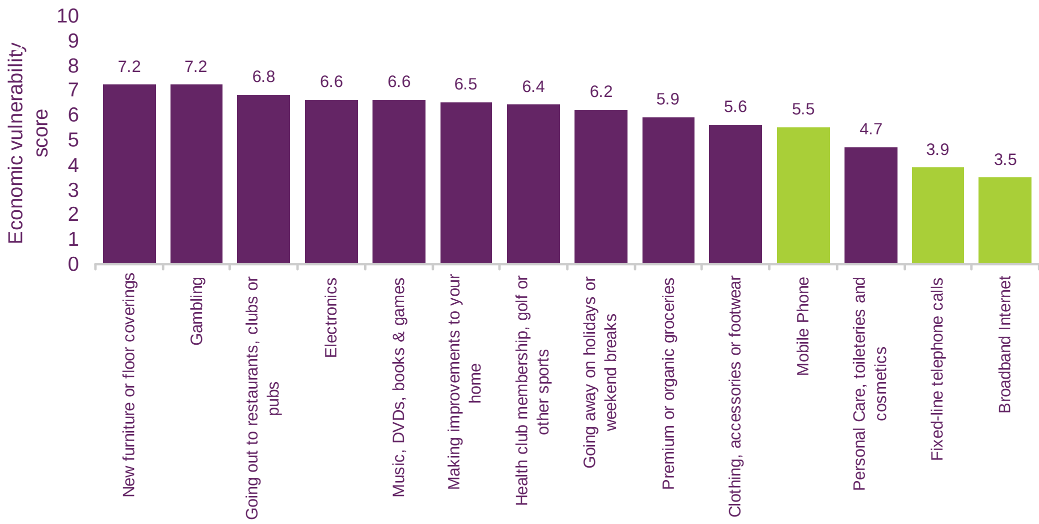


Source: Execution Primary Research

The research suggests that the consumer telecoms sector as a whole is likely to be relatively resilient to an economic downturn. Execution’s research of 14 types of ‘discretionary’ expenditure considered that mobile, fixed and broadband were three of the four categories least exposed to reduced spending in the face of an economic downturn (Figure 1.16).

The mobile sector was ranked as more vulnerable than fixed voice or broadband, and this could be due to consumers being more willing to cut spending on mobile data services. The research found that 16% of UK mobile users say that they are likely to spend either a lot, or a little, less on data services in the next 12 months (this is nearly a third of all consumers who actually use mobile data services). Consumers in France, Germany and Spain are even more likely to cut spending on data services (Figure 1.16).

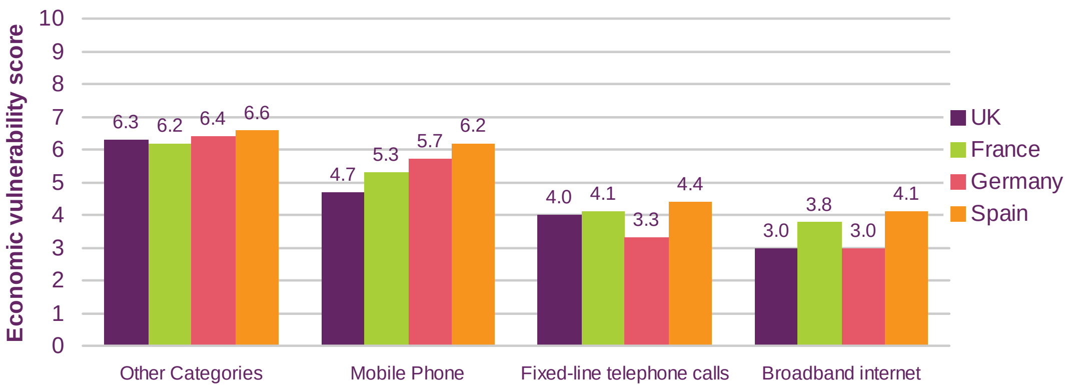
Figure 1.16 Overall economic vulnerability scores for items of discretionary expenditure



Source: Execution Primary Research
Note: Consumers were asked to provide a score to assess the likelihood that they would cut back on a particular area of expenditure where 0 = not at all likely to cut back and 10 = extremely likely to cut back.

Consumers in all four countries are less likely to cut back on spending on fixed-line voice and broadband services than on mobile services, with consumers in Germany least likely to reduce fixed-line voice spending and consumers in Germany and the UK least likely to cut back on broadband services (Figure 1.17).

Figure 1.17 Likelihood of cutting back on expenditure



Source: Execution Primary Research
Note: Consumers were asked to provide a score to assess the likelihood that they would cut back on a particular area of expenditure where 0 = not at all likely to cut back and 10 = extremely likely to cut back

1.4 The regulatory landscape

1.4.1 The relationship between market developments and the regulatory landscape

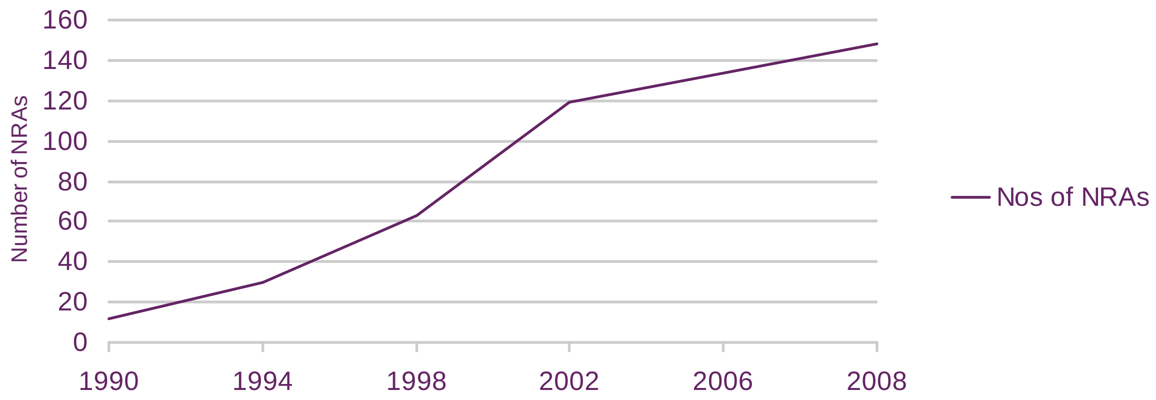
The regulatory environment can be an important influence on developments in communications markets, by introducing constraints on market players to achieve specific public policy goals in light of regulatory objectives. Equally, market developments and technology/consumer trends determine the evolution of the regulatory framework. For both reasons, this section provides some **regulatory context to the analysis of international communications markets** elsewhere in this report. It does not aim to be a comprehensive examination of regulatory frameworks across the comparator countries, but rather an overview of the main regulatory and policy developments over the past year.

1.4.1.1 Market liberalisation drives have prompted rapid growth in the number of regulatory authorities worldwide

In **telecommunications**, national regulatory authorities (NRAs) came hand in hand with the promotion of competition among suppliers, to ensure that all citizens continued to receive a basic set of services. NRAs were required to be independent from industry under the EU framework, and in many cases (but not all) they were also structurally independent from government. From just 12 in 1990, the number of NRAs had grown to 148 by mid-2008.

The organisation, structure, powers and governance of these NRAs vary widely. Some are also responsible for other network industries (such as post or energy) and a few have joint media and telecommunications responsibilities. In the main, their role is limited to setting obligations on service providers (such as the terms and conditions for access to the incumbent's network), but with no powers to investigate anti-competitive behaviour. But there is often strong cooperation between sector-specific regulators and the respective national competition authority. Ofcom, the UK regulator, is one of the few communications regulators with competition powers.

Figure 1.18 Growth of telecommunications NRAs: 1990 - 2008

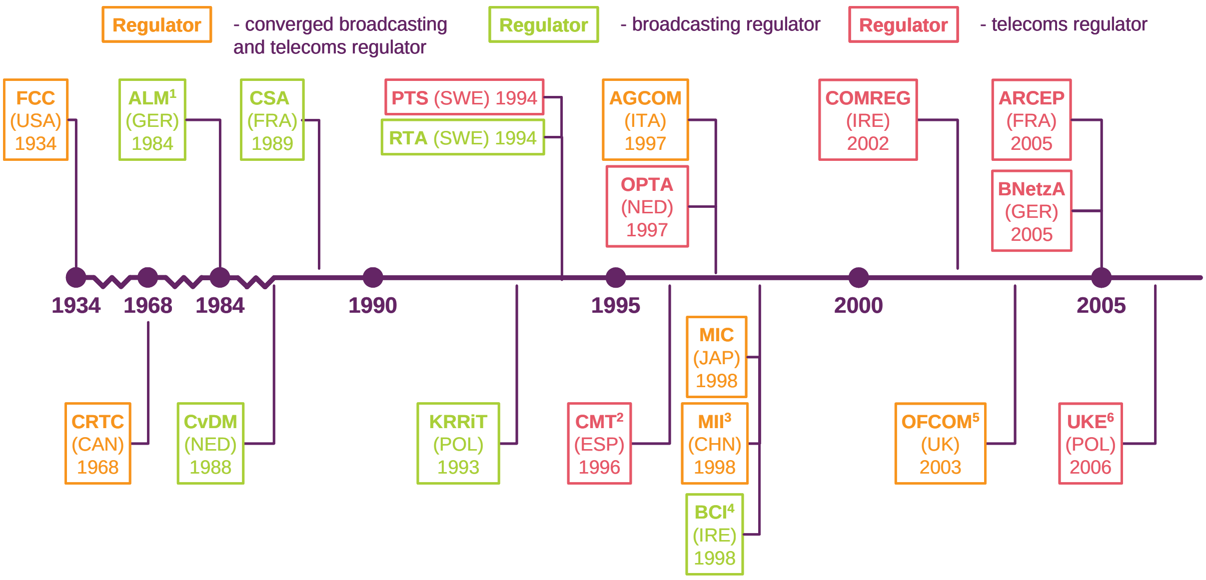


Source: ITU-D GSR Reports

In broadcasting, the creation of regulatory authorities has had less to do with promoting competition and more to do with the recognition of the fundamental democratic role played by the media in society and the need to ensure quality and cultural diversity under conditions of spectrum scarcity. In the US, Canada and France, there is a single authority responsible for the regulation of both commercial and public service broadcasting; in other countries (e.g. Germany), there are separate supervisory bodies for public service broadcasters. Equally, while some matters of broadcasting policy require nationwide regulation, in some countries, (such as Spain, Germany and the US) regional and local authorities have some media regulation responsibilities.

Figure 1.19 shows the foundation of the communications sectors' NRAs for the countries included in this report.

Figure 1.19 National regulatory authorities: timeline



Source: Ofcom
Notes: (1) In Germany, broadcasting is regulated at the state (Länder) level, and coordinated at the national level through the Association of State Media Authorities (ALM); (2) In Spain the Ministry of Industry, Tourism and Commerce regulates broadcasting with three regional authorities in Catalunya, Navarra and Andalusia; (3) In China broadcasting is regulated through a subsidiary organisation called SARFT, which is accountable to and supervised by the MII; (4) In Ireland new legislation is pending adoption (expected before the end of 2008) that will re-name the BCI to the Broadcasting Authority of Ireland, and expand some of its competences; (5) Ofcom inherited the duties that had previously been the responsibility of five regulatory bodies: the Broadcasting Standards Commission, the Independent Television Commission, the Office of Telecommunications (Oftel), the Radio Authority and the Radiocommunications Agency; (6) In Poland the UKE replaced the Office of Telecommunications and Post Regulation, which was established in 2002

1.4.1.2 Converging markets led to converging regulatory authorities in some countries

Converging technologies allow the same content and services to be delivered over a range of digital distribution networks and devices, and IP-based delivery has revolutionised how consumers receive and make use of text, audio and audio-visual content. For regulators, this has required an increasingly joined-up approach across the communications sector.

Converged regulators that span both networks and content now exist in many of our comparator countries:

- in the US the Federal Communications Commission (FCC) has been responsible for the communications sector since its inception in 1934;
- Italy was the first European country to set up a converged regulator in 1997;
- in the UK, Ofcom replaced Oftel and four other previously distinct national regulators with responsibilities spanning telecoms, broadcasting and spectrum, in 2003; and

- several other countries, including Finland, Australia, Slovenia, Canada, Israel, Japan and Switzerland, and more recently Malaysia and South Korea, also have converged telecommunications and broadcasting regulators.

But ‘regulatory convergence’ has not always led to full institutional convergence. There are still many instances of separate regulators for broadcast and telecommunications (e.g. France, Ireland, Poland, Sweden and the Netherlands) - but the challenges of convergence have been met through increased cooperation between these separate authorities. In certain countries, including the UK, Egypt, Germany, Hungary, Iceland, Sweden, Brazil and Turkey, NRAs also have some spectrum responsibilities.

The fast-moving pace of new media markets has strengthened the need to develop flexible tools, and to involve both consumers and market players in the process of regulatory design. This has led to the development of new self- and co-regulatory instruments. The Australian converged regulator (ACMA), for example, has for some years operated a co-regulatory system that spans content and internet services. The German and UK regulators are also very supportive of the benefits of self- and co-regulatory approaches, and the UK regulator (Ofcom) must consider self-regulatory approaches when reviewing its functions.

1.4.1.3 Global communication services have encouraged the development of regional regulatory networks

Regulators are increasingly dealing with companies outside their jurisdiction, or face challenges which are global in nature. Both of these trends require greater cooperation between regulators. This has triggered the creation of regional regulatory networks to deal more effectively with cross-border issues, to share experiences and to develop common regulatory guidelines and principles. Examples of such regional groups include the:

- European Regulators Group (ERG);
- Radio Spectrum Policy Group (RSPG);
- European Platform of Regulatory Authorities (EPRA);
- Mediterranean regulators (MEDA);
- Arab Telecommunications Regulators Network (AREGNET);
- Latin America Regulatory Forum (REGULATEL);
- West African Telecommunications Assembly (WATRA);
- ASEAN Telecommunications Regulators Council (ATRC);
- Telecommunications Regulators Association of South Africa (TRASA); and the
- East Caribbean Telecommunications Authority (ECTEL).

These regional groups meet to discuss international cooperation and to debate the most important regulatory challenges. For example, ERG held separate bi-lateral meetings with MEDA and REGULATEL in 2007, while in 2007, ERG and EPRA held a meeting to discuss matters of common interest. For the last eight years, the International Telecommunication Union has organised the Global Symposium of Regulators (GSR), gathering NRA representatives from approximately 100 countries.

1.4.1.4 …and international bodies play a key role in standardisation and policy development

In addition to NRAs and regional groups, several international institutions influence regulatory regimes. Their role becomes increasingly important as the development of common approaches grows around technology standards, software protocols, spectrum use, international mobile roaming, intellectual property and content standards:

- **The International Telecommunication Union** - the ITU-T (Telecommunication) sector studies the principles for international telecommunications services and related economic and policy issues. The ITU-D (Development) sector provides substantial support to NRAs from developing countries, through documentation, case studies, a web-based online information system (G-REX) and a hotline facility.

- **The Organisation for Economic Cooperation and Development** - the OECD Information and Computer and Communications Policy (ICCP) Committee collects and publishes relevant data and contributes to the development of the regulatory and economic telecoms policies of its member countries.

- **The World Trade Organisation** - The Fourth Protocol of the General Agreement on Trade in Services (GATS) sets out the requirements for opening up national telecoms markets to competition. The Basic Telecommunications Agreement sets out a number of liberalisation and regulatory principles which member states that have signed up to it must meet.

1.4.2 In Europe there is a common regulatory framework for telecommunications operators

The European Union (EU) has established a common regulatory framework for electronic communications networks and services. This applies across the 27 EU Member States and extends to Norway, Iceland and Liechtenstein, under agreement with the European Economic Area's EFTA Surveillance Authority.

The EU regulatory regime has its roots in European competition law and is the result of a long process, the first stage of which culminated in the full liberalisation of the European telecoms sector in 1996. This regulatory framework was reviewed and due to the increased likelihood of convergence (amongst other developments) this review led to an amended regulatory framework based on competition law principles (largely adopted in 2002) and often referred to as the 'Regulatory Framework'. It establishes the overall framework and covers issues of access, authorisation, universal service and data protection.

The Framework therefore aligns sector-specific regulation with the principles of competition law for assessing and regulating market dominance. It also sought to make regulation technology-neutral (covering all transmission platforms including circuit-switched and IP networks and fixed and mobile networks). The Framework aims to keep regulation to a minimum, and to be sufficiently flexible so as to allow regulation to develop (and be removed, as appropriate) as market conditions change.

In November 2007 the Commission published proposals for review which were in fact quite far-reaching, including:

- stronger technology and service neutrality principles and secondary trading for spectrum;

- a veto on remedies for market power for the European Commission;

- the introduction of functional separation as a remedy for market power;
- reinforced provisions on NRA independence;
- enhanced consumer protection through increased information and tariff transparency requirements; and
- the creation of a new European regulatory agency.

At the time of writing, the European Parliament has adopted its First Reading report on the package and the French presidency is working towards reaching political agreement by the end of the year. The consumer provisions have been broadly welcomed and supported, but there has been little appetite in both institutions for the veto or the Agency, as originally designed by the Commission, favouring instead an enhanced ERG and supporting secretariat. Regulatory independence has proved surprisingly controversial in Council. Some have raised concerns regarding the use of functional separation and the need to balance technology and service neutrality with public interest objectives, particularly in the area of spectrum management. If negotiations go to plan, the package will be finalised before the dissolution of the European Parliament in the summer 2009, and transposed into the national law of Member States by mid-2010.

1.4.3 Regulatory developments in telecommunications markets

The following sections provide an overview of regulatory developments in 2008 in key areas of the communications sector.

1.4.3.1 Next generation networks and access - the role of the market, state and regulation

Telecommunications operators worldwide are considering the roll out of next-generation core networks (NGNs), to replace multiple legacy core networks with a single IP-based network for the provision of all services. In addition, debates on the **regulatory approach to next generation access** (NGA)[3] have been high on the agenda in many countries over the past year.[4] Two issues are at the centre of the regulatory debate:

<u>1. The role of the market and of the state</u>

Japan and Korea have developed national strategies for NGA roll-out, involving some public support. Japan has given incentives to the incumbent operator (NTT) to invest in fibre through asymmetric regulation (with regulatory measures differing between copper-based and fibre deployments). This policy has involved the encouragement of infrastructure-based competition.

In Europe and the US, there has been a different strategy, with growth in NGA funded, or partly funded, by regional and local authorities. This accounts for Sweden’s strong European lead in customers connected using NGA. These schemes have sometimes proved controversial. The European Commission has scrutinised them on grounds of state aid, and they have faced legal challenge in the US. Deployments based on public intervention are generally based on arguments around market failure and digital inclusion. Also, best practice

[3] NGA can be understood as new physical infrastructure relying on new access network technologies enabling a significant improvement in the broadband experience for end-users, through combinations of: higher bandwidths; more equal upstream and downstream bandwidths; and more reliable, higher quality services.
[4] For a detailed overview of recent NGA market developments worldwide see section 5.1.5 below

for publicly-funded NGA generally involves the use of open access platforms, allowing multiple service providers to operate on the publicly-owned network.

2. The role of regulation in encouraging investment in NGA while promoting competition between providers

Regulatory policy is coming under close scrutiny as policy-makers seek to encourage NGA investment. Regulation should balance competition against the industry imperative of an appropriate expectation of return on investment.

The US authorities have adopted a policy of ‘regulatory forbearance’ (meaning that once incumbent operators have upgraded their access network to NGA, they are no longer obliged to offer access to it to other operators), and other countries are considering similar policies. In the EU regulators are looking at risk premiums for NGA investments when setting regulated prices, but are not considering forbearance, which would not in principle be permitted under EU law.

An issue that remains unresolved is what form of **regulated access to NGA** should be imposed. Options include various forms of passive and active access. Passive access involves access to physical network elements, such as ducts and fibre. Active access measures rely instead on granting access to the electronic equipment that is connected to the physical infrastructure.

1.4.3.2 Functional separation - creating a level playing field in access to infrastructure

Fixed-line network regulation aims to promote fair competition between providers by ensuring that alternative operators can get access to the incumbent’s network. Many countries require the incumbent telecom operator to supply wholesale services to rival operators on a non-discriminatory basis.

’Functional separation’ is a remedy that can complement other access measures by placing the monopoly elements in a separate business unit. This allows any wholesale products and associated services to be offered both to the incumbent's own retail businesses and to those of rivals on equal terms. Functional separation began in the UK market in 2005, when Ofcom accepted undertakings under national competition law from BT to place its access and backhaul businesses in a separate business unit (Openreach). An Equality of Access Board with its own secretariat within BT monitors and reports on BT’s compliance.

Functional separation is not unique to the UK and is a remedy either implemented or under consideration in other European countries. These include Sweden, Italy, Poland and Greece, although these mechanisms are not identical to that of the UK.

In the context of the Review of the European Regulatory Framework currently under way, the European Commission sought to ensure that functional separation was an available remedy under the regulatory toolkit. This has generated considerable debate both in the European Parliament and in the Council. There is wide agreement that functional separation should only be used as a remedy after a careful assessment of the evidence on a case-by-case basis, with some arguing that this should be considered an exceptional remedy.

Functional separation has also attracted support outside Europe. In March 2008, a three-way operational separation of Telecom New Zealand was approved by the New Zealand Government with legally enforceable undertakings. In Australia, the Government Minister for Communications is considering whether functional or structural separation should be a condition for the incumbent operator to build a national broadband network.

1.4.3.3 Regulating mobile termination rates to protect consumers

The level at which mobile termination rates (MTRs)[5] are capped has always been a major issue for the industry and has a significant impact on the pricing of calls to mobiles for consumers. The divergent and, in some cases, high levels of MTRs across Europe prompted the European Commission to make proposals in June 2008 that would have the effect of substantially lowering MTRs across Europe by changing the way in which regulators calculate the levels of both mobile and fixed termination (making them symmetric).

Outside the EU, a number of jurisdictions have interconnection regimes that are not based on termination charges. Instead, a pricing scheme for the two-way interconnection of two or more networks operates under a regime in which the reciprocal call termination charge is zero and each network operator agrees to terminate calls from the other network at no charge. This form of interconnection pricing is sometimes known as bill and keep (B&K) and has been adopted in the US. Other countries and territories such as Canada and Hong Kong operate variants of this model, which is attracting the attention of European regulators, both in connection with the future regulation of mobile, and in considering interconnection pricing models in other contexts such as NGN.

1.4.3.4 Roaming regulation aims to deliver consumer benefits

In 2007 a new Regulation, aiming to ensure that consumers travelling in the EU were not charged excessive prices to make or receive calls, entered into force. In particular, the regulation required operators to offer all consumers a roaming voice call tariff (the 'Eurotariff'). This had a significant impact on prices, which fell by up to 60% between June and September 2007. In September 2008, and drawing on recommendations from the ERG, the Commission proposed to:

- extend the current regulation of wholesale and retail voice roaming prices until 2013 (instead of 2010), with a continued decrease in the maximum price;
- introduce similar regulation of SMS wholesale and retail prices;
- introduce a maximum wholesale price for packet data roaming services, set at a 'safeguard' level to eliminate excessive prices at the fringes; and
- require operators to provide consumer information on SMS and packet data roaming prices, and enable consumers of packet data services to control the amount they spend by setting an upper limit.

The Council and European Parliament will discuss the Commission's proposals in the autumn of 2008. If adopted, the Commission proposes that they enter into force in July 2009.

1.4.3.5 USO - the debate moves from fixed to mobile and broadband

'Universal service' is the principle that a defined minimum set of communications services (originally postal and telephony services, and progressively other services such as internet access) should be available to all end-users at an affordable price, regardless of their geographic location.

[5] Charges levied by operators for the service of terminating a call on its network.

In Europe, all 27 Member States (except Germany and Luxembourg) have introduced universal service obligations. In accordance with European law, these are at present limited to:

- the provision of voice telephony and associated services such as public payphones or directory enquiries; and
- functional (narrowband) internet access, including access for disabled users.

In September 2008 the European Commission initiated a review of the scope of universal service, the main focus of which is whether (and if so under what conditions) it should be extended to cover broadband and mobile services.

In the US there is a universal service fund that covers the provision of basic telephone services in high-cost and rural areas, as well as for discount telephone services and funding for schools, libraries, and rural health care providers. As in Europe, there is also a wider debate about the creation of a fund to stimulate greater access to affordable broadband services.

1.4.4 Developments in content regulation

1.4.4.1 AVMS: more flexibility for broadcasters in an increasingly competitive market

In 2008, European governments and content regulators worked on the transposition of the recently adopted Audiovisual Media Services Directive (AVMS), which extends broadcasting regulation to cover video-on-demand services, into national law. The deadline to do so is December 2009. At present, all EU countries are either in the process of consultation or drafting legislation. In some cases, such as France and Ireland, legislation is currently before Parliament and will also address the reform of public service broadcasting.

The Netherlands, the UK, Poland, Italy and Sweden are currently preparing draft legislation. Generally, it seems that the great majority of member states will opt to allocate responsibility for the regulation of VOD services to the existing content regulators, with the possible exception of the UK, where co-regulatory solutions may be considered preferable.

It also appears that most countries will embrace the opportunity to liberalise some of the current restrictions on television advertising, including the prohibition on product placement. These changes will provide greater commercial flexibility for broadcasters in an increasingly competitive environment.

1.4.4.2 New media markets – challenging the role of PSB and its funding

In Europe, as well as in other countries such as Japan and Canada, broadcasting systems have been characterised by the existence of *a* dual public and commercial broadcasting model, combined with strict regulation of content standards*.* In the US, by contrast*,* commercial broadcasters have long dominated the market, and regulation of content has been limited. In China, the great bulk of Chinese television content is produced and distributed through state-owned media outlets, and controlled by the regulator (SARFT).

A major focus of policy debate during 2008 has been the need for public service broadcasting to reconsider its role and funding sources in a new media environment. In January 2008 the French government announced proposals to ban advertising spots on public television channels between 8pm and 6am from January 2009, with a total ban in place in 2011. Compensation for revenue loss will be through the introduction of a levy on commercial broadcasters as well as other telecommunications operators (see text box in section 4.2.4.3).

In the UK, Ofcom is also conducting a second major review in this area, with a focus on how to maintain and strengthen delivery of public service content in a digital era. Ofcom published a consultation document in September 2008, setting out three possible future models for consideration, with a view to presenting recommendations to Government in early 2009.

Where public service broadcasters receive public funds, they must comply with EU rules on state aid. This requirement has triggered some complaints about state aid to the European Commission and, as a consequence, regulatory reforms in a number of EU countries, including Germany, the Netherlands, Denmark and Ireland. In Germany, for example, a new draft Interstate Broadcasting Treaty envisages that the internal councils of the public service broadcasters (ARD and ZDF) will conduct or commission from experts an assessment of the market impact of their new services.

1.4.4.3 Piracy - contrasting approaches in the UK, the US and France

In most countries, the creation and distribution of online content and the associated regulatory challenges are at the forefront of debates on content regulation. A major challenge is the fight against piracy. During 2008, the European Commission consulted on this issue, and also explored digital rights management and the possible need for a multi-territorial licensing approach in the online environment.

In parallel, a number of national legislative and non-legislative initiatives have focused on piracy through enhanced cooperation between content and network providers, legal offers, educational initiatives and better cooperation between ISPs in blocking pirated content.

- In **France**, draft legislation, acting against illegal file sharing and downloading and promoting the development of legal online offers for music, audiovisual, and cinematographic works, was presented to the Government in summer 2008 and is expected to be examined in the autumn. The law envisages the establishment of a public body empowered to take action at escalating levels against copyright infringers with the power to terminate accounts in cases of repeated violations.

- In the **UK**, the creative industries and internet service providers have signed a Memorandum of Understanding (MoU) with the aim of working together to tackle peer-to-peer copyright infringement. Some of the activities being explored include raising consumer awareness, encouraging the consumption of ‘legitimate’ offers, and analysing other potential remedies including legislative options and technical measures. Other EU countries including Sweden and Finland have expressed interest in this approach.

- In the **US**, existing copyright and privacy regimes have informed proposals for action. In particular, the impact of behavioural advertising[6] was top of a substantial list of content-related issues being addressed by Congress and regulators in the US this year.

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[6] Behavioural advertising describes the use of automated systems to:
- profile individuals, by tracking and analyzing their online behaviour – the sites they visit and the web searches they make; and
- deliver targeted advertising which reflects the preferences and interests expressed through that behaviour

1.4.4.4 Protecting minors – attention turns to online content providers

A common focus for regulators across the world is how to protect users from harmful content online, given the inherently global nature of the internet. Tools under consideration include age verification techniques, rating and classification tools, and awareness-raising campaigns.

In Sweden and the UK, there are ongoing efforts to promote awareness of internet safety issues and to complement regulation with media literacy initiatives (see box below).

Some countries have introduced legislation to regulate some of the material available on the Internet (particularly if harmful to minors). Often the regulator (e.g. in Korea) or a co-regulator (e.g., Germany and Australia) deals with the monitoring and enforcement of the rules. Japan is exploring whether ISPs should be answerable for breaches of minimum regulations to guard against illegal and harmful content. In China, new regulations, jointly issued by SARFT and the Ministry of Information Industry, indicate that only state-owned or affiliated companies may broadcast online programmes and that licences will include conditions about the potential harmful and offensive nature of the content.

Media literacy is emerging as a global theme in communications regulation

In the last few years, media literacy[7] has climbed the agendas of a range of stakeholders and regulators worldwide. Statutory obligations to promote media literacy are rare (Ofcom is one of the few authorities with a duty to do so). But there are now other countries where it has been introduced (Ireland) or is being discussed (Israel, Belgium). Other initiatives (with different emphases) are taking place around the world:

- in New Zealand the Government has as an objective to ensure a 'media-literate citizenry' and has set out to incorporate media teaching into its school curriculum;
- in the US, the American Centre for Children and Media aims to sustain a vibrant children's media industry by developing, implementing and promoting policies and practices that respect young people's wellbeing;
- in Canada, the Association for Media Literacy provides a network for media literacy teachers throughout the world, and publishes curriculum anthologies and other support material in several languages for media teachers;
- In the UK, Ofcom recently published its latest wave of Media Literacy Audits. These include research into the skills and behaviours of UK adults, UK children, and UK adults from ethnic minority groups.[8]
- The UN's Alliance of Civilizations has a media literacy clearing house that sits alongside its core work.

As initiatives develop and more resources are employed in this area across a range of territories, there are increasing efforts to link the different interpretations of media literacy from around the world. In December 2007 the European Commission called for a joint European approach, while in May 2008 Australia, Canada, Ireland, New Zealand, the UK and the US launched the International Media Literacy Research Forum.

[7] Media literacy is not easy to define but generally refers to the capacity to use and understand communications. Ofcom defines media literacy as: 'the ability to access, understand and create communications in a variety of contexts'

[8] http://www.ofcom.org.uk/advice/media_literacy/medlitpub/medlitpubrss/

1.4.4.5 The net neutrality debate has implications for quality of service

The ‘net neutrality’ debate (whether, and where, there should be a principle of non-discrimination of internet traffic across networks) continued during 2008. It originated in the US, where there have been five abortive attempts at net neutrality bills (in each case, these bills would have prohibited ISPs from offering ‘tiered services’, priced according to the user's choice of level of quality of service).

The debate has a raised profile in Europe in the context of the review of the European Regulatory Framework. There seems to be a consensus that a combination of competition, information, and transparency is the right approach to any restrictions on access to applications and services, beyond reasonable network management. There remains the possibility of imposing minimum quality of service requirements, where competition proves insufficient.