



Looking to the Future of Public Service Television Broadcasting

Consultation

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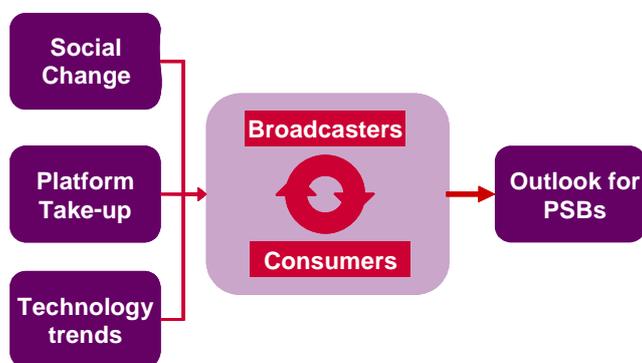
Contents

Section		Page
1	Introduction and summary of findings	2
2	The role of social change	6
3	Public Service Broadcasters confront the digital world	13
4	The impact of technology change on broadcasting	19
5	Impacts on consumer preferences and behaviour	29
6	Broadcasters and the market	42
7	What might the future look like?	59

Section 1

Introduction and summary of findings

- 1.1 This paper presents the work conducted by Ofcom in looking to the future of public service television broadcasting (PSB) in the UK. Our focus has been on addressing the challenges to PSB against the backdrop of the fundamental and potentially disruptive change brought about by the migration to all-digital television.
- 1.2 Our overall conclusion is simple: by the end of this decade, the existing ecology for the provision of public service broadcasting will be under real threat. Ongoing changes in society, in the way people consume media and watch television, in the competitive forces facing the existing main networks, will conspire to mean that the current arrangements for securing the provision of public service broadcasting will be inadequate to ensure the maintenance – let alone the strengthening – of PSB in the UK.
- 1.3 Traditionally, the UK broadcasting ecology has struck a delicate balance between the sources of funding, ownership and regulation. These factors have interacted to create a mutually reinforcing system. But this system is beginning to unravel, and needs reinvention in order to be fit for purpose in a fully digital world.
- 1.4 The following figure shows how we have structured our analysis. We consider, first, the key changes taking place in society, platforms and technology; and, second, assess the implications of these for viewers and broadcasters in the market. The overall goal of this analysis is to examine the outlook for the future of public service television broadcasting. Each of these areas is considered in turn in the rest of this paper.



The importance of social change

- 1.5 The composition, attitudes and concerns of UK society are very different from those which, for example, witnessed the launch of Channel 4 and multichannel television twenty years ago. These changes in society impact on PSB in two principal ways. First, we want different types of television and we watch it in ways different to the mid-1980s and before then. Second, and perhaps more subtly, these changes in society are also affecting the way we think about what PSB should be.
- 1.6 Important developments in this area include the growing affluence of individuals, the fragmentation of the traditional family unit, the growing diversity of UK society, changing attitudes towards membership of communities and other social networks,

and the rise of an 'entitlement' culture. What effect are these changes having on the very purposes and characteristics of PSB? Section 2 considers this question.

- 1.7 These changes can be seen in the purposes of PSB put forward elsewhere in our Phase 2 report. For example, as engagement with the political process and politicians breaks down, television has a continuing and important role in providing accurate news, information and analysis of current issues.
- 1.8 Reflecting and strengthening our cultural identity is a growing challenge as local and regional allegiances shift and the concept of being British becomes more complicated and multi-dimensional. And as the 'nuclear family' (the Oxo family perhaps) is less representative of the diversity of household units, awareness of alternative perspectives – through programmes which reflect the lives of different people and communities within the UK – is coming to the fore as an important ingredient of PSB.

Confronting the digital world

- 1.9 Shifting the focus away from broader social trends and towards changes in the television sector itself, Section 3 looks at prospects for the continued growth of digital television and progress towards full digital switchover. Why is the growth of digital television so important for PSB? There are two fundamental reasons.
- 1.10 First, for all of the PSBs, audiences in digital homes are substantially smaller than in analogue homes (for example, ITV1's share in multichannel homes in June 2004 was 18%, compared with 28% in analogue-only households¹). As digital take-up continues, all-homes audience share figures will inevitably tend towards multichannel home levels. By 2010, even without any confirmation of a definitive move to full switchover by Government, we expect that 78% of all UK households will have digital TV.
- 1.11 This downward pressure on audience shares is something to which the main terrestrial broadcasters will have to respond. They will need to find new ways of bringing audiences to the programmes they show – either on their main channels, or perhaps via new digital channels. They will need to look to different ways of scheduling and promoting their programmes.
- 1.12 The second fundamental importance of the growth of digital TV is both less obvious but also more profound for the provision of PSB by the commercial broadcasters. As analogue audiences disappear, so largely does the basis for the historic commercial PSB consensus, namely that ITV and Five have been content to broadcast several types of PSB programming in return for privileged access to analogue spectrum and the audiences this confers. Privileged access to DTT capacity and EPG prominence are likely to be much less valuable to them in the future. When there are no more analogue viewers, why should commercial broadcasters continue to deliver on PSB when there is little upside left for them in the deal?
- 1.13 Section 3 summarises the digital take-up projections published in Ofcom's April 2004 report, "Driving Digital Switchover". Since then, Freeview's popularity has continued to exceed even the most bullish predictions; BSkyB has announced its intention to re-introduce a free to view digital option; and several major players have begun to talk with increasingly serious intent about launching mass-market TV services over digital subscriber lines (DSL). Moreover, the indications are that Government is moving towards a full switchover programme that could start by 2008.

¹ Source: BARB

The importance of technology trends

- 1.14 In section 4, we delve into more detail on the implications of digital broadcasting. The competitive pressures brought about by the growth of digital TV form part of a complex and, to date, uncertain story. Increasingly sophisticated electronic programme guides (EPGs) and personal video recorders (PVRs) add powerful new functionality to the consumption of television. Second generation interactive services offer the potential to change the way viewers relate with programmes as well as the possibility of new revenue sources for broadcasters.
- 1.15 And further into the future, the emergence of on-demand television and mobile broadcasting could well have significant implications for PSB. Perhaps most interesting are early developments in payment mechanisms which could in time create a range of different ways in which viewers could pay for the television they watch. The idea of genuine 'pay as you go' TV – where each programme is clearly priced and viewers only pay for the programmes they actually watch – is something which technological developments are bringing closer to reality. This sort of payment method could radically affect the continued debate about the BBC licence fee.

Impact on consumer preferences and behaviour

- 1.16 Section 5 starts to bring the previous discussions together by looking at the ways in which social change, digital take-up and new digital services are likely to affect viewers' consumption of television, and public service television in particular. The effect of audience fragmentation should not be underestimated: five years ago, 85% of all viewing in the UK was to the main five channels; by the end of this decade it could be approaching 65%. As well as the commercial effects for broadcasters, this trend will inevitably affect attitudes towards, and consumption of, PSB. Viewing of the five terrestrial channels among those aged 35 and under is already below 50%. And, come 2012, people of university age and below will have little or no idea of what television was like when there were only four or five channels on air².
- 1.17 With respect to PVRs, overall we expect the growth in take-up of PVRs to be steady this decade but that they will not be ubiquitous by 2010. By the middle of the next decade, however, PVRs are likely to be as commonplace as video recorders are today. PVRs unquestionably have disruptive potential. The two most important behavioural implications are ad avoidance, with obvious implications for the commercial broadcasters, and the effect on scheduling. The proportion of viewing of live television in PVR homes seems to fall so dramatically that, as PVRs become the norm, the predetermined schedule could become relatively unimportant for many viewers.
- 1.18 This could create both threats and opportunities for the public service broadcasters. For instance, PSB programmes will not just have to compete with all of the other programmes on television at the time, but all of the other programmes stored on viewers' PVRs. However, it could also create new opportunities for PSB content to be stored and watched as an active choice at the viewer's preferred time.
- 1.19 In addition to PVRs, enhanced EPGs, new interactive services and the growth of on-demand services look likely to put traditional definitions of channels, schedules and even programmes under pressure. A particular challenge for Ofcom has been to assess what PSB will mean in this new environment, and how it can best be secured.

² All historical audience share data reported in this paragraph is from BARB; projected share based on scenario analysis reported in Section 6.

Broadcasters and the market

- 1.20 So what might be the impact of this change on the fortunes of the main broadcasters? We address this question in Section 6 by presenting the results of a detailed analytical exercise conducted by Ofcom. The starting point of our analysis is a so-called 'steady state' scenario. This is a deliberately artificial exercise, but we believe a useful one. In essence, the steady state scenario seeks to avoid second-guessing future commercial and regulatory change, but simply projects forward current known trends as far as 2012 and assumes that the market environment remains broadly the same as it is today. The results show the probable effect of the trends discussed in earlier sections: commercial PSBs will face growing financial pressures and will have to manage their businesses with an increasing focus on the commercial realities of a sector approaching full switchover. Under the limiting assumptions of the scenario, however, the commercial PSBs would still be able to continue to deliver on their PSB obligations.
- 1.21 We then consider a number of downside sensitivities that might threaten this outcome: the effect of even just one of these sensitivities could be to provoke a serious financial challenge for Channel 4 in particular. For ITV, the outlook in some scenarios appears more favourable (although not compared to past decades). However, this is not a sufficient condition for the continued delivery of ITV's PSB remit. Even if ITV plc is performing relatively well overall, if the value of their remaining analogue audiences falls below the implicit cost of continuing PSB obligations on ITV1, it would be financially rational for them to give up their PSB licences and become a purely commercial digital broadcaster.
- 1.22 The BBC faces a different challenge. It is in many ways in a more secure position, assuming it receives an adequate licence fee settlement. However, the corporation still faces the prospect of falling audiences, and so the issue here is more likely to be one of relative market position, both in terms of viewers and revenues. If, for instance, the licence fee is constant in real terms, it may well prove to represent a smaller percentage of total television funding (i.e. licence fee, advertising, subscription) over time.

Implications for public service broadcasting

- 1.23 Overall, our analysis suggests that the changes observed in the broadcasting market over the past five years are likely to intensify in the future. For viewers, these changes are on balance positive – more choice, innovative new services, and more power to the consumer should all be welcomed. The UK leads the world in many of these areas.
- 1.24 For the traditional model of PSB provision though, especially by the commercial broadcasters, these changes are real threats – an issue we discuss in more detail in Section 7.
- 1.25 But the digital world also creates new opportunities. First, we should be clear that none of these conclusions imply that the need for PSB itself is disappearing (although both social change and the impact of digital TV will affect how the purposes of PSB evolve). Rather, the key point is that in order to maintain and strengthen the delivery of PSB against its purposes and characteristics, a different approach will be needed, in particular if plurality in PSB provision by broadcasters other than the BBC is to be retained. This creates an opportunity for new (and possibly better) ways of delivering PSB.

Section 2

The role of social change

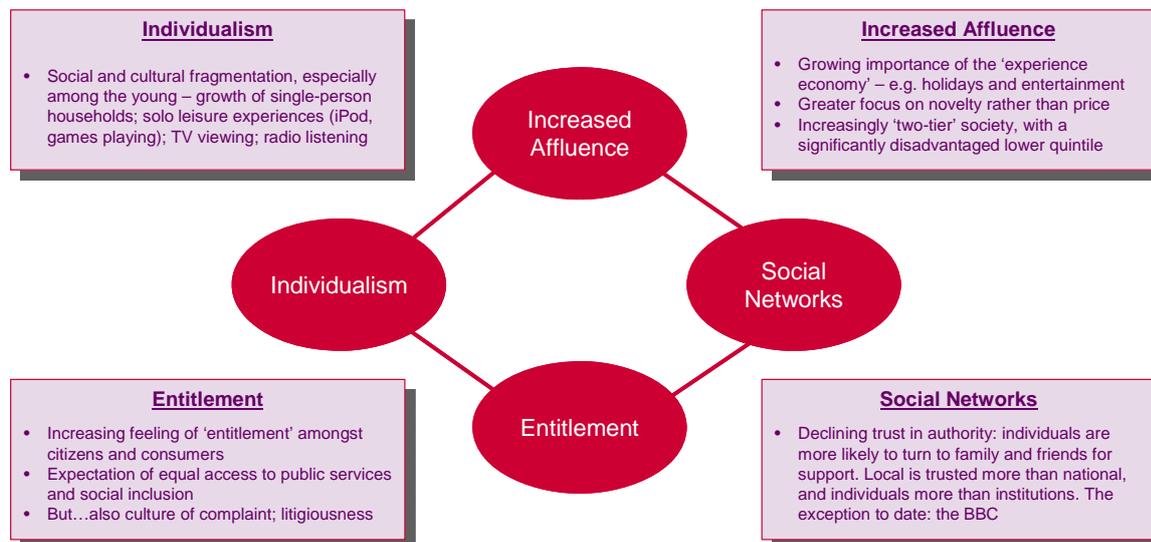
- 2.1 Television remains our largest single leisure activity. It has been since television ownership became widespread in the 1960s, even as British society has undergone significant transformation. Even now, the average British viewer watches more than 20 hours per week. The cost per hour of television consumption, compared with other forms of leisure expenditure, remains small, even when close to half of UK households pay for subscription television services. People who speak of the 'always on' society are typically thinking of new media and new technologies; but the television, in many British households, remains close to being 'always on', at least when people are at home.
- 2.2 Nonetheless, our relationship with specific forms of media evolves as society changes, and our use of media changes as a result. The purpose of this section is to review some of the drivers of the significant social changes currently visible in British society, to consider how these might evolve over the next decade, and to assess the implications of these for the provision and use of public service broadcasting.
- 2.3 A snapshot of British society in 2004 is a useful starting point. We are significantly more affluent even as consumer debt levels rise. Like other European countries, we are getting older, even if we do not always act our age. As a working society, we are more feminised: the number of women in the workforce is now equal to that of men, even if the women are still less well-paid and on average work shorter hours. This creates its own pressures on families and households; even if individual working hours have increased only slightly, the increase in 'household working hours' as women and men both work brings its own time pressures to households. As families are more likely to break up and be re-constituted, as women are likely to have children later (or not at all), life plans becomes more unpredictable. We are better educated, with significantly more people going to university.
- 2.4 The incidence of some technologies is now close to ubiquitous, at least among those segments of the population who choose or are able to engage with them. Mobile phone penetration is approaching saturation levels, while use of PC-based internet services is also widespread. There is a decline in trust in various forms of authority, which is correspondingly reflected in an increase in the importance of social networks and trust in peer-to-peer relationships, underpinned by mobile and internet technologies.
- 2.5 However, affluence and the extension of opportunities in the workplace have not benefited everybody equally. British society is now more polarised than at any time in the recent past. There is a significant minority of severely disadvantaged families who are least likely to benefit from the emerging digital society and face patterns of multiple disadvantage. The phrase 'digital divide' has been coined to describe the gap between the affluent majority, who have time and money to invest in new media and technology, and those for whom it represents another form of exclusion.

High level drivers of social change

- 2.6 Different commentators take different approaches to the analysis of social change, generating vigorous debate about the direction and degree of the observed trends, and different views about their implications. Henley Centre analysis provides one useful view, which is based on four high level drivers in schematic terms, as shown in the

following figure.³ As with all drivers, these do not exist in isolation: instead they play off against each other. Sometimes this produces unpredictable social outcomes.

Figure 2.1: High level drivers of social change



Source: Henley Centre

Increased affluence

- 2.7 We are an increasingly affluent society. Average UK incomes have doubled since 1971, not because the British economy has performed spectacularly well but merely as the result of steady year on year growth rates of around 2-3%. One of the striking features of affluence has been that as a society generally, more people now have enough money to live comfortably; the proportion we spend on basics such as food and clothing is shrinking, and the proportion we spend on services rising.
- 2.8 The fastest growing part of the economy is the so-called 'experience economy' of leisure services, such as holidays and entertainment. We have moved, generally, from a society in which most people are able to afford what they **need** to one in which most people can afford what they **want**, at least in terms of what the market can provide to them.
- 2.9 However, we have in the process become a two-tier society. The bottom quintile (20%) of UK households is significantly disadvantaged. One yardstick is the proportion of UK households without a car: 62% of the bottom quintile do not own a car, compared to 24% of the population as a whole.⁴ The top 10% of UK society is now four times wealthier than the bottom 10%; its share of the country's wealth has increased from 47% to 54%, just in the last ten years.⁵ This inequality maps onto access to digital technologies: seven in ten of those in social grade AB have access to the internet at home, compared in two in ten of those in social grade DE.⁶

³ This section draws on Henley Centre work commissioned by Ofcom, although is not solely based on it. It is not intended to be a comprehensive assessment of the diverse social trends shaping the UK TV market, but sets out what we believe to be some of the most important developments.

⁴ TGI, spring 2004.

⁵ Institute for Public Policy Research, 2004.

⁶ Continental Research, 2003.

- 2.10 Other challenges are posed by the ageing of society. We are living longer, with a man reaching 60 now expected (on average) to have a further 19 years of life ahead of him. For women, the equivalent figure is 22 years. By 2020, assuming no change in retirement ages, most people might expect to spend a quarter of their lives in retirement.
- 2.11 But the birth rate is not keeping up with the increasing number of people in retirement, putting more pressure on increasingly fragile pension schemes. The worst-off individuals, who have not been able to maintain sufficient savings, may find themselves even more marginalised and impoverished in their old age. And many people – not just the least well-off – may find themselves needing to learn new skills regularly to keep themselves in work and adapt to changing economic imperatives.

Individualisation and fragmentation

- 2.12 Since the 1960s there has been a strong trend towards individualism, which has expressed itself in multiple forms of social and cultural fragmentation. One is the rate of family break-up; divorce rates, which are rising again after a period of stability, are towards the higher end of the range across Europe. There are other relevant family trends. Women are delaying having children until later in life; an increasing number of women are deciding not to have children at all. The cost of university, and the cost of housing, means that those children who go to university (a number which has increased rapidly over the last decade and a half) are more likely to return to the parental home for several years after completing university.
- 2.13 One outcome of this has been a steady change in household composition. The traditional 'nuclear family' household, in which one or more children live with their birth parents, has fallen to about one-third of the whole, and will shortly be overtaken by the number of single person households. There is also considerable growth in multi-person households, in which (the 'Friends' model) a number of people who are unrelated share a house.
- 2.14 Fragmentation is not just a household phenomenon. It is seen in a range of forms of consumption, including media consumption. More personalised forms of media, from the Walkman onwards, have enabled producers to generate greater margins from the same content. This is a trend which has become a torrent. From games consoles to the mobile phone to the internet to the iPod, most of the innovative media and communications experiences of the past twenty years have been individual experiences. At the same time, the falling costs of consumer electronics devices generally mean that old media also proliferates through the home, so that individual experience replaces the group experience. To take two indicators of this, more than three quarters of 5-16 year olds have TVs in their bedrooms, and half have a video player.⁷
- 2.15 Fragmentation is also driven by the increasingly diverse nature of British society. The black and minority ethnic population increased from just under 2% in 1966 to 7.9% in 2001; in parts of London, the white population is now in a minority.⁸ Local, national and regional affiliations have also shifted as population mobility increases, while the internet makes it easier than ever for people to stay in contact with their home communities. People living away from the communities in which they were born often attempt to preserve elements of the lifestyle and consumption patterns they were used to, but they also cross-pollinate with their new communities, creating a rich patchwork of identities, values and social behaviours.

⁷ Childwise Monitor report, 2004.

⁸ Office for National Statistics, 2001.

Social networks, political disengagement

- 2.16 We live in a more networked world. This is true at the level of technology, but, importantly, it is also true of our social behaviour. It can be argued that network technologies would not have been embraced so readily had it not been for the fact that they reinforced an existing social desire. 77% of UK adults now have a mobile phone.⁹ 52% have internet access at home.¹⁰ Digital television penetration is at 53% of UK homes.¹¹ The desire for networking is also revealed in the success of online community tools and chat rooms.
- 2.17 The spread of technology has affected our attitudes to being connected. More than half of all adults agree that 'I like to be connected on my mobile phones at all times', while 80% of 15-19 year olds agree with the same statement.¹² Both figures have increased sharply over the last two years. There are inclusion issues here; among the bottom two quintiles only 57% are confident using a mobile phone (compared with an average of 65%) and 29% are confident sending an email via the internet (compared with an average of 46%).
- 2.18 The underlying social trend is, if anything, more powerful. Trust in authority has declined, not just in the UK but across the developed world. We use online reviews of products and services by our peers, rather than trusting advertising or sales advisers. We are more likely to turn to our family and our friends for advice and information. This sense of the local network is seen in the trust data where, generally, one is likely to trust more the local representative rather than the national organisation. 'My MP' is trusted more than 'parliament'; 'my GP' is trusted more than 'the NHS'.¹³ If the trend towards individualism leads to fragmentation, the trend towards networks, in which the social is reinforced and amplified by the technological, acts as a counter-balance.
- 2.19 However, declining trust in authority has been accompanied by a more general disengagement from the political process – a trend that has been identified across Western democracies. In the UK, voter turnout peaked at over 80% in the general elections of 1950 and 1951, but has declined substantially since then, falling below 60% for the first time in 2001. People are increasingly likely to see politics as distant and unimportant to them, and to have less faith in their political leaders.
- 2.20 In this context, trust in broadcasters, particularly as providers of accurate and impartial news, is particularly important. And it appears that the UK broadcasters still perform well in this respect. In the UK, television news taken as a whole is trusted by 85% of people; in the US, the corresponding proportion is only around a third.¹⁴ Henley Centre research suggests that trust broadly correlates with reach: both the BBC and ITV are trusted more than the other analogue channels and Sky.

⁹ TGI, 2003, adults 15+.

¹⁰ Internet Monitor 2004, adults 15+.

¹¹ Digital Television Update, Q1 2004, Ofcom: 10% cable, 29% digital satellite, 14% digital terrestrial. In addition 4% of households have access to analogue cable

¹² Henley Centre, Planning for Consumer Change research programme, 2003. 54% of adults 18+ agree 'slightly' or 'strongly' that 'I like to be contactable on my mobile phone all of the time'.

¹³ Henley Centre, Planning for Consumer Change, 2003. 'How much confidence do you have in the following institutions?': Parliament, 16%; The NHS, 52%. 'To what extent do you trust the following to be honest and fair?': Your MP, 23%; your GP, 84%. This is not a universal phenomenon however; 51% have confidence in the police, but only 45% trust 'the police in your locality' to be honest and fair.

¹⁴ MORI 2001; Pew Research Center, 2002; both cited in BBC, Building Public Value, 2004

Entitlement

- 2.21 If affluence is linked to the rise in consumerism, it is offset to some extent by the rise of a trend which is perhaps best characterised as 'entitlement'. This is best expressed as a trend in which service users have rights which are, at least in principle, independent of wealth or status; they exist by virtue of citizenship. The clearest expression of this trend is in the Human Rights Act, but it is also seen in other public issues, such as the legislation on the smacking of children.
- 2.22 Entitlement is an uncertain driver which can play out in different ways. Linked to fragmentation, it leads to litigiousness and the 'culture of complaint', individual responses to a failure of service. Linked to the networked society, it is a more positive force linked to access and inclusion. The most powerful current expression of this perspective in the UK at present is in the 'cultural entitlement' agenda seen in the arts: the idea that individuals should have roughly the same opportunities of access to creative and cultural opportunity, regardless of where they live.
- 2.23 This view has been articulated strongly by the Culture Secretary, Tessa Jowell, in a recent paper, 'Government and the Value of Culture', in which she argued that 'cultural activity is not just a pleasurable hinterland for the public.... It is at the heart of what it means to be human. Government should be concerned that so few aspire to it.'¹⁵ Although her argument was specific to culture and the arts, it is reflective of a wider view of the nature of public good and the duty of government to encourage aspiration.

Consumer-citizen responses to these trends

- 2.24 The composition, attitudes and concerns of UK society are very different from those that prevailed twenty years ago, when Channel 4 launched, and even further removed from those of the 1950s, when ITV first aired. Partly, this affects the television that people want as consumers, and the way they watch it. The 'affluence' and 'fragmentation' drivers can both be characterised as consumer and market drivers. But changes in society also affect the way we think about what PSB should be, and what we require of the broadcasters as citizens. The 'networks' and 'entitlement' drivers are, perhaps, most relevant to our social and public selves. So these four drivers reflect the dichotomies which are generally at the heart of social regulation, and which specifically have informed the regulation of broadcasting. However, before reviewing their implications in terms of the delivery of public service broadcasting, it is worth noting that there are emerging trends that counter the effects of the moves towards affluence and fragmentation.
- 2.25 For instance, there appears to be a resurgent desire for shared, even mass, experience. 57% of British adults say that they have 'all the material things I need'¹⁶, and this is expressed culturally in trends such as 'de-cluttering' and the rapid growth of eBay. The growth in the consumption of 'leisure services' (such as travel, eating out, theme parks and so on) is marked but seems still to leave a sense of disappointment. In the words of a participant in a Henley Centre project on tourism, "When you've been to all the places you want to go to, where do you go to after that?" The result has been the growth in both commercial and non-commercial shared experiences, from the boom in music festival attendances to communal viewing of anything from ballet to international football matches.

¹⁵ Tessa Jowell, Government and the Value of Culture, DCMS 2004.

¹⁶ Source: Henley Centre

Implications for public service broadcasting

- 2.26 Our first conclusion from this preliminary review of social change is simply to point up the need for public service broadcasting to respond to significant and ongoing changes in social norms and behaviours. A rigid system of PSB, based on genre quotas and static assumptions about 'the public interest', would rapidly appear anachronistic. In fact the existing system has proved itself remarkably resilient during a period of substantial change, in society as well as in the broadcasting market. But emerging social trends, as well as the market and technological developments discussed later in this report, might suggest a need for more radical reassessment.
- 2.27 First, TV may have a role in creating new spaces for community-building and interaction. The growth of single-person households and an increasingly fragmented society have helped give rise to new forms of social networks and the search for shared experiences; TV may be able to respond to this demand, for example by creating interactive community features that exploit the opportunities offered by the digital backchannel. Voting and text messaging are the first manifestations of this potential, but TV has a long way to go before it matches the richness and value offered – to those who want this kind of interaction – by online communities.
- 2.28 Second, TV can also create social capital by continuing to bring people together (the 'watercooler TV' phenomenon), and build cohesive communities by reflecting the diversity of modern Britain and helping people understand cultures other than their own. TV is clearly not a solution to all the challenges of an ethnically and economically diverse society. But it does provide a way of exposing the population to a wide range of lifestyles and attitudes. If the fragmentation of the audience works against this by creating a series of individually homogeneous niche markets, which serve only to reflect back to people their own lives (or the lives to which they aspire), some of the value of mass market, mixed schedule TV will have been lost.¹⁷
- 2.29 Third, TV has a continuing and important role in providing accurate news, information and analysis of current issues in the context of political disengagement. Audiences for current affairs programming may have been falling. But this does not detract from the importance of the genre. Rather it puts additional emphasis on the need for broadcasters to find innovative and creative ways of engaging the audience, especially a younger audience. Newspaper readership is declining and political allegiances are weakening – for many people, TV is the only channel still able to bring them into contact with democratic debate and the major issues affecting the world around them.
- 2.30 Fourth, we are conscious of the digital divide and should seek to ensure that TV helps to narrow the gap, rather than exacerbate the problem. This has a range of manifestations, most obviously ensuring access to a wide range of appropriate services in an increasingly competitive commercial marketplace. But the digital divide has a number of more subtle aspects. Those in social group E are most likely to say they rely on TV to keep them informed. But they are least likely to have digital TV, and often feel less confident in their use of mobile and PC technologies. This includes a large number of older households living on very low incomes, for whom the TV may be their only leisure activity and their main source of social stimulation. We must ensure that these groups are not further disadvantaged by the transition to digital TV.
- 2.31 Finally, the entitlement agenda suggests that there will be strong demand for universal access to a wide range of cultural experiences, including major sports events, music

¹⁷ The role of public service broadcasting in building social capital is discussed in "Watching Alone: Social Capital and Public Service Broadcasting" – a report by Martin Brookes, published jointly by the BBC and the Work Foundation in 2004

festivals and other national occasions. TV may be the only way of ensuring inclusion across the socioeconomic spectrum in the UK's cultural life; Restoration and The Big Read provide two recent examples of how this can be achieved. There may also be increasing need for TV to contribute to lifelong learning and self-improvement, driven by economic pressures to reskill as much as by the desire to learn for learning's sake.

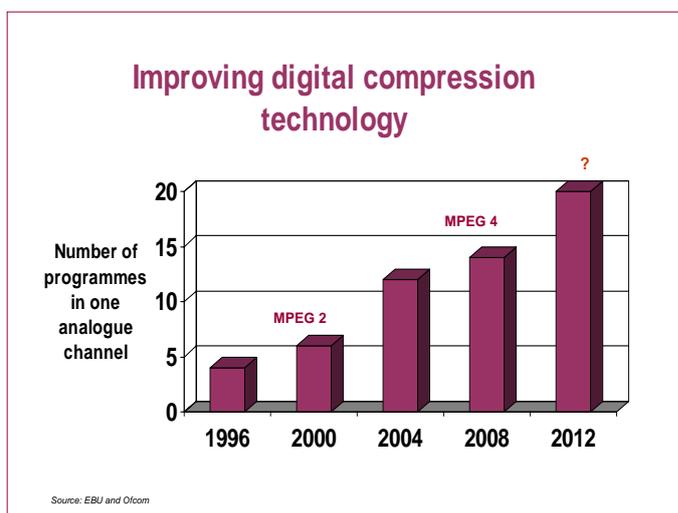
- 2.32 These trends create both opportunities and threats for the institutions currently delivering PSB. On one hand, as the most trusted and well-resourced broadcasters, they are well placed to explore the opportunities offered by new technology and changing social imperatives. The BBC in particular has a wealth of experience, as a result of its investment in online services, that could be relevant to the development of new TV community and educational tools.
- 2.33 But the individualism agenda, and the emphasis on choice, suggests that viewers may also value plurality in the provision of public service broadcasting, and the representation of a range of approaches to delivering these critical public goods. These are challenging areas for broadcasters and they require the creative stimulation of competition. The difficulties involved in reshaping current affairs programming for an increasingly political disaffected audience, for example, are unlikely to be solved by a single broadcaster with *de facto* sole responsibility for this area.
- 2.34 But it will be increasingly difficult for commercial (or commercially-funded) broadcasters to dedicate the investment required to adequately and creatively explore the areas described above. There are substantial commercial risks attached to experimentation in increasingly 'difficult' areas like current affairs; similarly, there is little benefit in serving very low-income and/or older households given advertisers' preference for younger, more affluent audiences. And audience fragmentation implies a diversification of tastes which makes it increasingly difficult to take a 'one size fits all' approach. If commercial broadcasters have to choose which audiences they have to focus their energies on, the poorest and oldest viewers are very unlikely to be the beneficiaries.
- 2.35 This analysis has identified new potential roles for public service broadcasting, posing new opportunities for broadcasters as well as significant challenges. However, social change is of course not the only force impacting the broadcasting ecology. The following sections discuss in more detail the impact of media and technology change on the outlook for the main five channels, starting with an analysis of probably the most fundamental change to the broadcasting market since the first black and white sets were launched.

Section 3

Public Service Broadcasters confront the digital world

- 3.1 Turning from social trends to the broadcasting sector itself, major changes continue to unfold – creating new challenges in the process. Most of these challenges have one root cause – digital. Subsequent sections consider the new services and propositions that digital television offers, the ways in which these may affect viewer and consumer behaviour, and their commercial impact. But before addressing these wider issues, the current section starts by considering how the take-up of digital television might unfold for the remainder of this decade and in the early part of the next decade.
- 3.2 The transition from analogue to digital broadcasting technology has significantly increased the number of channels available, by enabling the carriage of six or more channels in the bandwidth previously occupied by one analogue channel. There are now over 35 channels carried on the digital terrestrial television platform¹⁸, and over 350 channels on digital cable and satellite.
- 3.3 In addition, improving digital compression technology, including the new MPEG 4 standard, will provide the capacity to carry at least double the number of channels in the future¹⁹. These new compression systems require new digital receivers however, which will prevent their short-term introduction onto established digital terrestrial, cable and satellite platforms.

Figure 3.1: Improvements in digital compression technology



- 3.4 Every household will have access to many channels in the fully digital world – leading to the possibility, at least, of widespread audience fragmentation. In addition, it is possible that in this digital world media will be consumed in many different ways: personal video recorders (PVRs) will be increasingly commonplace; high speed DSL internet (>2Mbps) will allow different on-demand services and interactivity; wireless networking will distribute media throughout the household; sophisticated flat and

¹⁸ <http://www.freeview.co.uk/>

¹⁹ EBU Tech review, April 2004

plasma screens will enhance viewing; home multi-media servers will personalise content and allow efficient storage and access. And perhaps most interestingly of all in the long-term, new options for paying for consumption of television (such as advanced conditional access systems supporting 'pay as you go' per programme consumption of television) could directly attack existing funding models. These technologies and their impact on viewing behaviour are considered in more detail in section 4 and 5 respectively.

- 3.5 At the time of writing in the summer of 2004, public service broadcasters are coming to terms with the reality that the age of five (or four) channel television has now passed. The majority of homes in the UK now have digital television. As the penetration of digital television grows towards 100% of all UK homes, broadcasters face difficult choices about how best to cope with this rapid and destabilising change: how can audience share, brand and margins be protected? What does it mean to compete with 30 (or 300) other channels? How sustainable are existing business models? How will the new services and functionality of digital affect the way people use their televisions? And what does all this mean for the sustainability and development of public service broadcasting?

Platform take-up

- 3.6 Ofcom published its views on the prospects for market-led digital switchover in its April 2004 report "Driving digital switchover: a report to the Secretary of State"²⁰. In this report, we concluded that, based on the most up to date and comprehensive data available at the time, and without any government intervention, digital penetration would reach 80% by 2012.
- 3.7 These figures took as their starting point the assumption that Government does not announce a formal date for switch-off any time this decade - in other words, take-up is left entirely to the market.
- 3.8 The market-driven projection was based on a comprehensive modelling exercise that incorporated research into consumers' attitudes to television platforms and digital TV in general, as well as comprehensive historic take-up data and a range of third party forecasts for future take-up²¹. Some of the other main assumptions were:
- BSkyB reaches its subscriber target of eight million at the end of 2005 with growth continuing thereafter.
 - Cable operators gradually convert all their TV customers to digital and gain new subscribers by offering digital TV alongside broadband internet access.
 - The price differential between integrated digital televisions (IDTVs) which have an in-built digital receiver and Digital Terrestrial (DTT) set-top boxes falls over time, but remains significant.
 - A wide range of IDTV models is introduced but analogue models remain the main products on offer in high-street shops.
 - The lowest price of DTT set top boxes drops to around £30 in real terms leading it to become an impulse buy for some consumers. DTT set-top boxes become more widely available in supermarkets.

²⁰ Available on the Ofcom website at: http://www.ofcom.org.uk/research/dso_report/print/dso.pdf

²¹ This work was conducted with Spectrum Strategy Consultants and was supported by complementary research from the DTI

- A pay TV DTT option is taken up by no more than half a million subscribers with the vast majority of these being existing Freeview customers
- PSB services become available over phone lines (TV over DSL) this decade, but their availability tends to be limited to areas where other platforms, including cable, are already available. Consequently TVoDSL does not have a significant net impact on take-up.
- The free-to-view smartcard scheme for satellite is not reintroduced and free-to-view satellite (whether with or without a smartcard) is not actively promoted.

Base case projections

3.9 The figure below sets out Ofcom's central projection for digital take-up under the assumptions set out above. Under the base case it is estimated that 78 per cent of households would have digital TV by the end of the decade, and 80 per cent by the end of 2012.

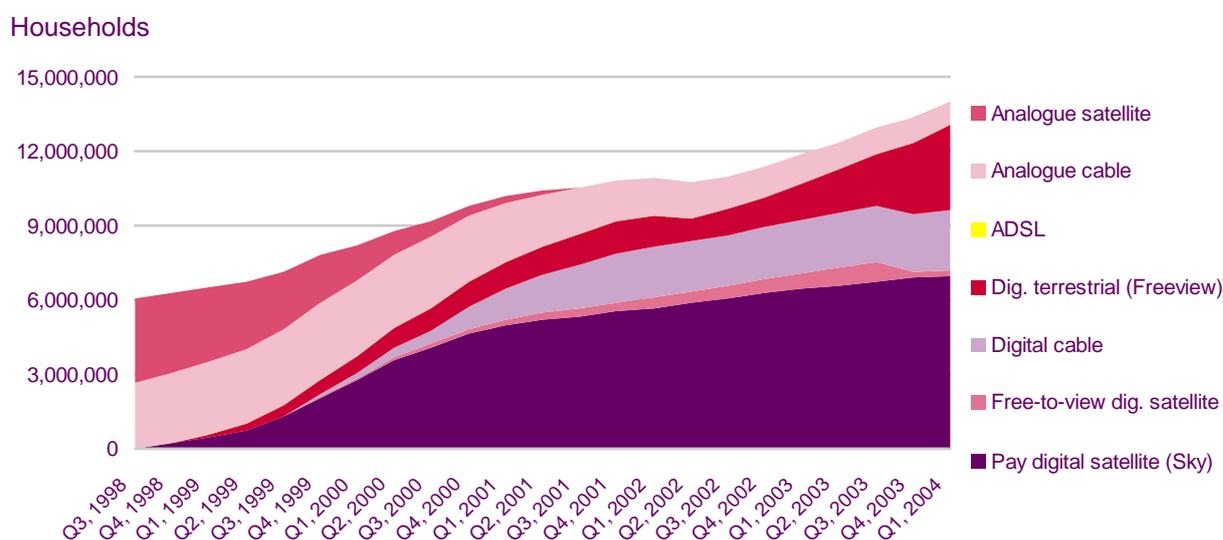


Figure 3.2: Estimated take-up of digital TV by platform at the end of each year

Source: Ofcom

3.10 From the perspective of switchover policy, the key conclusion emerging from these projections, and the principal recommendation of Ofcom's report, were that switchover could not be achieved without intervention. Specifically, getting to switchover will require:

- extension of digital coverage and availability nationwide
- a staged regional switchover plan; and
- Government commitment to a firm date.

3.11 Progress is now being made on all of these fronts, and the direction of travel is clear. Within six years, the likelihood is that another eight million homes will have gone digital, bringing the total to over 20 million, even without a firm switchover date.

3.12 The other side of the coin is that, for a period of time, around five million homes may continue to have access to only four or five channels. During this transitional phase, continued provision by the main five channels is essential for those who are unable or unwilling to switch to digital TV of any kind. Research commissioned by the DTI²²

²² *Attitudes to Digital Switchover*, DTI, 2004

suggests that up to 20% of households intend to remain analogue-only (in the absence of any switchover announcement). According to analysts Mediaedge:cia, this figure has remained broadly stable since 2002, except for a spike following the collapse of ITV Digital.

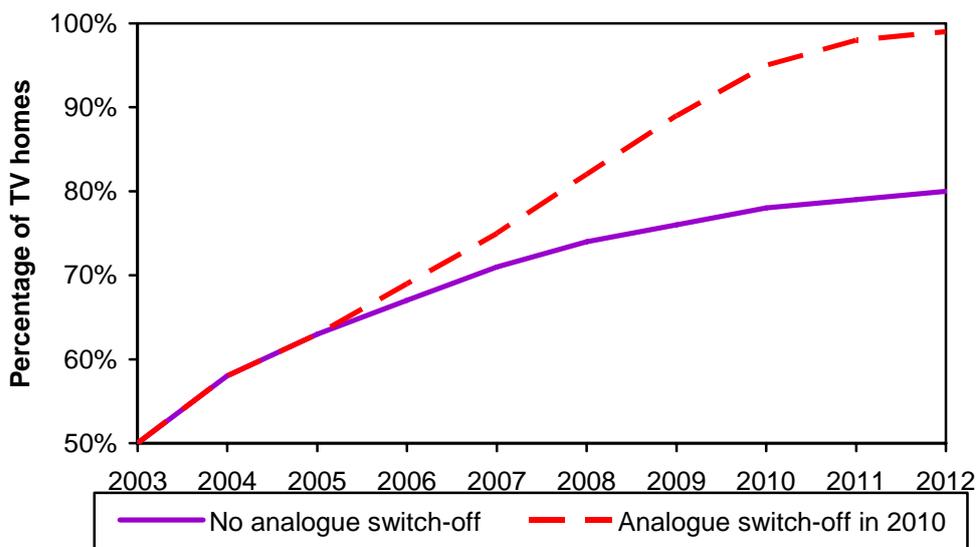
- 3.13 The challenges to switchover policy posed by these so-called 'digital refuseniks' are well known, but it is important to point out that they create challenges for the commercial analogue broadcasters regardless of the date of switchover. The slowest to switch to digital TV are likely to be older and less well-off viewers: one survey found that 44% of those in social grade E claim they will 'never' get digital TV, as do 46% of retired people. Conversely only 13% of 25-34s say the same.²³
- 3.14 The main five channels may therefore find that their analogue broadcasts are serving an older and poorer audience as switchover approaches. This audience is much less attractive to advertisers, exacerbating the commercial difficulties created by the general decline in audiences.

Alternative outcomes

- 3.15 The assumptions underpinning Ofcom's April projection will need to be revised over time – indeed there have been a number of new developments since we published our forecasts²⁴. These include:
- Further moves towards a definite date for the switch-off of analogue transmissions
 - Shifts in Sky digital's strategy
 - Emergence of new platforms, and further acceleration in Freeview take-up
- 3.16 Any definite announcement of analogue switch-off would unquestionably have profound implications for the public service broadcasters. While, at the time of writing in late summer 2004, a precise date has not been announced, the government has made it clear that it plans to begin the switchover process in 2007/8, with a view to completing switchover in 2012.
- 3.17 If this planned timetable is followed through, we expect take-up to accelerate relative to Ofcom's base case projections. In our modelling work, we illustrated the possible impact of what, at the time of writing in spring 2004, appeared to be the earliest possible switchover date – 2010. As the following figure shows, an announcement of a firm switchover date of 2010 would increase dramatically the take-up of digital television.

²³ Source: Mediaedge:cia

²⁴ At this stage, we have not taken steps to revise our projections in the light of recent developments. But Ofcom does intend in any event to produce new take-up projections at least annually.

Figure 3.3: Impact of switchover on estimated digital take-up

Source: Ofcom

3.18 We have also witnessed recent shifts in Sky digital's business strategy. Over recent months, questions have been raised about the direction that BSkyB will decide to take the subscription business once the twin targets of eight million subscribers and £400 ARPU have been achieved in 2005. Broadly, the options appear to be a choice between: continuing to push ARPU (and profit) higher through a focus on subscriber retention rather than acquisition, introduction of new revenue enhancing services and tight financial control of the business; and a strategy which seeks to maximise Sky digital's share of remaining UK analogue-only households. A Sky digital announcement in early summer 2004 provided some indication of the possible future direction of the business. Specifically, Sky digital announced its intention to launch a new free-to-view proposition by the end of the year, suggesting that the business might be focusing on share of digital households, rather than on continued ARPU growth. If the service is launched as planned, it may well have an impact on the rate and composition of platform take-up.

3.19 Recent months have also seen movements in the take-up of the different digital platforms. For instance, Freeview take-up in the first quarter of 2004 was greater than our forecasts had anticipated. And we are now seeing further movement on the emergence of alternative platforms, in particular the mass market take-up of TV over Broadband Asymmetric Digital Subscriber Line (TVoDSL).

3.20 Broadband internet video streaming has the potential to deliver television broadcast services, but despite recent improvements in digital compression technology (including MPEG 4 and Windows Media 9), a bit rate of more than 1.5 Mbit/s is still needed to deliver broadcast quality television pictures²⁵ and cannot be supported by most UK broadband connections which operate at or below 512 kbit/s. Unlike conventional broadcasting, the cost of providing Internet video streaming services increases linearly with the number of simultaneous end users (technology licences, server capacity and internet bandwidth) making it significantly more expensive than cable, satellite and terrestrial to provide broadcast services to large audiences. In addition, technologies that are able to prioritise the delivery of video streaming over the internet to enable *glitch* free transmission at the times when the internet is heavily used are not yet in

²⁵ ISO picture quality trials.

place. These issues are expected to be addressed by the introduction of new internet *multi-casting* technology that will enable one IP stream to be efficiently sent to multiple addresses.

- 3.21 Yet television services can be accessed over ADSL in certain locations²⁶. At present, two companies offer TV over DSL services – HomeChoice and Kingston Interactive. Together, these companies had just 8,887 subscribers in 2003²⁷.
- 3.22 Nevertheless, HomeChoice embarked on a new marketing campaign in summer 2004, aimed at establishing a fourth digital platform to the satellite, cable and terrestrial options. In addition, several other major players – including BT and ntl – were quoted in press reports as being close to the launch of TVoDSL services. TVoDSL offers the advantage of using existing phone lines to the home for the provision of services, which could be bundled with telephony and internet access. For ntl and other cable companies, TVoDSL would offer the prospect of extending reach beyond that of current cable networks.
- 3.23 In conclusion, as with any forward-looking analysis, major uncertainties remain about the precise nature of digital take-up for the rest of this decade. One thing is certain though: as digital television grows, the impact on the public service broadcasters – already substantial – will only grow. The following sections consider in more detail the new services and applications that digital offers, and their possible impacts on viewer and audience behaviour.

²⁶ Note: Until recently, it has not been possible to access linear television services. This has changed with the relaunch of the HomeChoice service.

²⁷ Source: Multichannel Quarterly, Q4,2003

Section 4

The impact of technology change on broadcasting

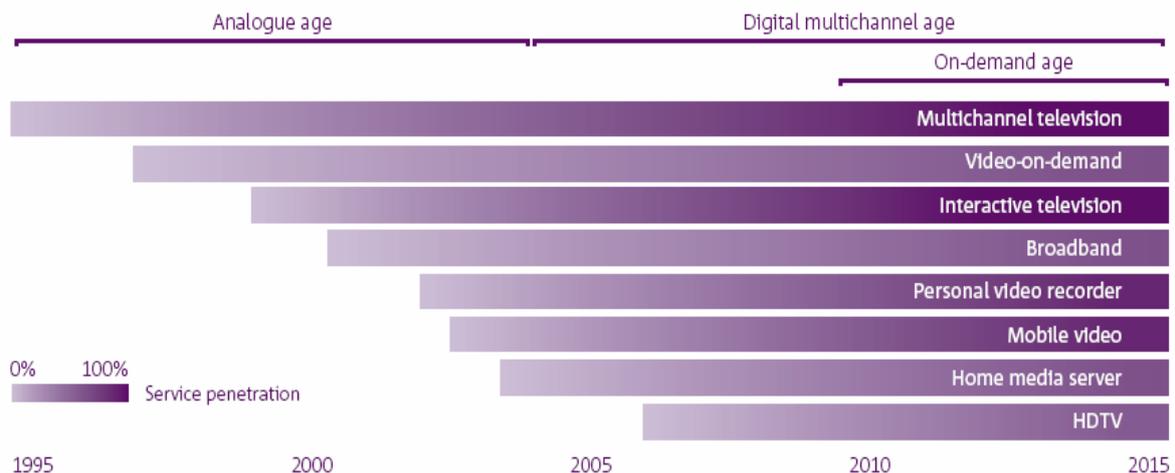
4.1 Having analysed the take-up of digital television platforms and the composition of this take-up, we now examine the wider technological perspective. Building on the technological dimensions of the move to digital, we consider in more detail the new technologies and services which digital may usher in.

4.2 The topics covered include:

- interactive television;
- high-definition television;
- time-shifted viewing driven by the take-up of Personal Video Recorders, home-media servers and DSL television;
- the move from linear to on-demand television;
- content payment systems; and
- mobile television services.

4.3 Schematic estimates of the potential future take-up of these different technologies are illustrated in figure 1. We have moved from the analogue age into the digital multichannel age; and in the medium to long term, we will enter into the on-demand age.

Figure 4.1: Estimated penetration of different technologies



Source: Ofcom

Interactive television

4.4 In the same broadcast stream, digital can support video, audio, games and text information – thereby enabling the introduction of new types of interactive multimedia

services. Early attempts to provide internet access and interactive shopping and banking applications using a telephone modem integrated into a digital television receiver did not appeal to many viewers, who found it easier to use a PC rather than a television set for these services. Interactive applications closely related to conventional television content have proved to be much more popular and are starting to create new relationships between viewers and their television sets. For instance, on its final night, the first series of Pop Idol generated 8.7 million votes from viewers using either telephone, SMS or the interactive red-button on their remote controls. In addition, premium rate voting is now a significant revenue stream for many programmes²⁸.

- 4.5 However, it is important to note that there are limits to consumer engagement with interactive services. For instance, users seem unwilling to purchase via interactive TV in the way they increasingly do online. Games, once relatively popular, have suffered more recently: the proportion of digital viewers playing games via the remote control declined from 60% of households in 2000 to 44% by 2003. The only interactive applications showing significant growth are betting (which now accounts for over half Sky's interactive revenues) and digital radio.²⁹
- 4.6 The ability of interactive television to achieve high levels of viewer engagement could make it an increasingly valuable tool to public service broadcasters in maintaining viewing audiences and generating new revenue streams on digital platforms. Forty percent of digital viewers have already pressed the interactive red button on their remote controls and some interactive programmes are starting to attract large audiences. Thirty-one percent of digital viewers interacted with C4's Big Brother programme and 29% with the BBC's Wimbledon coverage in 2003.³⁰ Commercial broadcasters continue to explore the potential of interactive advertising as a means of enhancing the power of television as a promotional medium.

High-definition television

- 4.7 A potentially significant development over the next 5 to 10 years will be replacement of cathode-ray-tube (CRT) television sets with large flat panel LCD and plasma displays. The consumer electronics manufacturer Sharp aims to replace all its conventional CRT television sets in Japan and Europe with LCD-based models by 2005³¹. And, at the time of writing, prices for LCD screens are expected to fall even further due to an increase in production capacity³².
- 4.8 These displays magnify the coding artefacts and the limitations of standard definition digital television services and are expected to drive the demand for high-definition television (HDTV) services. An additional driver for these services will be the introduction of high-definition DVD players next year, which is likely to force broadcasters to upgrade their premium film subscription channels to HD to provide the same picture quality as films distributed on DVD. There is a parallel here with the introduction of multichannel Dolby surround sound on DVD, which drove its introduction onto premium broadcast services.

²⁸ "interactive accounts for between 20% and 30% of Endemol's revenues", <http://www.newmediazero.com/awards04/category.aspx?cat=individual>

²⁹ Mercier, Peter, and Barwise, Patrick, 'Digital television in the UK: consumer responses to interactivity', London Business School, 2004

³⁰ IPSOS, DART interactive viewer survey 2003.

³¹ <http://www.semiconductor-technology.com/projects/sharp/>

³² See The Economist, "The big picture", July 24th 2004, pp. 61-62.

- 4.9 The bit-rate needed to deliver HDTV is significant and the whole of a Digital Terrestrial Television (DTT) multiplex is required to deliver one HDTV service. The greater transmission capacity of satellite and cable compared with terrestrial means these platforms are most likely to introduce HDTV services first. For instance, Sky recently announced its intention to launch HDTV services in 2006³³.
- 4.10 The introduction of high-definition television over the next five years on digital satellite (and potentially digital cable) may pose a significant threat to the PSB channels carried on the digital terrestrial platform, which will be unable to upgrade their services to HDTV unless they obtain extra bandwidth after switchover. HDTV services could be delivered on the digital terrestrial network by downloading content overnight (or over a broadband connection) onto a PVR for playback later. This approach would not be suitable however for live broadcasts such as sports events, and would require the use of new set-top boxes. This makes it unlikely to be implemented within a short to medium term timeframe.
- 4.11 Nonetheless, It is likely that public service broadcasters will produce an increasing amount of their content in HD format even if it cannot be broadcast on digital terrestrial, in order to enable it to be sold in other countries operating HDTV services (such as the US and Japan)³⁴.

Time-shifted television

- 4.12 The growth in digital multichannel television has significantly increased the number and range of channels available. This is creating a potential mismatch between the amount of content available and the limited amount of time viewers have to consume it. An important development, therefore, is likely to be technologies that enable viewers to consume television content at a time and in a format that is convenient to them.

A transformative technology

- 4.13 The Personal Video Recorder (PVR) is a relatively new consumer electronics device that currently enables over 20 hours of digital television to be stored digitally. The PVR combines a hard disk storage device, developed for the personal computer industry, with a digital television receiver.
- 4.14 The PVR makes the recording and playback of television programmes much easier than using an analogue Video Cassette Recorder (VCR) because it does not require the use of tapes, and recordings can be set directly from an Electronic Programme Guide (EPG) rather needing to program a VCR timer. Some of the major characteristics of PVRs are summarised in the table below.

³³ Sky press release June 2004: http://www.corporate-ir.net/ireye/ir_site.zhtml?ticker=BSY.UK&script=415&layout=0&item_id=580035

³⁴ Paul Kafno, HD Thames, at DTG seminar in 2004 "Broadcasters in the UK see the logic of producing to a higher standard for sales and future archive purposes"

Figure 4.2: Typical characteristics of personal video recorders

Typical Characteristics of Personal Video Recorders	
High-Capacity Storage	Stores 20-70 hours' worth of programmes on a hard disk
On-Screen Menu	Allows selection of programmes to record and play using an intuitive on-screen menu system
Record-and-Play	Allows a user to watch the beginning of a programme even before recording is complete
'Hands-Off' Functionality	Can record entire series as well as simply individual programmes; more sophisticated models can 'learn' user preferences
Skipping	Facilitates skipping between programme segments and through adverts
Pause 'Live' TV	Allows live television to be paused or played-back in the event of viewing being disturbed

The implications of PVR use

- 4.15 Many observers recognise that the PVR presents a potentially serious challenge to linear broadcast services, where the channel provider sets the sequence in which programmes and adverts are watched. Rather than viewers having to choose between different programmes broadcast at the same time, the PVR enables viewers to create their own programme schedules. Channels are no longer only competing for viewers with programmes broadcast at the same time but with all programmes carried on the digital platform.
- 4.16 Those who use a PVR report that it has radically transformed their TV experience, making it difficult to imagine going back to “the dark ages” of the pre-PVR world.³⁵ Perhaps the most powerful illustration of the power of the PVR is the reactions of early Sky+ subscribers: 92% score the service 8 or more out of 10 on an 8-10 satisfaction scale; nine out of ten are likely to recommend it to a friend; and 100% say they are likely to remain a Sky+ customer.³⁶
- 4.17 In addition, available research (which may be influenced by the behaviour of early adopters) suggests that the PVR significantly increases the amount of time television is viewed in a time-shifted format. In both TiVo and Sky+ homes, ‘live’ viewing drops substantially – US research suggests that up to 70% of viewing is recorded in PVR homes; in Sky+ homes, the figure is just over half that.³⁷ UK analysis suggests that, while households with a VCR spend on average only 10% of their viewing time watching recorded television whilst in households with a PVR, 40 to 45% of television is watched in a time-shifted format³⁸.
- 4.18 Decipher has conducted most of the qualitative research on PVR use in the UK to date, and reports a range of new behaviours: including ‘bingeing’, ‘grazing’,

³⁵ The Walt Disney Company International, BrandDriver research, 2004

³⁶ Source: BSkyB, 2004

³⁷ Source: BSkyB, 2004

³⁸ Enders Analysis,

<http://www.endersanalysis.com/enders/documents/The%20Personal%20Video%20Recorder%20ES%20%5B2003-50%5D.pdf>

'compressing' and 'extending'.³⁹ Viewers are more attentive during prerecorded material (as we would expect, given that they have made the effort to seek it out and record it). Viewers will rework the weekly schedule to suit their own circumstances – for example, delaying *EastEnders* by half an hour to fit around the children's bath time, or taping Friday night TV and watching it on Saturday evening instead. The BBC has found that some people only watch the first few minutes of a show like *Changing Rooms* before fast-forwarding to the last few minutes; similarly, Celador reports people skipping the early rounds of *Who Wants to be a Millionaire?* to get quickly to the more exciting later stages.

Accelerating take-up?

- 4.19 Despite its positive reception by consumers who have used it, the take-up of PVRs to date has been relatively modest – with sales of only several hundred thousand units. TiVo was the first entrant into the UK market, and has now pulled out, leaving the Sky+ PVR as the main available PVR.
- 4.20 But take-up is likely to increase more rapidly since BSkyB began intensive marketing of Sky+ in 2003. Projections range considerably, from 18% penetration in the UK by 2010⁴⁰ to 50% penetration or more by the same time.⁴¹ A reasonably conservative projection might be 25-30% penetration by 2010 with significant growth continuing for several years into the next decade. For instance, Mindshare predict that by 2007, 20% of homes will have a PVR and by 2010 this will have risen to 40% of homes⁴².
- 4.21 In contrast, Professor Patrick Barwise of London Business School has argued⁴³ that the potential for PVRs is much more significant than some other emerging technologies, with a saturation level of 100%, because they provide significant consumer benefits which are relevant to all TV viewers. Also, they are now receiving substantial marketing investment (from BSkyB, with others to follow) with a mass-market strategy, and the price is falling as the capacity is increasing. It is not inconceivable that penetration could reach 70% by 2010 if they become integrated into low-cost digital terrestrial set-top boxes as the natural replacement for VCRs as switchover approaches. The introduction of a seven-day EPG on the digital terrestrial platform required will enable the development of a new retail market for PVRs. PVRs are also expected to be integrated into the next generation of media-centric PCs⁴⁴. These new devices will enable consumers to view and record digital television, access the internet and store all of a household's media content including music, photos and home videos.

The end of advertising?

- 4.22 The behaviour that most exercises the advertising industry and the commercial broadcasters is ad avoidance. The extent to which viewers skip past ads, and the effect on advertising impact, are hotly contested. Disney's research suggests that up to 98% of advertising is skipped in prerecorded viewing; Sky's figure for Sky+ is 76%. US research found viewers only skip 60% of ads, but with massive variation between

³⁹ Untangling the Future of UK TV, presentation to Ofcom seminar, July 2004

⁴⁰ Source: UBS, 2004

⁴¹ Source: PHD, Decipher

⁴² Source: Mindshare, 2004

⁴³ Private Ofcom seminar, July 2004, used with permission

⁴⁴ Microsoft key note address at CES 2004, Las Vegas.

different types of advertising, ranging from 92% skipping for advertising for financial institutions but only 32% for beer commercials.⁴⁵

4.23 However there are reasons to be cautious about the impact of PVRs on advertising:

- People have always sought to avoid unappealing advertising – Disney estimates the decline in ratings between programmes and their associated ad spots is 24% in terrestrial-only homes, and 38% in Sky Digital homes even without PVRs
- Conversely, viewers do value entertaining or engaging advertising – it is reported that some people will stop and even rewind for advertising they particularly enjoy
- People often forget they are watching in prerecorded mode, especially near live
- Some people have even argued that people have to pay more attention to ads while fast-forwarding than they normally would, to ensure they don't miss the restart of the programme. In Decipher's research, levels of ad recall were similar to those for viewers who watch advertising at normal speed – although whether watching advertising at 16* normal speed can really be called effective brand exposure is doubtful. And it is not clear whether similar levels of ad recall are achieved when a majority of viewing is prerecorded and the majority of ads are skipped.

4.24 MindShare and others have attempted to quantify the net impact of ad avoidance. MindShare assumes that 15% of ads are avoided without a PVR, and that this rises to 75% in prerecorded viewing in PVR homes – a net increase of 60%. If 60% of viewing is prerecorded, then the net effect is a 36% reduction in the ad audience in PVR homes. And if PVRs are in 32% of homes (MindShare's 2010 projection), the net impact is a reduction in the audience for advertising of 12% – significant, but not disastrous. Similar calculations by Disney put the figure at only 5% by 2009, although this is based on very low penetration projections. Disney also points out that this reduction in ad viewing will be compensated to some extent by the increasing proportion of viewing to commercial channels in a multichannel environment, with the result that the total number of available impacts may remain constant or even increase.

The broadcasting landscape in a time-shifted world

4.25 Ofcom plans further independent research into patterns of behaviour in PVR (and non-PVR) homes and its cumulative impact on advertising effectiveness. It already seems likely that centre breaks will increase in value compared to end breaks. It is also highly likely that different kinds of programming will suffer more than others. Ironically, the programmes that are amongst the most popular and most attractive to advertisers are also the most likely to be prerecorded – soaps, high-end dramas, films.

4.26 Advertisers are likely to have to look at the performance of different slots in more detailed and creative ways, to ensure that advertising continues to break through to its target audience. These could include placing an increasing premium on ads and programme sponsorships positioned first and last in the ad break, as these are more likely to be seen. There is also likely to be an increased premium paid for ads placed around live events and shows that are less likely to be watched in a time-shifted format. This could create an increase in the rights paid, for example, for Sports events and encourage further growth in reality-TV shows, and live interactive voting on television programmes. Advertisers may also need to place an increased emphasis on creating ads that are entertaining to encourage viewers to elect to view them rather than simply skipping past them. The PVR is also likely to support the introduction of

⁴⁵ Sources: Disney (2004), Sky (2004), Friedman, W., 'PVR users skip most ads', Advertising Age, 2002

new forms of interactive advertising by enabling viewers to exit from a live broadcast stream to access an interactive ad without missing any of the programme they were watching. And it may change the economics of high-cost acquired programming – for example, PVR take-up might damage the DVD rental market, incentivising film studios to explore different routes to market; this could include bringing first-run movies to TV earlier, or through a pay-per-view route.

- 4.27 In addition, and despite the uncertainties about the future of PVRs, it seems highly likely that by 2014, the predetermined schedule will be much less important than it is today. Viewers will have moved from an almost entirely ‘push’ broadcasting model – watch what happens to be on – to one which contains ‘push’ and ‘pull’ – watch what they want to watch, when it suits them to watch it. Surfing from channel to channel will decline as people turn to their stock of saved programming instead, and the practice of coming across unexpectedly satisfying viewing by ‘serendipity’ will be much less common. Landmark shows, ‘appointment TV’ and special interest programming will still exist – if anything they will be strengthened by viewers’ ability to watch this output when and how it suits them, not only when the programmes are on (or when they remember to set the video). Weaker, low-budget and ‘wallpaper’ TV will suffer.

The move from linear to on-demand television

- 4.28 Digital terrestrial, cable and satellite networks broadcast television in a linear time-sequential format and provide the same content simultaneously to each household. Cable networks could however be re-configured, using Internet Protocol (IP) technology, to provide a dedicated high-speed on-demand connection for each household. Over the next five years, it is expected digital cable operators will look to migrate their networks towards this configuration to deliver true on-demand services and network PVR type functionality, in order to differentiate their services from those provided by terrestrial and satellite. The limited geographical coverage of cable however means that these services will not be universally available throughout the UK limiting the impact of these changes on the overall broadcasting landscape.
- 4.29 Broadband Asymmetric Digital Subscriber Line (DSL) technology provides an alternative to digital cable by enabling on-demand television services to be delivered over domestic telephone line connections. The DSL television providers Kingston Interactive Television (KIT) and Video Networks – as mentioned in Section 3 – do not use the internet to deliver their services and instead provide their content from local servers to improve their quality and reliability. To access broadband television services customers must live within a few kilometers of the local telephone exchange. Because of this constraint, the coverage of DSL television is significantly less than digital terrestrial and satellite limiting its deployment to areas of high population density in cities and towns.
- 4.30 Some of the on-demand services provided by DSL television could be simulated with a five-year timeframe on digital satellite and terrestrial platforms by pushing broadcast content onto PVRs. This approach would enable viewers to select for example films on an on-demand basis from a content library held on the PVR and provide an improved service over the near video-on-demand services currently provided on digital satellite and cable platforms, which play-out multiple versions of the same content with a small delay between them. The on-demand content could be downloaded overnight to reduce transmission costs and be marketed and sold as separate services with their own EPGs, advertising and sponsorship. This type of service is currently provided in the US on the DirecTV satellite platform by TiVo/Starz!⁴⁶

⁴⁶ www.starzondemand.com

- 4.31 Overall, the limited geographical coverage of digital cable and DSL television, at least in the medium term, means that true video on-demand services will be available to less than 50% of homes in the UK and is likely to limit their impact on the overall broadcasting landscape. Nonetheless, it is interesting to note that, in July 2004, BT set out a plan to offer television services over its broadband network.
- 4.32 In addition, the storage capacity of PVRs is expected to double approximately every two years⁴⁷. Terrestrial and satellite broadcasters could use this increased capacity to push content onto future generations of PVRs to simulate video-on-demand functionality. These services are likely to focus in the short-term on the delivery of on-demand films and are unlikely to have a significant impact on public service broadcasters. In the longer term, high capacity PVRs and home-media servers could enable all television content to be presented in an on-demand format and in doing so fundamentally challenge the concept of broadcast channels – a subject to which we return in Section 5.

Content payment systems

- 4.33 Content payment systems are becoming an increasingly important part of the media landscape with the growth in pay TV, e-commerce and paid-for media content sites on the internet. These systems could provide a potential alternative to advertising based revenues under threat from multichannel and on-demand television services and an alternative to the BBC licence fee in the longer term.
- 4.34 An essential part of a content payment scheme is an ability to prevent the content being accessed without payments being made. Conditional Access (CA) technology provides this functionality on pay TV platforms. This technology scrambles the content and distributes electronic descrambling keys to the viewers who are entitled to watch the content. This approach enables different channels and services to be made available to different households based on the payments they make. A payment and billing system is integrated with the CA system to provide pay TV operators with a high level of flexibility over how content can be marketed and sold to viewers. Sophisticated micro-payment billing systems can be supported using this approach but most content is sold today either on a monthly subscription basis that enables viewers to access a package of channels or on a per programme on-demand basis for high value content.
- 4.35 CA systems are currently supported on digital cable, satellite and DSL platforms but not on the digital terrestrial platform. Top Up TV recently launched a Pay TV service on the digital terrestrial platform but this is only available to ex-ITV Digital subscribers who already owned digital receivers capable of supporting CA. Most of the Freeview digital terrestrial receivers currently sold in the UK market are unable to support CA making it unlikely that a content payment could be universally implemented on the digital terrestrial platform within a short to medium term timeframe. In the longer term, however, the introduction of Digital Rights Management (DRM) systems to protect digital content from illegal copying and piracy may lead to the introduction of CA functionality in all digital receivers and support the introduction of new content payment systems.
- 4.36 To make payments related to services carried on a Pay TV platform but not directly linked to a television channel subscription, such as the purchase of goods from a tele-shopping channel, a credit card payment is normally used rather than the Pay TV operator's billing system. This helps ensure that Pay TV platform operator does not become

⁴⁷ IDC analyst (June 2003) "...capacity doubles every 12 to 18 months", <http://www.zeropaid.com/bbs/archive/index.php/t-11395>

involved in a potential dispute between the provider of the goods and the consumer. Credit cards are also the preferred payment means for e-commerce purchases and as digital television operators start to integrate broadband internet services into their platforms the role of the credit card in paying for these services is likely to increase. The digital receivers used on the Sky platform have a built in credit slot but it is not currently used.

- 4.37 Because of the high costs associated with credit transactions (linked to costs associated with fraud, international transfers, insurance etc) they are normally best suited to making payments with a value of £10 or more. Some of the new internet music download sites sell music tracks for as little as £1 to credit card customers, however, and get around this problem by offering consumers different tariffs based on how many electronic tokens they buy with their credit card to use for future purchases.

Mobile television

- 4.38 The new generation of 3G mobile networks provides the capacity and infrastructure needed to deliver high quality video services to handheld devices. This brings opportunities for broadcasters to re-package their content and forge new partnerships with the mobile industry to deliver mobile video services to the consumer, such as live sports events and the latest news clips. Last autumn, Vodafone and Hutchison's 3G network, 3, paid in excess of £20m each in a three-season deal for Premier League match highlights⁴⁸. BSkyB have also recently announced a deal with the 3G operator, 3, to offer Sky Sports News⁴⁹.
- 4.39 Mobile networks are configured for personal one-to-one communications and makes the cost of transmitting video to large audiences over a mobile network relatively expensive. Because of this, most 3G video services currently only offer downloadable video clips of no more than a few minutes duration. The digital terrestrial television network could deliver video content that is likely to be watched at the same time by a number of viewers, such as the replay of a goal scored at a football match, much more efficiently. Broadcast content could also be pushed into the digital memory of future handheld devices to provide on-demand services to viewers.
- 4.40 To provide the robust signals needed for handheld reception the transmission mode (modulation scheme and error correction) currently used for digital terrestrial television services must be adapted. The European Digital Video Broadcast group is working on standards (DVB-H) for these services⁵⁰. New transmitter sites would also be required, but partnerships between broadcasters and mobile phone network operators could enable the additional transmitters required to be co-located with existing mobile phone masts. By combining digital terrestrial services with a mobile telephone return path a rich set of new interactive mobile services could be supported including, live television, on-demand television, interactive television, interactive advertising, voting, location based services etc. The duration of the video content delivered would not be constrained on these systems by the costs of transmission but by the power consumption of the handheld devices and user requirements.
- 4.41 New mobile multimedia services could create new revenue opportunities for broadcasters by extending the reach of their existing broadcast services to viewers whilst they are away from their homes and extending their appeal to younger

⁴⁸ <http://www.3-three.com/5917.htm>

⁴⁹

<http://www.three.co.uk/news/h3gnews/pressnewsview.omp?collcid=1019745742912&cid=1086361971238&index=7>

⁵⁰ <http://www.dvb.org>

audiences who are heavy users of mobile technology but relatively light users of conventional television. The main obstacle to the launch of mobile television services in the UK will be the requirement for new spectrum to deliver these services.

Impact of technology change on the public service broadcasters

4.42 What are the key implications for public service broadcasting? This section opened with a schematic figure of the potential future take-up of different technologies. The following table summarises our discussion in more detail, highlighting the impacts in the short-term, medium term, and longer term.

Key development	Timeframe	Impact on PSBs
Move towards the multichannel world	Short-term (next five years)	Challenges to audience share and advertising revenues May increase consumer importance and regulatory significance of EPGs (see Section 5)
Increase in time-shifted viewing via PVRs, home media servers and emerging on-demand services	Medium term (five to ten years)	Challenges to advertising revenues may require new advertising models New opportunities from PVRs – a new means of consumption of PSB content
Introduction of HDTV on digital satellite and potentially other platforms	Introduced in short to medium term; main impacts longer term (ten years plus)	May pose threats to DTT platform, which cannot currently support HDTV Post-switchover, broadcasters could use released spectrum to enhance DTT platform Could place premium on high quality programming that can use HDTV technology to its full potential
Full on-demand services over broadband and cable, or simulated by high capacity PVRs	Longer term	Pose increasing threats to linear broadcast channels Could require a complete rethink of the role of the existing public service broadcasters
Advances in CA and DRM technology enable new content payment methods	Longer term	Could result in “pay-as-you-go” television – pay only for the content consumed Could eventually provide an alternative method of collecting the BBC licence fee
Growth in mobile television	Longer term	Create new ways of delivering content to consumers Potential new revenue stream for the PSBs

Section 5

Impacts on consumer preferences and behaviour

5.1 In this section, we consider how social change, digital take-up and new digital services are likely to affect viewers' consumption of television. The issues covered include:

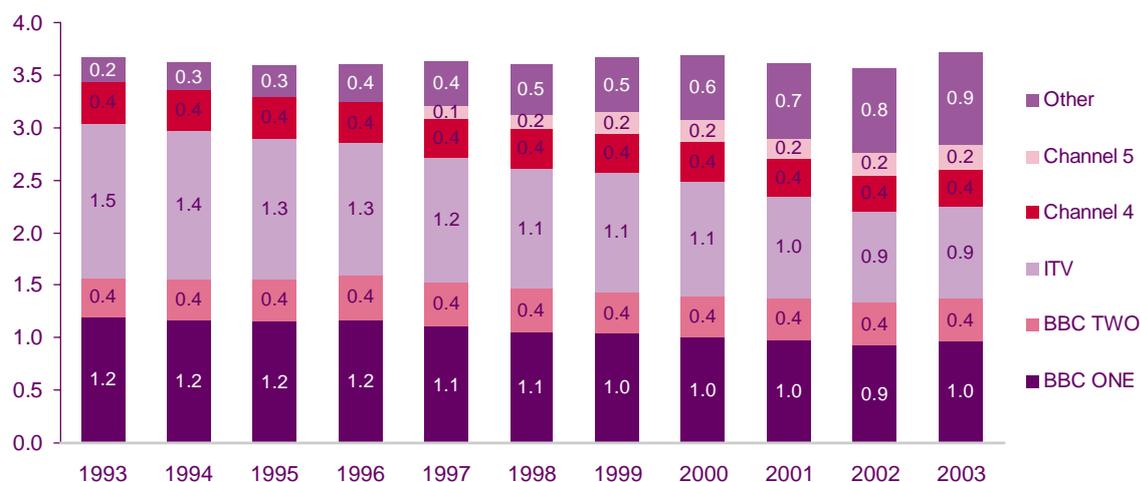
- the competition for consumer time – arising from the expansion of different forms of media and entertainment;
- changing programme preferences – including an increasing shift toward entertainment;
- challenges to the traditional model of scheduling;
- choice and fragmentation in the digital world;
- whether these challenges might result in the end of “channels”; and
- access to and control of television content.

5.2 Overall, this section aims to assess the effect of change on the way we consume and perceive TV. We also expand on the consequent implications and uncertainties facing the delivery of public service television broadcasting in the UK.

The competition for consumer time

5.3 The story behind the massive expansion of media over the last 10-20 years has been an increasingly fierce struggle for consumer time and attention. Over the last twenty years a huge range of new sources of entertainment and information have become established. The most pervasive include the Internet (including email and instant messaging), games consoles, mobile phones (text and voice), DVDs and compressed digital music, as well as innovations in the TV market itself. More traditional media have also renewed and reinvented themselves – cinema attendance is increasing and some broadsheet publishers have bucked the trend of declining readership by launching tabloid editions. However, in the face of this radically increased competition, TV viewing has been remarkably resilient.

Figure 5.1: Average daily hours of viewing, 1993-2003



Source: BARB

- 5.4 As **Error! Not a valid link.** shows, on average, time spent watching TV in the UK has been stable at a little over 3.5 hours per day since 1993 – although the distribution of that time between channels has changed, as Five launched and multichannel TV became more widespread.
- 5.5 But there are signs that TV’s grip on consumers’ time is waning. Over half of European broadband users report spending less time watching TV since subscribing,⁵¹ and Wanadoo has found an 11% swing from TV viewing to Internet use in broadband households⁵². NOP has published research suggesting that in households with a PC, total time spent on the PC now exceeds that spent watching TV⁵³. Some areas of broadcasting are affected more than others – the well-documented decline in viewing of news and current affairs may be partly compensated by the increasing use of online news – and some audiences will move away more quickly than others. For example, use of the Internet as the main source of news is significantly higher amongst young Asians than other groups.⁵⁴
- 5.6 Part of the story may be declining attentiveness to TV. The BBC’s long-term tracking study, Daily Life, has found that overall levels of viewing have increased substantially since the 1940s – but the amount of attentive viewing has stayed remarkably constant. We know that the TV is often on even when nobody is really watching it – what may be increasingly happening is people having the TV on while doing something completely different, such as using the Internet.
- 5.7 The most likely areas of growth and development in the broader media industry over the next ten years are in DVDs, the Internet (driven by broadband take-up), networked games consoles and third-generation mobile phones. It seems inevitable that this will drive out broadcast TV consumption to some extent, especially amongst the young. 16-24 year olds already watch less TV than 25-34s, who in turn watch less than the average adult.⁵⁵ The biggest users of the Internet are 16-24 year olds; the biggest users of games consoles are aged 10-14. According to the BBC, 95% of teenage boys

⁵¹ Source: Strategy Analytics, 2004

⁵² Source: Wanadoo, 2004

⁵³ Source: NOP, 2004

⁵⁴ Source: Old News, New News, ITC, 2002

⁵⁵ Source: BARB

have a games console at home, and half of them spend nine or more hours playing on them every week⁵⁶.

- 5.8 This can be expected to affect all broadcasters' audiences, particularly those which lack compelling, appointment-to-view TV. Growing take-up of multichannel TV and PVRs, both of which increase TV viewing (at least in the short-term), may help to counteract this to some extent, but it seems likely that levels of TV viewing, at least in younger age groups, will gradually decline over the next ten years.
- 5.9 However, it is not clear that this will similarly impact consumers' propensity to pay for TV. If anything, spending on TV has increased as more viewers sign up for subscription services, the licence fee has increased in real terms and more expensive home entertainment systems have appeared on the market. We spend more on TV and the Internet than on books and newspapers, gardening, games and hobbies and the cinema.

Figure 5.2: Weekly household spend on recreation and culture (selected categories), 2002-2003

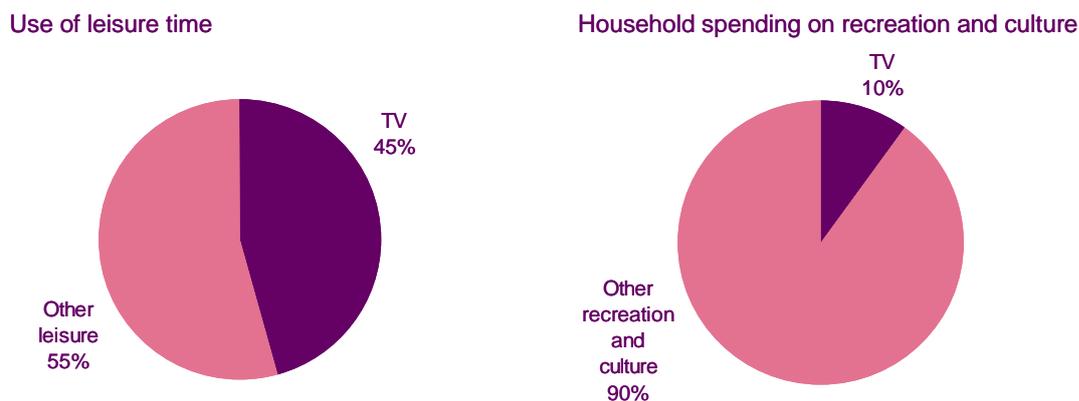


Source: Expenditure and Food Survey, Office of National Statistics, 2002-03

- 5.10 And TV still looks very cheap as a form of leisure and entertainment. It takes up almost half our leisure time, but accounts for just ten per cent of household spending on recreation and culture.

⁵⁶ Source: Daily Life, 2002-2003; BBC, 2003

Figure 5.3: Allocation of leisure time by full-time workers compared with breakdown of household spend on recreation and culture



Source: Household Survey, Expenditure and Food Survey 2002-03, both ONS

Programme Preferences

- 5.11 Research carried out for Phase 1 of Ofcom's PSB Review found that multichannel viewers are significantly less likely to watch what has traditionally been considered 'public service' programming, including current affairs, arts and religious output.
- 5.12 This may simply reflect preferences that are concealed by the lack of choice in a terrestrial-only environment: given the choice, most people might prefer to watch something light-hearted than Dispatches. Alternatively it may reflect differential preferences amongst the first 50% of the population to go digital; after all, they may have chosen multichannel TV at least partly because of the greater volume of entertainment, movies and sport on offer.
- 5.13 However, there is some evidence that rejection of this kind of 'pure' PSB programming might be linked to a wider shift away from the perception of TV as a force for social good. Sky and cable viewers are less likely to think TV has a big influence on people's thoughts and behaviour (61% vs 77% of terrestrial viewers) and less likely to believe that it should promote tolerance and understanding of different lifestyles (54% vs 70%).⁵⁷ The sense is that TV is more ephemeral, more light-hearted than these grand social projects would suggest; it achieves social cohesion through entertainment and diversion, not through serious or in-depth discussion of political and cultural issues.
- 5.14 It is too early to draw firm conclusions about the changing perceptions of TV's role in society. Ofcom's research still shows strong value is attached to TV's social functions and its role in bringing people together. But we will need to monitor this closely. If evidence suggests that viewers increasingly see TV as a pure entertainment medium, rather than a source of education or 'betterment', this would pose serious questions about the purpose and efficacy of 'public service' broadcasting, however it is defined and delivered.

The end of scheduling?

- 5.15 Any shift in programme preferences may well reflect the fact that the traditional model of scheduling is under pressure. As discussed earlier, PVRs have the potential to revolutionise both viewers' use of TV, and the economics of the TV market. Another

⁵⁷ Source: Ofcom

implication is that the use of PVRs could help shift viewing preferences, possibly further away from challenging material: for instance, some people will skip serious news and documentary output, if the PVR allows them to store and play back numerous hours of comedy and entertainment programming. On the other hand, PVRs enable us to sample – at a time convenient to us – high-quality, high-profile ‘event’ TV, including the innovative and expensive categories of PSB programming, in a way that could reward risk-taking by broadcasters and enable greater experimentation with formats and scheduling.

- 5.16 In addition, the emergence of new payment models may reduce the value of the traditional schedule – since viewers will be able to buy precisely the content they want to watch. Micropayments and the concept of the ‘electronic wallet’ were touted as the ‘next big thing’ during the Internet boom, but never really took off. They often failed because of concerns about security, lack of a critical mass of users (merchants and purchasers), and lack of desirable things to buy.
- 5.17 These problems may disappear in a TV context. As Barry Cox points out,⁵⁸ cable companies already have successful, secure and trusted micropayments systems in the form of the telephone bill. And pay-per-view (PPV) TV is reasonably well established on Sky. Some have prophesied that eventually (even within the next 10-15 years) every programme will be selected and paid for individually.
- 5.18 This kind of completely fragmented, individualised market seems unlikely. It does not square with the way people experience TV and want it delivered to them. Already a significant minority (42%) of Sky viewers admit they find it difficult to keep up to date with all the choices available to them, and qualitative feedback suggests that even viewers in Sky homes prefer the concept of a mixed schedule with a good variety of formats and genres within one channel. Channel owners are recognising the importance of building a strong brand that, while not attempting to speak to everyone, does attempt to cover the full range of diverse tastes of its particular target audience.⁵⁹
- 5.19 A market in which viewers pick what they want to watch on an item-by-item basis from whichever provider can best meet their immediate needs seems to involve too much complexity for many people to make the effort. We will remain more likely to buy channel packages or bundles of content, even if that means we end up subsidising channels or programming we never use. Nonetheless the use of pay-per-view seems likely to increase at the margin, not least simply because of the growing numbers of people signed up to digital and broadband services that make this kind of market possible. And – as discussed in the previous Section, future technology developments are likely to make on-demand services more attractive, and the traditional schedule less important.

Choice and fragmentation in a multichannel environment

- 5.20 We have already seen that the move to digital will result in the supply of TV content expanding dramatically over the next ten years. Viewers are likely to be able to choose from a wide range of premium movies and sports coverage, archive material, dedicated special interest channels and increasing volumes of foreign imported TV, as well as a significantly greater amount of new, UK originated material.
- 5.21 The most obvious effect so far has been to reduce the audience share of the main five channels. This trend has been apparent for several years, and is unlikely to be

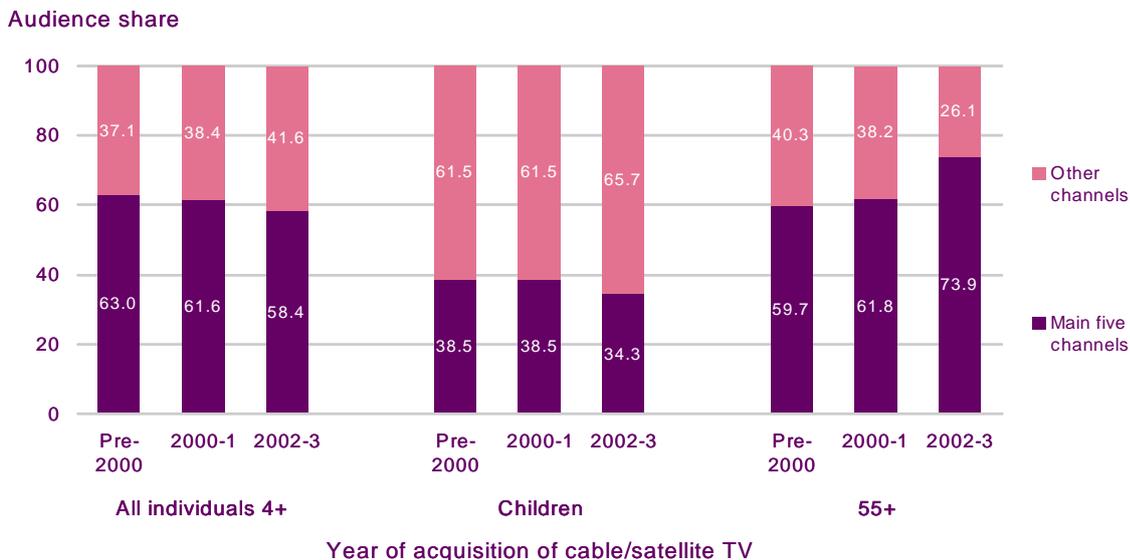
⁵⁸ Free For All?, Demos, 2004

⁵⁹ Dick Emery, CEO of UKTV: “Channels like ours shouldn’t try to meet everyone’s needs all of the time, but some of the audience’s needs a lot of the time.” (The New Medium of Television, 2004)

reversed. In the late 1990s, the main five channels still accounted for 85% of viewing; by 2003 this had fallen to 76%, as viewing to multichannels slowly crept up. By 2010 the share of the main five channels will have fallen further, possibly to around 60-65%. ITV1's decline is most stark, from 31% in 1999 to just 24% in 2004. Despite a strong start to 2004, its share had fallen below 23% by April 2004⁶⁰.

- 5.22 The decline in audiences for the main five channels is especially acute amongst younger viewers and in less affluent homes. The share of the five terrestrial channels amongst those under 35 in multichannel homes was less than 50% by early 2004 (compared with over 70% among over-55s). 16-24 year olds in multichannel homes watch half as much BBC programming as those in terrestrial-only homes. The decline is sharpest amongst children, who watch just 9 minutes per day of the five terrestrial channels in multichannel homes, compared to half an hour per day in terrestrial-only homes.
- 5.23 Some have suggested that new multichannel adopters 'experiment' with a range of different channels in the early days of acquisition, before returning to the main five channels when they discover that most of the favourite programmes can still be found there.
- 5.24 But analysis of viewing data (Error! Not a valid link.) suggests that if this initial boost occurs at all, it only lasts for a relatively short period of time, and the 'settle-down' distribution of viewing in long-term multichannel homes is substantially skewed away from the main five channels. Viewing to digital channels in 2003 amongst those who had owned digital satellite or cable for a year or more was 48%, twice as much as the average across all homes. Indeed, for older viewers, the reverse of the previous argument appears to be true: the longer they have had access to cable or satellite services, the more multichannel TV they watch.

Figure 5.4: Viewing of digital channels in cable and satellite homes, by age and year of acquisition of multichannel TV



Source: BARB

- 5.25 If anything, 2003 cable or satellite adopters appear to be more committed to multichannels than previous acquirers. Their share of viewing to digital channels in

⁶⁰ Source: BARB

2003 was 57%, while previously new acquirers had not watched significantly more multichannel TV than average for cable or satellite viewers in their year of acquisition (47% in 2002). If this trend continues and proves to be more than just a one-off cohort effect, the picture may be bleaker for the main five channels than the earlier analysis suggests.

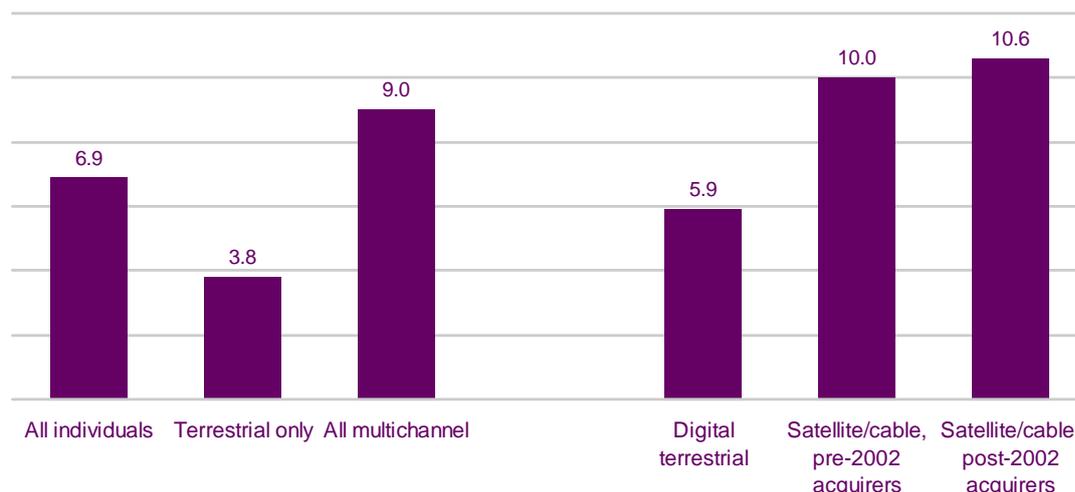
The future of channels

5.26 This discussion raises a number of important questions: in schedules driven by a small proportion of high-profile programming, and given widespread use of PVRs, do traditional linear channels have any meaning for viewers? Will they simply select the programming they want from a directory of content, without really noticing where they are getting it from?

5.27 To answer this question, we looked first at the channel experience of long-term multichannel viewers. Although the future TV environment will be very different from today, patterns of behaviour amongst those who have had multichannel TV for two or more years might point towards possible future trends as digital penetration approaches 75-80%.

5.28 On average, individuals in multichannel homes watch at least 15 minutes of 9 different channels every week.⁶¹ For most of them, this includes BBC1 and BBC2, ITV1 and Channel 4/S4C; of the main five channels, only Five reaches less than half the multichannel population every week (45%). But digital terrestrial viewers are different from cable/satellite subscribers, watching an average of 6 channels per week compared with over 10 for cable/satellite viewers. However, there is little difference between more recent and longer-term cable/satellite viewers; those who have had cable or satellite access for at least two years watch an average of 10.0 channels per week, while those with access for two years or less see an average of 10.6.

Figure 5.5: Average number of channels watched in a typical week, by platform and year of acquisition



Source: BARB

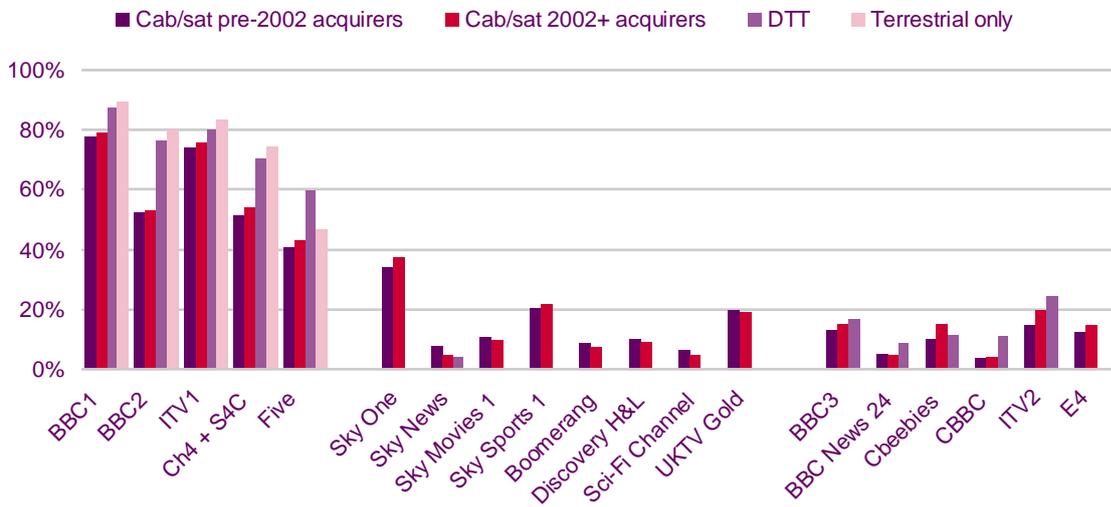
5.29 However, there is some difference in the nature of the channels they watch. Long-term multichannel viewers are less likely to turn to the five main channels and more likely to include some of the minor channels in their viewing; the reach of channels like UKTV Style, Boomerang, Plus, Discovery Home & Leisure, Toon Disney, the Sci-Fi Channel

⁶¹ Source: BARB

and UKTV Gold is all higher in long-term multichannel homes. Conversely, more recent cable/satellite acquirers are more likely to watch the terrestrial channels' spin-offs.

Figure 5.6: Channel reach by year of acquisition

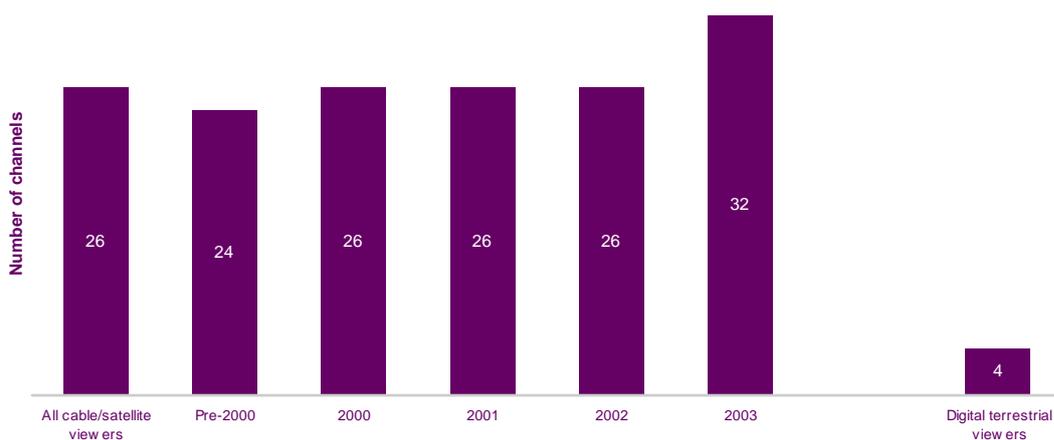
Channel reach, March 2004



Source: BARB

5.30 Nonetheless, the overall averages suggest that individual long-term multichannel viewers are not watching more channels – just slightly different ones. In 2003, 26 channels accounted for 75% of viewing in cable and satellite homes, with the exception of those homes that acquired digital TV in that year, who watched an even wider mix of channels.

Figure 5.7: Number of channels required to account for 75% of viewing, by year of acquisition



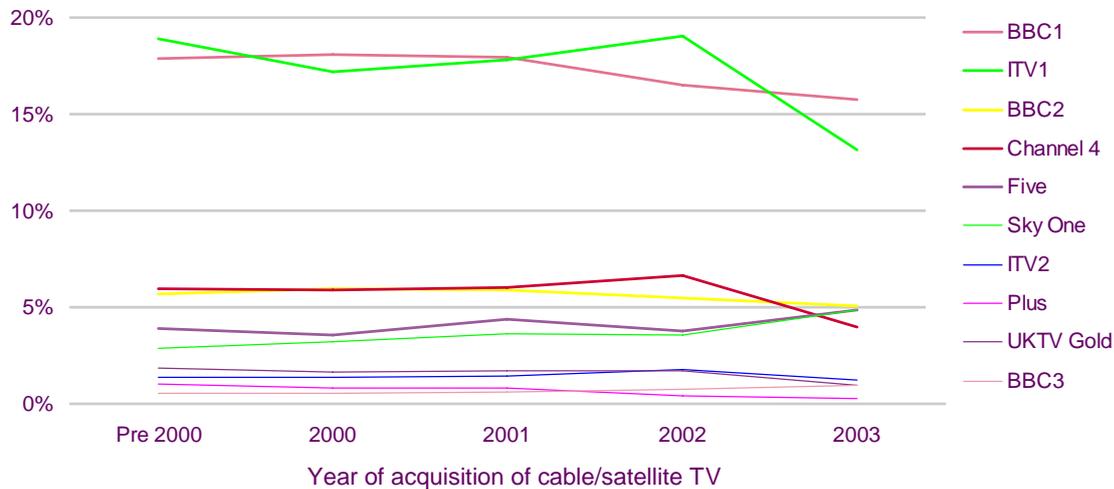
Source: BARB

5.31 Looking at audience share trends suggests that if there is a blip in viewing when viewers first acquire cable or satellite TV, it only affects viewing for the first year, and probably a considerably shorter period than that. In the first year viewing to the main five channels is particularly low, before stabilising thereafter; viewing of more recent

adopters tends to be more fragmented than long-term multichannel viewers', as they spend a greater proportion of time testing out non-terrestrial channels.

Figure 5.8: Channel share by year of acquisition

Audience share of selected channels in cable/satellite homes, 2003



Source: BARB

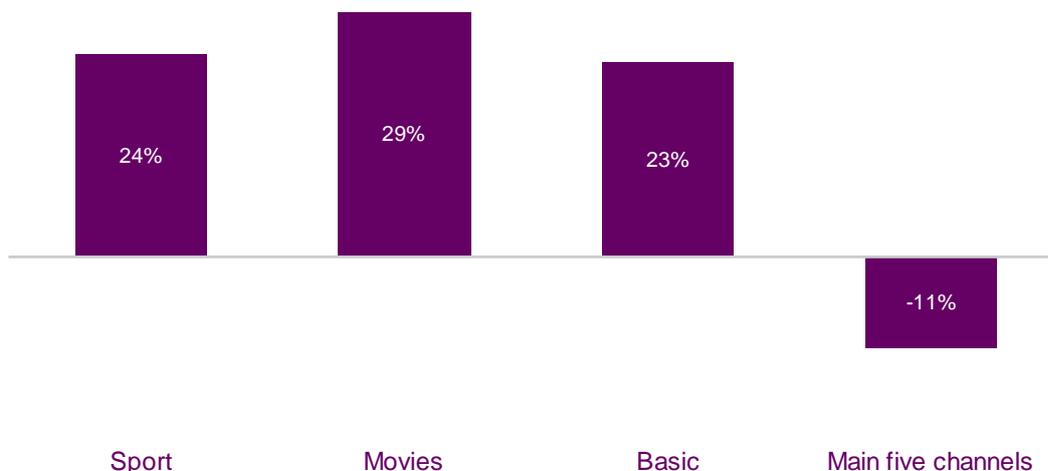
- 5.32 What does seem clear is that the immediate threat to the importance of channel brands from multichannel TV has been overstated. Well-branded channels remain a vital marketing tool, building loyalty, giving audiences confidence in new programming, enabling cross-promotion. If anything, strong, distinctive brands have become more important in a multichannel environment. The top ten digital channels are broadly consistent, regardless of viewers' length of exposure to multichannel TV; again, only 2003 acquirers appeared to behave significantly differently in their year of acquisition, and it is not yet clear whether this is a cohort effect or 'viewing lifecycle' effect.
- 5.33 PVRs, however, may pose more of a threat. Some argue that they encourage a 'magpie' mentality, with viewers flitting around the EPG to pick up whatever immediately grabs their attention, without caring or even noticing which channel has provided it.
- 5.34 It seems likely that use of PVRs will continue to challenge the audience share of the five main channels by enabling viewers to store programming from other channels that they might otherwise have missed. US research has found that 65% of PVR viewers watch more channels than before,⁶² and are more driven by loyalty to particular programmes or genre categories than affinity to a particular set of channels.⁶³ Sky has found that 54% of Sky+ subscribers watch more channels, with the main five channels the biggest losers.

⁶² Source: Interactive TV Research Institute, Murdoch University, Perth, 2003

⁶³ Source: C Cubed, 2002

Figure 5.9: Impact of Sky+ on channel viewing

Net change in viewing of channel groupings (% watching more - % watching less)



Source: BSkyB

5.35 But it seems unlikely that this will significantly devalue the channel as brand, at least for the five main channels. PVRs do not eliminate the need for viewers to narrow in on a relatively small number of channels as their main providers – viewing data and qualitative evidence suggests around 8-10 channels on average.⁶⁴ They will turn to them first, remember their slots on the EPG and proactively screen them for material to record. Indeed PVRs may help viewers develop their priorities by requiring them to identify a manageable set of channels they look to when deciding what to record.

5.36 In this environment the successful channels are likely to be those with strong, well established brands, a clear positioning and large programme budgets available to invest in high quality, original programming. Viewers will continue to identify with those channels that tend to produce the kind of programming they value most – although maybe this will be Sky One, Discovery or Nickelodeon as often as BBC1 or Channel 4. Beyond these mainstream, mass-market channels, the channels that succeed may well be minority channels serving dedicated niche interests to a depth that the mass market mainstream channels could never match. The losers will be low quality, repeat-heavy general interest channels, with little by way of appointment TV, an undifferentiated offer and without the small-but-loyal audience of specialist channels.

Access and control

5.37 If PVRs are the device through which viewers choose what they want to watch, when they want to watch it, and they choose from an increasingly wide and diverse range of channels, then important issues arise: where do we get our information about TV, particularly new and untested shows, and who do we trust to give us that information? How will viewers decide what to watch?

5.38 Much has been said about the importance of electronic programme guides (EPGs) as the key to viewer choice. EPGs will be an invaluable guide for consumers faced with a bewildering array of channels, pay-per-view content, prerecorded and on-demand content. As a result a high EPG placement has already begun to become a valuable piece of electronic real estate, subject to intense commercial negotiation and dispute.

⁶⁴ Source: Ofcom

- 5.39 EPG placement is likely to be important, but we should not overstate the importance of the EPG in driving future viewing. ITC research found that people were willing to look below the first page in the genres they were interested in, and frequently remembered the channel numbers of a few channels they watched regularly. More importantly, the EPG is still only one of the sources of information about programming. ITC research conducted in 2002 found that when cable and satellite viewers turn on their set, 29% go straight to one of the main five channels; only 22% turn first to the EPG. Slightly fewer (18%) surf till they find something they want to watch, and a similar number (17%) already know what they're going to watch. Two-thirds of viewers plan their viewing at least a few hours in advance, mostly using press or specialist magazine TV guides; one in four never use the EPG.⁶⁵ Most people have a fairly clear idea of the order of channels on the EPG and will remember the numbers of the channels they watch most frequently.
- 5.40 So EPG placement may be one of the factors that helps determine a channel's audience, but by no means the most important, especially for the main networks.
- 5.41 For new channels, the issues are more complex. At present the process by which viewers find out about new channels is unpredictable and serendipitous – 44% find them by chance when surfing, 37% seem them advertised or promoted on TV, 31% read about them in operators' magazines and only 29% notice them on the EPG. Most people would welcome more information – 77% support the idea of a special section on the EPG for new channels, or some way of highlighting them.⁶⁶
- 5.42 Like VCRs, the Internet and other new media before them, EPGs have redistributed power over technology in the home. The ITC's research found that children (9+) are the most sophisticated and confident users, and used the widest range of features; the 'household champion' (often an older teen or father) is confident but only has partial knowledge. Women often feel the EPG doesn't 'belong' to them and will either avoid it entirely, or experiment only when viewing by themselves. As with PVRs, children's media sophistication may create difficulties in ensuring that they are not (wittingly or otherwise) exposed to material that their parents would not want them to see.
- 5.43 It is also worth noting that this discussion is based on EPG systems as we currently know them – i.e. as a means of gaining information about, and access to programming on a pre-determined schedule.
- 5.44 However, future technological developments might change the nature of the EPG, and so also impact on consumers' interaction with television content. For instance, in a similar way that Internet search engines such as Google help identify sites of interest from the billions available on the Internet, future EPG software may enable viewers to electronically search for the content they want to watch on a digital platform. For example, viewers could search for programmes involving their favourite actors, or for documentaries on particular topics. These search engines, coupled with storage facilities in digital receivers could enable viewers to create their own virtual channels tailored to their individual preferences from the programmes broadcast on a digital platform.
- 5.45 In this way, EPGs (or the services that evolve out of them) could become more powerful gateways to television content, and so help exacerbate the trends noted earlier about the movement away from linear broadcasting. The key technologies already exist to provide this type of functionality, but are unlikely to be introduced

⁶⁵ Source: ITC, 2002

⁶⁶ Source: ITC, 2002

within a five year timeframe because of the need for new digital receivers and for broadcasters to provide the required additional data on the programmes.

Implications for Public Service Broadcasting

- 5.46 So what does this all mean for the public service broadcasters? In many ways, the main five channels are in a relatively strong position going into the digital age, thanks to their established brands, long history of quality programming and continued mass reach. Yet they still face significant challenges over the next ten years. In particular, the kinds of programming traditionally thought of as public service broadcasting are likely to face continued pressure.
- 5.47 It is difficult to predict how such a volatile market will evolve over a relatively long time period – we have already seen that uncertainties abound in many areas. Nonetheless, the state of the consumer TV market will depend most critically on how effectively the main five channels (and their digital competitors) adapt to changing consumer preferences and behaviour.

The Main Five Channels: Areas of Strength

- 5.48 The main five channels are likely to remain the flagship UK broadcasters and the focus of most people's daily viewing. Even in cable and satellite homes, Five - the analogue channel with the lowest share – accounted for more viewing in 2003 than the digital channel with the largest audience (Sky One). The main five channels benefit from high brand awareness, unrivalled programme budgets, the majority of the UK's appointment-to-view TV and a deeply ingrained understanding of the domestic audience.
- 5.49 This brand heritage could support extensions of the main five channels' broadcast services into new areas, facilitated by the development of PVR and EPG technologies. It is not difficult to imagine, for example, the BBC positioning itself as a trusted guide to the digital environment, providing advisory and ratings services (at least to its own content) through an advanced EPG.
- 5.50 Indeed growing satisfaction with TV generated by technologies like PVRs might boost the main five channels by enhancing viewers' perceptions of their entire TV experience. Although more research needs to be done on this subject as take-up of PVRs increases, it is possible to hypothesise, for instance, that the main five channels – with their high levels of programme investment – may continue to provide the majority of the content that PVR users record – soaps, dramas, high-profile series – and as such their total audience might be higher than it otherwise would be, at least in particular areas of the schedule.

Challenges to Public Service Broadcasting

- 5.51 However, despite these assets, the main five channels will undoubtedly face new and increasing pressure over the next ten years. There will, for instance, be pressure on broadcasters to reallocate their programming investment. High end, high-impact output (suitable for high-definition TV and a 'must-have' for PVR owners) will have even greater value, proportionately, than it does now. This could mean that competition for key sports, movies and major imported series will intensify still further – putting pressure on the programme budgets of the broadcasters.
- 5.52 Nonetheless, live event TV or 'water-cooler' reality shows will continue to be supported. They are least likely to be recorded and most likely to get the press

coverage necessary to drive viewing in a 300+ channel environment. Major original live or real-time formats could be the foundations on which new channels build their brands. But much programming is likely to suffer - especially "wallpaper" or "commodity" TV, for which there will be declining demand and little differentiation to attract PVR users or bring new audiences.

- 5.53 This shift in programming priorities may also mean that viewers of the traditional public service channels could find themselves lower on the priority list of the broadcasters. For instance, high-profile, high-impact series could be released first on pay-per-view, subsequently on subscription services, and only a year or two later on free-to-air TV. Broadcasters could maintain different channels to meet each of these needs, as well as developing a series of different channels with clearly focused brands, to address the fragmentation of the consumer audience.
- 5.54 Finally, broadcasters will seek opportunities to exploit programming using a range of business models across different media. If movie premieres are released on broadcast pay-per-view services first, they could also be made available simultaneously via on-demand broadband or network PVR services. Advertiser funding may become less important as broadcasters develop a range of alternative business models to offset the threat to advertising represented by PVRs. The early signs of this are already apparent: in 2003, pay-TV subscription revenues outstripped advertising revenues for the first time. In the longer-term, this could reduce the viability of the current commercial PSB model.

Section 6

Broadcasters and the market

- 6.1 In this section, we consider how the changes outlined in the preceding chapters will impact on the broadcasters and their market, and how this will affect their financial fortunes and decisions about programming choices.
- 6.2 We described earlier how digital take-up might progress over time. The threat to the terrestrial channels is two fold: first, new channels will win incremental revenues from the commercial PSBs over the period; second, and of greater significance, as analogue audiences disappear, so largely does the basis for the historic commercial PSB consensus – a theme to which we return in Section 7.
- 6.3 The market structure, ownership and degree of competition could also change. Economies of scale and scope in broadcasting suggest a possible move towards increased market concentration. Vertical and horizontal integration may remain powerful forces, and the result of a global approach may be a hastening of the move towards foreign ownership of key UK television assets.
- 6.4 Any change of ownership of the major UK commercial broadcasters could have a major impact on the market. A takeover of ITV by one of the major US studios might allow ITV to reap further cost savings as well as perhaps prompting changes to their programming schedule in favour of more acquired material. As a response, C4 and Five might seek to merge their sales houses, either with each other or with BSkyB, consolidating bargaining power in the industry. A take-over of Five by an independent player could possibly allow significant investment in popular programming, damaging both ITV and C4 significantly, and placing their ability to service PSB obligations in jeopardy.
- 6.5 Broadcasters may have to rethink fundamentally their business models. As shown in Sections 4 and 5, consumers' experiences of TV and what they are able to do through their TVs will mean that the PSBs may need to exploit new digital opportunities as viewers become dissatisfied with 'plain old' analogue TV. This will increase the transition away from the PSBs' main channels. The use of new technologies such as PVRs may reduce the amount advertisers are willing to spend on TV, especially if consumers show a preference for accessing new services through alternative technologies such as DSL. If these trends are pronounced, the PSBs will face significant margin pressures as, with their falling viewing shares, they will be winning a smaller share of a smaller market. Direct payment for content may become much more important as advertising income is eroded.
- 6.6 All of these possible changes to the market will place the PSBs under significant pressure. Already, the main terrestrial channels are losing out to new competitors, and as our analysis below highlights, even with a relatively optimistic set of assumptions going forward the PSBs will struggle to achieve performance levels similar to those exhibited before 2000. Once we factor in the very real possibility of a combination of the above factors further impacting the viewing shares and revenues of the commercial public service broadcasters, we can only conclude that they will struggle to deliver on PSB obligations with the same market and regulatory structures as today.
- 6.7 To establish a framework to compare the potential impact of changes Ofcom has developed a scenario-based model of the UK television broadcast market⁶⁷. This

⁶⁷ This work was conducted with Spectrum Strategy Consultants.

model was used to explore the potential development of the sector, and to help understand the implications of possible changes in either the market and policy environment on the main players within the industry.

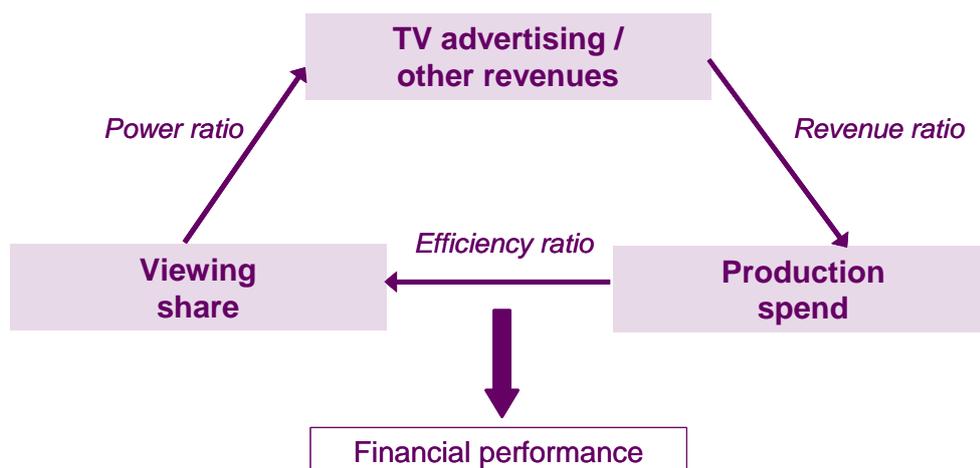
- 6.8 The model was built adopting a scenario-based approach, whereby each scenario was constructed individually taking into consideration historic trends and informed by views on the development of key variables given the likely strategies and actions of the key players within the industry. The model acts as a tool to check that views on future development are internally consistent, and examines the impact of changes in one part of the sector on other areas.
- 6.9 As its starting point, the modelling work constructed a 'Steady State' – a deliberately artificial scenario, which represents the possible evolution of the market given no significant changes in the market structure, regulatory policy or device uptake trends from today's environment⁶⁸. For example, current ownership of the major broadcasters was assumed to remain unchanged, broadband internet access and PVRs have a relatively limited impact upon viewing patterns and analogue switch-off does not occur.
- 6.10 It should be noted however, that even with this relatively benign set of assumptions, the PSB channels, and ITV and Channel 4 in particular, will struggle to achieve the financial results they have been accustomed to over the last decade. In addition, as digital take-up continues, all the broadcasters will evaluate the costs and benefits associated with their broadcasting licences.
- 6.11 Alternative scenarios of market development and regulatory policy were developed as variations upon the Steady State, with separate input assumptions made for each scenario. These scenarios were designed to test the impact of the potentially wider market changes discussed in the preceding chapters. These more radical changes, we found, could have profound implications for the genres, quality and quantity of programming that will be available.
- 6.12 The scenario-based approach has the merit of being able to incorporate changes to past patterns of market operation. The assumptions made were informed by historic trends and scrutinised in discussions among senior Ofcom personnel and with industry experts. They considered the potential for such trends to be fundamentally altered by commercial and policy developments. The model acted as a tool for cross-checking these assumptions, by demonstrating the implications of one assumption upon other variables.

Key relationships and drivers within the model

- 6.13 The model was principally based upon the linkages between expenditure on production by a channel, the viewing share gained from this programming, and the advertising revenues generated on the basis of these audiences. This triangular structure is illustrated in the following chart.

⁶⁸ As such, the "Steady State" does not represent our view of the likely outcome, but is a neutral basis against which other scenarios can be built and tested.

Figure 6.1: Core model structure



6.14 The relationships between these three variables formed the principal cross-checks for the assumptions being made. Three key ratios were examined:

- **The efficiency ratio** - share of total production spend divided by share of viewing. Used to ensure that assumptions made on production spend translated into appropriate changes in viewing share for each channel, based on a view of how the 'efficiency' or a broadcaster's expenditure is expected to change over time;
- **The power ratio** - share of total advertising revenues divided by viewing share. Used to check viewing and advertising assumptions, and ensure viewing performance is adequately translated into revenue performance over time;
- **The revenue ratio** - proportion of total revenues spent on programming. Used to ensure that the amount broadcasters spend on programming over time was appropriately linked to their ability to finance the expenditure through revenues.

6.15 Around the core triangular structure, other factors were added to generate forecasts of the financial performance of the channel businesses of the main broadcasters. Production expenditure was divided into spend by programme genre (e.g. news, sport, drama, and education) and spend by source (originated in-house, originated independent or acquired productions) to ensure compliance with PSB obligations. An adjustment was made to advertising revenues to account for the impact of time-shifted viewing, at the level of total television advertising and channel share. Subscription revenues were added to advertising revenues for pay-TV channels and platforms⁶⁹ and licence fees to the BBC. Non-programming costs; including transmission, marketing and licence fees, were added to production spend to calculate total costs.

Key assumptions under the 'Steady State'

Macro assumptions

6.16 The underlying assumptions include moderate economic growth, no major changes in the ownership of the major channels and platforms and progressive uptake of digital devices. In regard to regulatory policy, we have assumed no analogue switch-off, and no change in existing PSB obligations or licence fee terms for ITV1 and Five⁷⁰. In addition, viewing habits and consumption patterns are assumed to remain broadly unchanged, with no significant impact from rising broadband penetration, for instance.

⁶⁹ Including associated revenues from interactive services, pay-per view, second set-top boxes and PVR revenues (Sky+ revenues)

⁷⁰, however, that the projected amount of licence payments declines as digital penetration increases.

Programming spend

- 6.17 In the Steady State, it is assumed the public service broadcasters increase programming spend at similar levels in nominal terms to recent years. Production expenses accounts for an increasing proportion of revenues for these broadcasters over the 2004-12 period. This growth is expected to be driven by increased competition for audiences resulting from rising multichannel penetration. In addition, the PSBs also seek to consolidate and expand their digital channel portfolios to offset the erosion of viewing of their terrestrial channels.
- 6.18 Five is expected to increase its programme spend at the fastest rate in order to consolidate and grow its viewing share, with ITV expected to follow close behind as it is able to realise cost savings from the Carlton-Granada merger, there is increased management focus on delivering commercial impact within the Contract Rights Renewal (CRR) framework, and it seeks to develop further its portfolio of digital channels. Channel 4's spend rises in absolute terms but less quickly as audience share figures tend towards levels in digital homes. The BBC's budget is assumed to increase in line with growth in licence fee income, dependent upon the RPI and the growth in households.
- 6.19 The highest levels of annual growth in programming budgets are expected from the multichannel sector. This reflects the increasing revenues gained by non-PSB channels (through growing viewing share and established credibility in the eyes of advertisers), further increases in the number of channels, and their current low levels of expenditure.
- 6.20 By 2012 programming spend by the PSB channels would rise to £4,915 million in nominal terms from £3,427 million in 2003 (CAGR of 4.1%). Excluding sports and entertainment, this growth rate is comparable to the growth in programming spend over the past six years.

Figure 6.2: Programme expenditure CAGR 1998-2012

CAGR	1998-2003	2003-2012
ITV1	4.7%	4.2%
C4	5.9%	3.7%
C5	8.0%	4.6%

Viewing share

- 6.21 To isolate the effects of unforeseen shocks to the industry, we have projected viewing shares for the main terrestrial channels. To do this we have taken each channel's share on each separate platform in 2003, assume these remain unchanged, and then projected total viewing shares forward based on expected platform take-up.
- 6.22 Our projected viewing shares for the PSBs are tabled below:

Figure 6.3: Projected viewing shares in 2008 and 2012 under the steady state

Steady State Viewing Shares	2003A	2008E	2012E
BBC1	26.2%	24.2%	23.6%
BBC2	11.4%	10.2%	9.8%
Other BBC	1.8%	2.6%	2.9%
ITV1	24.1%	22.6%	22.2%
Other ITV	1.1%	1.5%	1.7%
C4	9.9%	9.0%	8.7%
Other C4	0.5%	0.5%	0.6%
C5	6.7%	6.3%	6.2%
Other available free-to-air	2.0%	2.9%	3.2%
Other pay	16.4%	20.2%	21.1%

6.23 It is probable that these viewing shares represent a relatively optimistic view of the future for the PSBs. They implicitly assume that the PSB channels will not be negatively affected by new channel launches on these platforms. In addition, the PSB channels current viewing shares on DTT are much higher than on other forms of digital TV, and much of the forecast DTV growth comes from DTT penetration. Given that our projections for the take-up of digital platforms are faster between 2004 and 2008 and that take-up tails off thereafter, audience share declines are most pronounced in the early years of our forecast.

Advertising revenues

6.24 The Steady State assumes moderate growth in television advertising. Forecasts of Net Advertising Revenues (NAR) were made on the basis of detailed econometric modelling carried out by Professor David Hendry for Ofcom, supported by PricewaterhouseCoopers⁷¹. Our model shows TV NAR rising at a real CAGR of 2.2% to 2012, relative to a real CAGR of 2.7% between 1993 and 2003. In nominal terms (2003 prices) TV NAR rises to £4,804 in 2012. The impact of increased time-shifted viewing and greater skipping of commercial breaks begin to exert a negative impact on the growth in NAR by the end of the 2004-2012 period. But, in the Steady State, this effect is relatively minor, as the uptake of PVRs is modest.

6.25 Although all commercial PSB channels experience increasing advertising revenues in nominal terms, their share of television NAR falls because of the loss of viewers to multichannel, and especially to free-to-air multi-channel. However, the decline in

⁷¹ At the time of writing this paper, the econometric forecasting work is still ongoing. The forecast will be revised to reflect new developments and newly published data for 2004 (when the latter becomes available). Therefore, these forecasts will necessarily be subject to change as the assumptions and data continue to be updated.

viewing outpaces the decline in share of NAR, resulting in rising power ratios for the commercial PSB channels. This reflects the increasing premium paid by advertisers for mass, albeit diminishing, audiences in an environment of greater audience fragmentation. The exception to this pattern is ITV1, for whom the Contract Rights Renewal (CRR) mechanism links share of viewing and share of NAR. The CRR allows advertisers to reduce the proportion of their television budget allocated to ITV1, in line with any fall in the channel's share of commercial impacts. We, therefore, assume no change in ITV power ratio over the forecasting period.

6.26 We assume that the BBC TV revenues grow in line with the licence fee. We have assumed that the licence fee grows according to the current regime (RPI + 1.5%) until 2006, and at RPI thereafter. Furthermore, we have factored in the growth in the number of households paying the licence fee over the period, rising at a CAGR of 0.7% between 2003 and 2012. Overall BBC TV licence fee rises from £2,667m in 2003 to £3,718m in 2012 in nominal terms.

Results under the 'Steady State'

6.27 In this section, we summarise the financial results generated by the model under the Steady State and the implied key challenges for the major broadcasters and the independent production sector.

Financial results by broadcaster/entity

6.28 The projected changes in EBITDA margin over 2004-12 are shown in the figure below. Note that, for the main terrestrial broadcasters, these forecasts are made at the broadcast level only – not including profits from production units or other subsidiaries. For instance, in the case of ITV, when we refer to ITV1, we exclude any costs or revenues associated with ITV digital channels or group costs – the projected profitability refers only to the ITV1 channel itself. Similarly, profitability for Channel 4 is projected below at the level of the PSB channel, and does not include profits from digital channels and other ventures.⁷² For BSkyB, we consider revenues and costs on the UK platform, with Sky's Eire operations excluded from our analysis.

Figure 6.4: Projected EBITDA margins of the main commercially-funded broadcasters (index 2003 = 1.0)



⁷² In addition, the figures provide an indicative guide to broad trends in profitability – they are not intended to represent the most likely outcome, nor a definitive forecast of profitability in a specific year.

ITV1

- 6.29 ITV would face a challenge to enhance its profitability. Whilst we project that ITV1 would increase its margins by approximately 50% over the period, it must be noted that this factor in approximately £100 million in costs savings from the merger, and that 2003 margins were at a historically low level. Even with the very optimistic viewing shares modelled in the Steady State and a projected “bounce back” in NAR in 2004, ITV1’s margins never recover to pre-2003 levels. Growing Group margins would require significant success in developing a multichannel strategy, which can offset declining average viewing and pressure on advertising revenues on ITV1. Throughout the period, it is likely that ITV plc would have an incentive to seek lower cost programming (e.g. acquired and derivative material), and to seek to reduce the burden of PSB programming, especially for costly genres such as regional programming. There would also likely be ongoing evaluation of the commercial return from costly investments in UK drama and similar programme types.

Channel 4

- 6.30 Under this scenario, Channel 4 would face flat profit margins for its broadcast operations over the majority of the period 2004-12. It suffers from the erosion of audiences for the five terrestrial channels by multichannel services. Channel 4 is also assumed to be unable to make further cost savings on the scale of the newly merged ITV, or, given its higher base level, increase viewing share to the extent of Five.
- 6.31 As a result, Channel 4 would face a major challenge in fulfilling its remit for innovative, experimental and distinctive programming over 2004-12. With no requirement to provide commercial rates of return to shareholders, Channel 4’s principal objective will be to remain at or above breakeven while audiences fragment. However, without the ability to borrow funds, even steady but low margins will have an impact on the channel’s ability to compete for content and grow its budget in line with other broadcasters.
- 6.32 As with ITV1, these results are based on benign viewing share assumptions coupled with only slowly increasing programme spend. To secure this sort of outcome, Channel 4 would be under pressure to change its programming strategy away from innovative “risky” programming towards “bankers”, especially if viewing shares amongst ABC1s erodes faster than shown in the Steady state. The programme genres that would come under the greatest pressure would probably include drama, comedy, arts & performance and current affairs.

Five

- 6.33 The major challenge for Five over the next decade will be to capitalise on its scope for improved profitability. Under Steady State assumptions, Five increases margins between 2004 and 2012. But much of this growth is concentrated in later years as investment in previous years’ programming pays off and, even by 2012, the margin level suggests the broadcaster will not be a generator of large profits in the context of its need to provide returns to shareholders.
- 6.34 After benefiting briefly from the high rate of NAR growth assumed for 2004, margins are depressed by the erosion of the PSB channels’ viewing share, due to increasing multichannel penetration. However, our modelling suggests that Five is able to generate growth in margins from 2010, as its mass audiences attract a growing premium from advertisers in the context of audience fragmentation. It is expected that its originated programming target will remain Five’s most challenging obligation.

BSkyB

- 6.35 The steady state scenario anticipates that BSkyB will generate very healthy returns over the next decade. The key challenge it faces will be to maintain and improve profitability if growth in subscribers begins to slow.
- 6.36 Under the Steady State assumptions, Sky makes major gains between 2004 and 2007, as subscriber growth remains strong and ARPU rises with the growing popularity of interactive services, Sky+ equipment and second set-top box subscriptions. Sky also benefits from increasing advertising revenues, as increasing digital penetration brings larger audiences to its channels.
- 6.37 By 2008, subscriber growth is expected to have slowed, as the pay-TV market reaches saturation. Further digital adoption is expected to be dominated by the Freeview platform, which may have greater appeal to later adopters. While BSkyB is expected to continue to add households to its subscriber base during the 2008-12 period, these homes may dilute ARPU by having a lower propensity to take top tier packages, or additional services, such as pay-per-view, or Sky+. The revived FreeSat package will help to attract late adopters, but might not be a major profit driver (as no subscription fees are paid) and may further stifle ARPU growth by encouraging greater churn and 'spin-down'⁷³ among existing pay-subscribers. Furthermore, as all non-PSB channels benefit from growing audiences and advertising revenues, BSkyB will face increasing competition from other digital channels for key sports, movie and entertainment rights. This is assumed to inflate the costs of rights acquisition for BSkyB, and bring greater competition for viewing share and advertising revenues for its digital channels.

Independent production sector

- 6.38 The model included projections of the profitability of the independent production sector, as well as the major broadcasters. The industry was modelled in aggregate, so individual production companies may outperform or under perform this average.
- 6.39 Under Steady State assumptions, the independent production sector is able to increase its profitability over the 2004-12 period. This improvement is driven by an increasing volume (in hours) and value of commissions from the main public service broadcasters, who all increase programming expenditure over the period (we assume no change in independent production quotas over the period). Some consolidation is also assumed across the sector over the next nine years and, combined with an increase in commissions, this should result in greater scale economies and improved profit margins. Furthermore, the introduction of new codes of conduct by the public service broadcasters is assumed to provide independents with greater opportunities to retain and market rights for the programmes they produce. Retention of these rights will serve to create asset bases within the more successful independents, improving their ability to attract private equity and other capital.

Alternative Scenarios

Introduction to Market Scenarios

- 6.40 As stated above, the Steady State posits a benign environment for the PSBs. Despite this, the channels will struggle to improve margins and programming quality to previous levels.

⁷³ 'Spin-down' refers to subscriber households trading down to lower priced channel packages

- 6.41 However, we now need to consider the impact of different market forces on the broadcasters and their ability to react to such trends and shocks. Our analysis above and scenarios below highlight that the Steady State is in many ways an “at-best” scenario, and that whilst PSB programming would indeed survive under such a set of assumptions, cracks start to appear as we peel back these benign assumptions one by one.
- 6.42 We developed a set of possible market developments to model against the steady state in order to assess how future developments may impact the strategies and financial performance of the main players in the UK television broadcast market. By considering how the different market developments would impact the primary drivers of the model – viewing shares, advertising revenues and programming spend – for each of the main players we are able to assess their relative fortunes under different market conditions.
- 6.43 We have not considered the probability of occurrence of each of the scenarios, and we do not necessarily consider these market scenarios as either the most likely to occur or those with the greatest potential impact on the market. The scenarios have been chosen to demonstrate how the fortunes of the main players would vary relative to the results of the steady state and to identify the strength and direction of the possible impacts.
- 6.44 We first consider a downside scenario to illustrate the full extent of the commercial PSB channels problems if our benign assumptions in the Steady State are reversed. Other market development scenarios modelled relate to changes in ownership of the private commercial broadcasters, including likely reactions from the other players, to changes to consumer demand and buying patterns and to the effect of announcing and achieving digital switchover in 2010.
- 6.45 There are many other potential factors that could prove extremely disruptive to UK broadcasters and which we have not formally modelled. Such de-stabilising factors could include an initiative by the Government to achieve mass take-up of broadband/ “broader-band” services, a major change in strategy following a merger of the two cable companies, and any change to the remit and operations of the BBC.

A) The Downside Risk

- 6.46 In this scenario, a moderate downside case for the PSBs, there is faster digital take-up than expected, higher demand for other types of media and for PVRs and an erosion of the mass audience base of ITV and Channel 4. Each of these assumptions is quite plausible, and the absolute numbers we incorporate into our model are realistic for such a scenario. The combined effect has a serious impact on the financial performance of the commercial PSBs.
- 6.47 In the downside case for PSBs we assume that digital switchover is announced in 2004, begins in 2007 and is largely completed in 2010. Also, we assume that PVR penetration and advertisement skipping are high, and at the same levels as discussed in our rapid technological change scenario (discussed in detail below). As such audience fragmentation occurs much more rapidly than under the steady state. Concurrent with this loss of market share to other channels, the absolute size of the market declines as consumers are drawn to other media, and as TV loses its attraction to the advertisers given a high incidence of PVRs and time-shifted viewing (these impacts were discussed above in section 5). Further, we posit that Five is able to improve its market share thanks to (higher digital take-up and coverage) to such an

extent that it competes head to head with Channel 4, and that ITV's advertising dominance is broken.

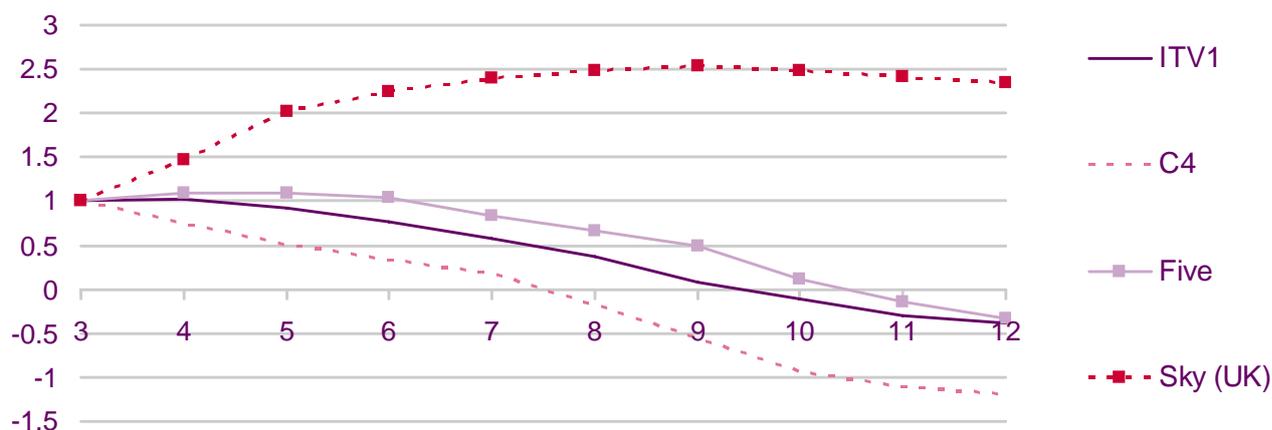
- 6.48 Viewing shares for all PSBs (except Five) decline under this scenario. Five benefits from and is able to capitalise on increased reach through increased digital penetration, whereas the other channels suffer from increased competition. Our viewing share assumptions are tabled below:

Figure 6.5: Viewing share in the downside risk scenario, 2008 and 2012

Downside Viewing Shares	2003A	2008E	2012E
BBC1	26.2%	22.2%	19.8%
BBC2	11.4%	9.7%	9.1%
Other BBC	1.8%	2.9%	3.7%
ITV1	24.1%	20.1%	17.1%
Other ITV	1.1%	2.6%	4.1%
C4	9.9%	8.3%	7.4%
Other C4	0.5%	0.9%	1.2%
C5	6.7%	5.7%	5.2%
Other available free-to-air	2.0%	4.7%	7.4%
Other pay	16.4%	22.7%	24.7%

- 6.49 With these viewing shares and under the limiting assumption that programme expenditure would remain at Steady State levels, ITV1 suffers a steep fall in margins relative to the rise it enjoyed under the Steady State. C4 is hardest hit, and its margins turn negative from 2008.
- 6.50 Fighting to retain its viewing share, we would expect ITV to attempt to cut costly per-viewer-hour programmes and focus throughout the schedule in maximising impacts for every pound spent on programming. 'Investments' in more expensive programme types would probably be put off in favour of frugal margin management, and PSB programming would be marginalised. Channel 4 might move away from riskier innovative programming to a schedule based more on long-running successful formulas and more commercially attractive genres, targeted at its core demographic. Core PSB programming such as current affairs and drama would be restricted to short runs, often out of peak. The changes in EBITDA margin over 2004-12 are shown below:

Figure 6.6: Projected EBITDA margins in the downside risk scenario (index 2003 = 1.0)



B) Rapid technological and consumer demand change

6.51 We have modelled a rapid technological change scenario, which analyses the effects on broadcasters arising from the acceleration of three trends: fast uptake and use of PVRs; acceleration of digital TV take-up; and increasing use of alternative forms of media (e.g. on-line). The scenario assumes PVR penetration at 50% in 2012, up from 20% in 2012 in the Steady State and 1% in 2003. This massive increase is a result of aggressive marketing of Sky+, falling prices for hardware, added attractive functionality and acceptance of the PVR replacing the VCR, especially in DTT homes.

6.52 Average weekly hours of viewing fall across all platforms as individuals devote more time to consumption of other media, and specifically broadband internet. Our scenario assumes that the BBC defends its viewing share in this scenario, possibly because through the use of its programming archive. However, other major channels (notably ITV1 and Channel 4) are assumed to experience declines in viewing shares – albeit to levels not as dramatic as those in the “downside” scenario reported above. The smaller channels all experience relative falls in viewing share, especially the smaller (Other FTA) channels.

6.53 The incidence of PVRs and the rise of alternative media over the forecast period results in a fall in total TV NAR as the demand for TV advertising falls. Although time-shifted viewing also reduces the supply of impacts, the UK TV advertising market historically has an elasticity of approximately -1.4⁷⁴. As such any reduction in supply will be partially offset by a corresponding increase in the price of advertising. However, the substitution of TV advertising for other media, in part due to accelerated audience fragmentation, results in a 20% drop in NAR by 2012 against the Steady State, though TV NAR still grows in nominal terms.

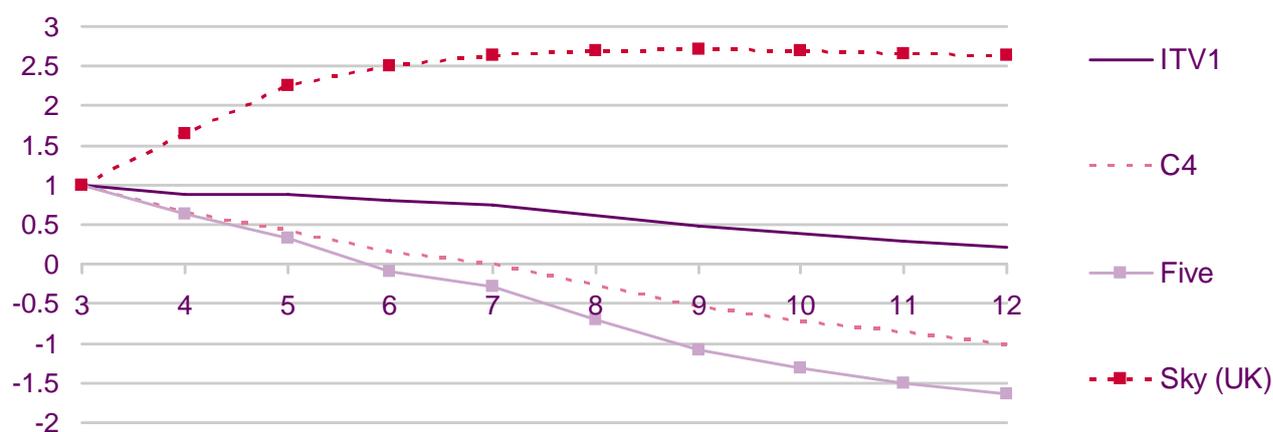
6.54 The major channels receive the majority of the premium and maintain their share of NAR better than viewing share relative to the Steady State as audiences are of greater value in a media environment of increasingly fragmented audiences⁷⁵. By contrast, minor channels lose NAR share relative to Steady State because of their greater exposure to time-shifting and advertising avoidance. The rise in sponsorship revenues does not compensate for the decrease in advertising revenues.

⁷⁴ The econometric modelling referred to earlier (by Professor David Hendry and PwC) suggests an elasticity of -1.44

⁷⁵ So, for instance, ITV1's power ratio is assumed to be equal to that in the steady state scenario.

6.55 As a result of the fall in NAR, the revenues and margins of all commercial PSBs decline relative to the Steady State. ITV faces challenges, but the decline in profitability is offset partly by its rising power ratio and its ability to attract mass audiences. In contrast, Five is impacted most heavily as it is least able to compete for linear audiences with appointment-to-view programmes and becomes loss-making from 2006. As shown below in the section on key sensitivities, Five's margins are most susceptible to changes in NAR, and the fall hits Five more than proportionately, relative to ITV and C4. Channel 4, although less affected than Five, also becomes loss making from 2008 onwards. By contrast Sky's margins improve as the decline in advertising revenues is outweighed by the benefits of increasing Sky+ penetration.

Figure 6.7: Projected EBITDA margins in the rapid change scenario (index 2003 = 1.0)



C) ITV no longer main commercial player – Five acquired by third party, Sky launches C6

6.56 This scenario provides an insight into the possible impact of a more even market share distribution between the PSB channels (in terms of revenues and viewing shares). The scenario posits that ITV's viewing share is weakened significantly by fast growth from Five and by the launch of a new Sky channel 'C6' on the DTT platform. We assume that Five is acquired by a major media company that invests heavily in Five's programming schedule in order to grow market share.

6.57 We assume that Five's new owner injects large investment into Five's programming, concentrated in the years 2005-09. By 2012 Five's programme expenditure matches BBC2. We assume that Sky commits £150m p.a. to programming on C6 on DTT, comparable to Five in 2003, but in the context of a much more competitive viewing market. ITV responds to this aggressive competition by raising expenditure above the steady state. However, with margins under increasing pressure it is forced to reverse this policy and to cut expenditure in nominal terms from 2008 to stem widening losses. C4, with lower margins under the Steady State, has little headroom for increasing programme investment. Faced with negative margins under this scenario, C4 is forced to cut programme expenditure from 2008, with serious implications for its ability to deliver on its PSB remit.

6.58 Five makes viewing share gains on the back of its programme investment and access to cheap acquired material and overtakes C4, reaching c. 11% viewing share by 2012. The greatest gains are made in analogue homes, with growth in digital homes limited by the launch of Sky's C6. Other FTA channels also increase viewing share with the launch of C6, with Other FTA achieving over 6% by 2012. C4 and BBC1 face an

accelerated decline in viewing share, though their more distinctive and less substitutable PSB ethos means that their decline is less marked than ITV. ITV1 suffers the most from Five's growth, but still attracts the largest viewing share among commercial channels (c. 16.5% by 2012). The decline is most pronounced in digital homes, where ITV1 must compete with both Five and C6.

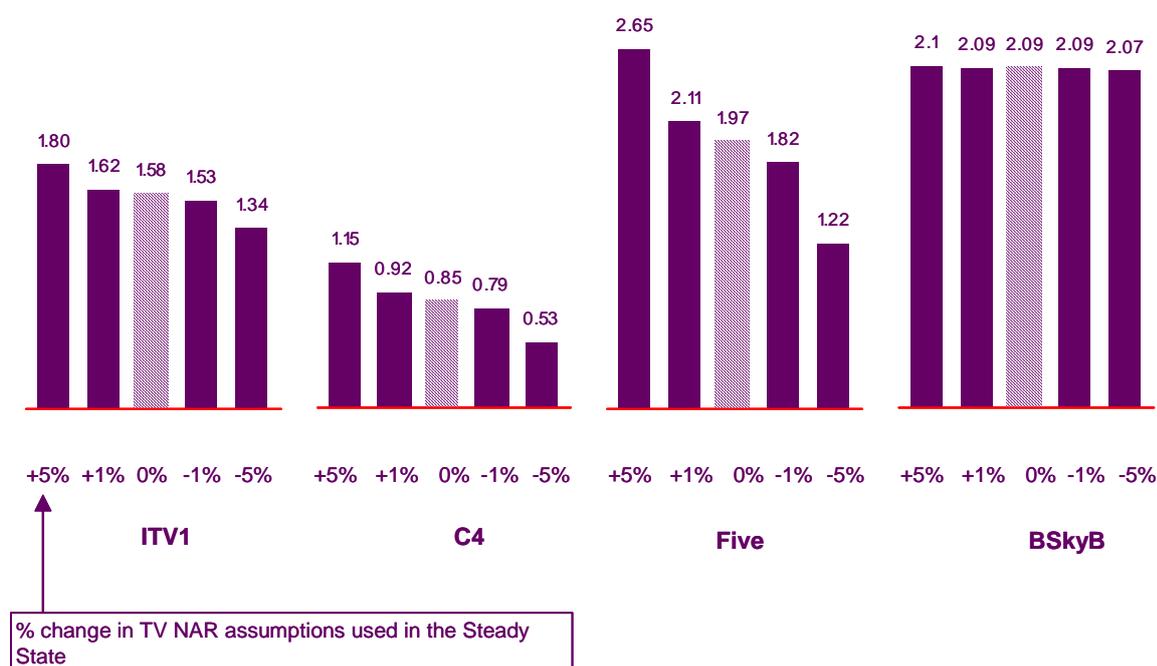
- 6.59 Perhaps the most interesting aspect of this scenario would be its impact on programming spend and mix of content shown by the main commercial PSBs. All commercial channels would probably seek to compete more "in the middle ground" focusing on winning the rights to popular foreign material at the expense of innovation and origination. PSB content would come under extreme pressure, and it is likely that range and diversity would suffer.

Key sensitivities

- 6.60 There are some key variables which affect the outputs generated by the model in all scenarios. The primary sensitivities are changes to the assumptions of television NAR and platform penetration, which have a major impact upon the financial prospects forecast for the major broadcasters. The importance of these inputs was addressed by developing separate forecasting modules, which provided detailed analysis of likely future trends.

Television Net Advertising Revenues (NAR)

- 6.61 Advertising revenues represent the primary source of income for ITV, Channel 4 and Five, and a growing source of income for Sky and multichannel channels. As a result, television NAR assumptions are the single most important variable within the model. Any change to television advertising expenditure has a substantial impact upon the financial results forecast for the broadcasters. The scale of this impact upon the Steady State results is illustrated below. Note that the sensitivities refer to changing the absolute value of TV NAR in 2012 by +/- 5% as opposed to changing TV's share of NAR by +/-5% points:

Figure 6.8: Projected EBITDA margins under changes to TV NAR (index 2003 = 1.0)

6.62 A relatively small change in the annual value of television NAR is shown to have a large impact upon the profitability of the major broadcasters. A 5% increase in the level of NAR assumed in the Steady State significantly increases Channel 4's profit margins by 2012. Conversely, a 5% decline is sufficient for Channel 4 to become loss-making at a broadcast level. The relative effect of such changes in NAR for ITV plc and Five are less marked, as the broadcasters enjoy more robust margins in 2012. However, the absolute impact is still significant; a 5% change in NAR results in a 25-30% change in ITV plc margins and a 50-55% change in Five margins. BSKyB represents an anomaly in this regard, as advertising revenues are a minor revenue driver compared to subscription income.

Platform penetration

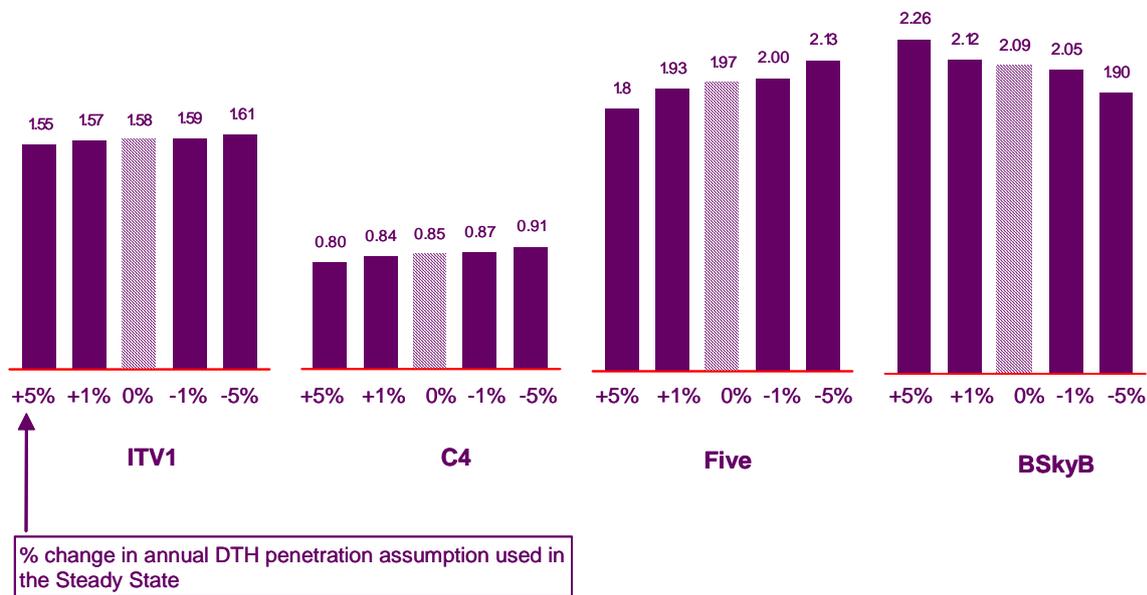
6.63 Platform penetration represents a major sensitivity because it affects broadcaster revenues at a number of levels. A change in the assumptions made regarding platform penetration influences advertising revenues through the impact upon viewing share and time-shifting of programmes, as well as determining subscription revenues for BSKyB.

6.64 In the model, viewing share is forecast separately for DTH, cable, DTT and analogue terrestrial platforms. As a result, a change in the take-up of a particular platform results affects a channel's audience and number of commercial impacts. Assuming there is no change in power ratios, this will have a direct impact upon advertising revenues. In addition, the propensity to adopt PVRs and the proportion of viewing which is time-shifted is also modelled separately for the four platforms. This reflects the greater suitability of PVRs for the DTH and cable packages which offer a high number of channels and sophisticated Electronic Programme Guides (EPGs). Satellite homes are expected to have particularly high PVR uptake and usage because of the promotion of Sky+. Therefore, differing platform adoption patterns will change the amount of viewing which is time-shifted, and the scope for advert-skipping. This will also influence advertising revenues at the total television NAR level.

6.65 Platform penetration affects BSkyB’s revenues by determining the number of net additions to the satellite platform. The assumption made for DTH penetration is a direct determinant of the number of subscriber households. The assumed pattern of uptake of other platforms also influences growth in subscriptions, because of the differing levels of substitutability between satellite and other multichannel platforms. If much of the growth in multichannel penetration over the 2004-2012 period is expected to come from adoption of cable, this is likely to cannibalise satellite net additions because the two platforms are close substitutes. If much of the growth is expected to be driven by Freeview adoption, Sky net additions are likely to be higher as the two platforms compete less directly.

6.66 In the following exhibit we have used differing levels of DTH penetration to illustrate the effect on broadcaster revenues by 2012. As above, note that the penetration sensitivities relate to changing the number of households with DTH in 2012 by +/-5%, as opposed to allocating +/- 5% of all households to DTH.

Figure 6.9: Projected EBITDA margins under changes to DTH penetration (index 2003 = 1.0)



6.67 Although the impact of changes to the Steady State is less than that caused by changes to television NAR (for PSB operators), broadcaster profitability is sensitive to platform penetration assumptions. Relatively small changes in satellite penetration have a significant impact upon margins, especially for Five and BSkyB.

Outlook for the public service broadcasters

6.68 The following table summarises the key results arising from the market analysis – reporting viewing shares, programme spend, and revenues and margins under each of the scenarios.

Viewing Shares 2012					
%	2003	Steady State	Downside Scenario	Rapid Tech. Change	ITV loses prominence
BBC1	26.2%	23.6%	19.8%	24.1%	19.4%
BBC2	11.4%	9.8%	9.1%	9.4%	8.2%
ITV1	24.1%	22.2%	17.1%	20.9%	16.4%
C4	9.9%	8.7%	7.4%	8.0%	7.7%
Five	6.7%	6.2%	5.2%	6.1%	10.7%

Programme spend 2012					
(£m nominal)	2003 ⁷⁶	Steady State	Downside Scenario	Rapid Tech. Change	ITV loses prominence
BBC1	1,083	1,510	1,510	1510	1,510
BBC2	389	513	513	513	513
ITV1	1,004	1,450	1,595	1,450	1,668
C4	442	611	611	611	561
Five					
Total spend by PSBs	160	240	240	240	550
	3,427	4,883	5,028	4,883	5,418

Revenues and Margins 2012										
(£m; %)	2003		Steady State		Downside Scenario		Rapid Tech. Change		ITV loses prominence	
BBC TV ⁷⁷	2,667		3,718		3,718		3,718		3,718	
ITV1	1,833	15%	2,516	24%	1,917	-6%	1,954	3%	1,726	-22%
C4	644	14%	852	12%	647	-16%	663	-14%	673	-11%
Five	272	6%	385	11%	335	-2%	313	-9%	782	13%
BSkyB	3,005	12%	4,956	26%	5,488	29%	5,780	33%	5,125	24%
Independent Sector	771	6%	1,122	7%	1,146	7%	1,122	7%	1,127	3%

6.69 In summary, our analysis of the UK broadcasting market suggests that, under a relatively optimistic set of assumptions as per the Steady State, the main terrestrial networks will at least maintain their current financial performance, and ITV and Five may be able to improve their margins. ITV's margins would not, however, return to the levels seen before 2000.

⁷⁶ Note that the modelling exercise was carried out before Ofcom had received actual 2003 programme spend and revenue data from the broadcasters. Hence, the model was driven off 2003 actuals, and so 2003 costs and revenues are based on projected values.

⁷⁷ Note: We do not include margins for BBC TV.

- 6.70 Under these attractive market conditions, we would expect all broadcasters to be able to afford to deliver a reasonable quantity and quality of PSB programming. However, even in the steady state, ITV1 and Channel 4 would face the incentive to cut back on programme spend in order to protect and improve their margins. More generally, the challenges to profitability would threaten the historical PSB “consensus”, an issue to which we return in the next section.
- 6.71 Under less optimistic assumptions on viewing shares, programming quality and commitment to PSB delivery would falter even further. Faced with rapidly declining revenues, the commercial public service broadcasters would seek ways to either improve revenues or to cut costs. To some extent, channels may try to move their premium content to new digital channels to improve subscription revenues, though they will need to avoid accelerating the viewing shares declines on their main channels. Most channels are currently actively cutting non-programme costs and future cost saving opportunities will be limited, especially for Channel 4, which will be forced to spend an increasing amount of the previous year’s revenue on programming.
- 6.72 The main opportunity for cost-cutting will come from reducing programme expenditure. The most attractive targets for programme cost cutting will be those high cost genres which attract low viewing figures – often the PSB genres, and especially regional programming for ITV and the “innovative and high-risk” formats for Channel 4. New technology take-up, digitalisation of TV and audience fragmentation all directly threaten the maintenance and strengthening of PSB delivery, as commercial broadcasters are forced to retain margins in a competitive environment.
- 6.73 As a final point, it is worth noting that our scenarios are all plausible given current trends and likely future developments: we have not included any scenarios that assume a major shock to the system that could bring about sudden disruptive change. For instance, if we were to experience a major government initiative on broadband, a major change of strategy at the cable companies, or a downsizing of the BBC, the challenges to the traditional PSB model would be immense.

Section 7

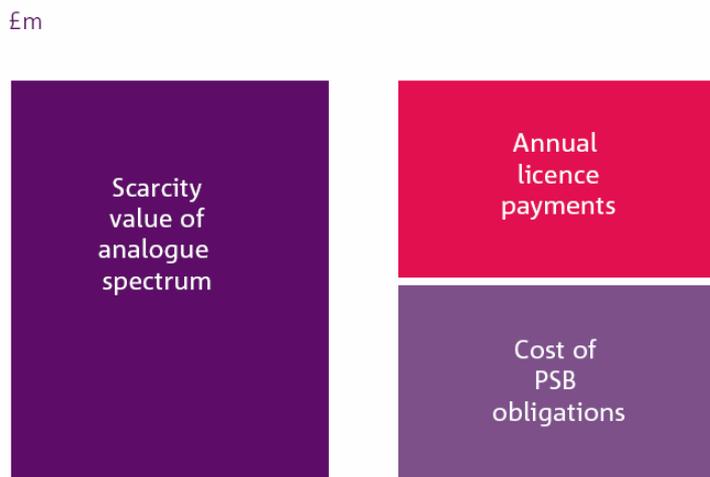
What might the future look like?

- 7.1 As the previous section shows, with the exception of the benign “steady state”, the changes described earlier in this paper will bring about increasing financial pressure on the commercial public service broadcasters. What might this mean for the future provision of public service television broadcasting?
- 7.2 Some initial answers to this question were set out in the previous section: for instance, financial constraints may mean that programming spend comes under increasing pressure. However, as we discuss in the rest of this chapter, our view is that these changes may also bring with them wider systemic pressures.

The future of public service television broadcasting

- 7.3 Before we define the precise nature of these pressures, it is worth reminding ourselves briefly how the purposes of public service broadcasting were secured in the pre-digital age.
- 7.4 The complex system of public service broadcasting in the UK evolved over the course of more than 70 years – the BBC was granted its first Royal Charter in 1927, and regular television broadcasting began in 1936. Before the 1990s, plurality and competition was introduced only gradually into the system: independent television was launched in 1955, BBC Two went on air in 1964, and Channel 4 came into being in 1982.
- 7.5 Looking back over this period, while there were important changes and developments, a number of key characteristics were common throughout:
- The BBC was given privileged access to public funding, and in return committed to special and wide-ranging public service obligations.
 - Commercial broadcasters like ITV and Five were granted privileged access to scarce analogue spectrum, in return for commitments to fulfil certain channel remits and deliver on programming obligations.
 - Channel 4, although financed by advertising, was guided by its public service remit – not by the objective of making profits for shareholders.
- 7.6 The net result of this was a delicately-balanced system which created a PSB “consensus”: it was a highly regulated system which required and obtained broadcasters’ buy-in to a public service ethos in return for carefully controlled competition.
- 7.7 But the process of change has eroded this consensus. Specifically, the sustainability of the consensus is predicated on there being a state of equilibrium between the costs of being a public service broadcaster (e.g. licence payments to the Treasury, and opportunity costs of PSB obligations) and the benefits derived (i.e. the value generated from privileged access to spectrum). Such a state of equilibrium is illustrated in the figure below.

Figure 7.1: Equilibrium between value of analogue spectrum and the costs of being a PSB (illustrative only)



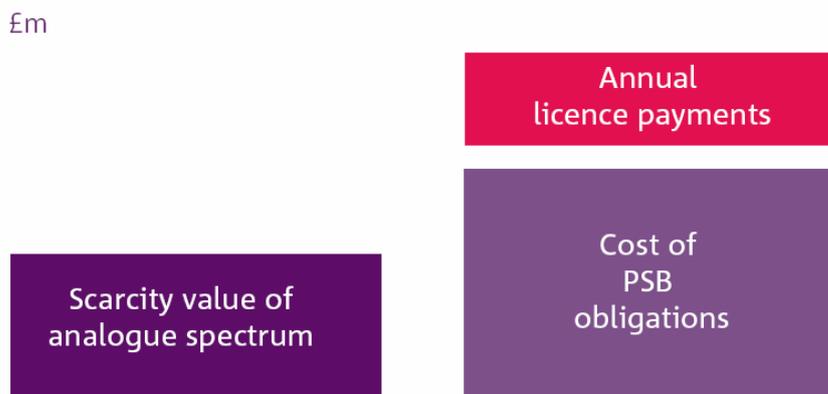
7.8 Overall, our analysis in this paper has suggested that the changes underway in the broadcasting sector have brought about – and will continue to bring about – permanent and significant change. As we have seen, these changes will deliver many benefits for citizen-consumers – such as increased choice, innovative new services, and more power to the consumer. These developments are to be welcomed.

7.9 However, if fragmentation continues, and as digital penetration increases, then there are two key implications for the key players in the market:

- **Privileged access to the analogue spectrum becomes of increasingly lower value to the commercial public service broadcasters.** The revenue from analogue advertising is no longer the only source – indeed not even necessarily the main source – of income for commercial broadcasters.
- **There are alternative routes to market.** In the past, the main broadcasters had a single (analogue-only) route to market – which meant they had no choice but to take part in the PSB compact. But in the multichannel world, the routes to market have expanded: from analogue-only to include broadcasting over digital terrestrial, digital satellite and cable platforms.

7.10 In these circumstances, the potential consequence is that the balance might slip: as privileged access becomes increasingly unimportant, the benefits of holding onto PSB status decline. This may be countered somewhat by a reduction in licence payments to the Treasury, but the costs of PSB status may well end up outweighing the benefits. This creates a potential disequilibrium, as set out in the following figure.

Figure 7.2: Value of analogue spectrum outweighed by the costs of being a PSB (illustrative only)



- 7.11 After digital switchover, the problem is likely to intensify. While estimates of the residual value of guaranteed capacity on DTT multiplexes vary, it is highly unlikely that any such value will be sufficient to offset the costs of PSB, were the latter to be maintained at the current level. If this situation were to arise, then the commercial broadcasters may face the rational economic incentive to seek an alternative route to market – one which would impose few if any of the costs of PSB status.
- 7.12 For instance, a commercial broadcaster might simply choose to gain carriage on DTT, Sky and / or cable on a purely commercial basis. In so doing, the broadcaster would incur additional costs, such as the cost of carriage on digital platforms; and the broadcaster would also lose any remaining analogue advertising revenue which it continues to earn.
- 7.13 However, as digital switchover approaches, the latter will continue to reduce in value. So the “cost” of giving up PSB status might be minimal, and may well be outweighed by the cost savings from no longer having to meet PSB obligations. In other words, as shown by the figure below, the decline in the value of the analogue spectrum is a gradual process: if analogue advertising revenue falls below the costs of remaining a PSB, then commercial broadcasters may wish to retreat from PSB status prior to digital switchover.

Figure 7.3: Possible retreat from PSB status (illustrative only)

- 7.14 This does not mean, of course, that the commercial broadcasters would completely withdraw from all programming that meets the purposes of PSB – while the future is by its nature uncertain, some such programming may well be retained. For instance, the US networks all provide news bulletins, despite the lack of any requirement to do so. As such, this would not be a “zero PSB” world, but it may well be one in which the PSB contributions of commercial broadcasters is substantially reduced.
- 7.15 The situation is different for the BBC and Channel 4 – the “not for profit” broadcasters. The BBC has access to a stable funding source through the BBC licence fee, and Channel 4 does not have to make a profit for distribution to shareholders. But by no means does this imply that the BBC and Channel 4 are immune from these pressures. In the case of Channel 4, for instance, the question is not one of whether it wants to continue be a public service broadcaster; rather, the question concerns whether Channel 4 is able to do so.

- 7.16 Specifically, Channel 4 faces many of the same pressures as ITV1 and Five: the increasing audience fragmentation associated with digital penetration means that there could be substantial pressure on Channel 4's ratings and advertising revenues. As the value of the analogue spectrum declines, Channel 4 may find it increasingly difficult to continue to deliver on its PSB remit of innovation and originality.
- 7.17 The future of the BBC is clearly an issue for the Charter Review process. But it is worth noting here that the BBC is in many ways in a more secure position, assuming it receives an adequate licence fee settlement. However, the issue here is more likely to be one of relative market position: if, for instance, the licence fee is constant in real terms, it may well prove to represent a smaller percentage of total television funding (i.e. licence fee, advertising, subscription) over time.
- 7.18 In short, the changes described in this paper – when analysed in this framework – suggest that public service broadcasting, taken together, will be under increasing pressure as we move towards and into the fully digital world:
- commercial public service broadcasters may face the incentive to seek other routes to market;
 - Channel 4 may face a reduction in the margin available to support PSB purposes; and
 - the BBC may face pressures arising from a shift in the balance of funding towards the commercial players.
- 7.19 And so, if there is no change to the policy environment, there is a real chance that the broadcasting landscape will evolve in such a way that the provision of PSB will fall substantially.

Prospects for “market-driven PSB”

- 7.20 But if the PSB consensus does break down, would the market fill the gap? In other words, is it likely that commercial broadcasters – facing commercial objectives and no public service obligations – will provide schedules that help to meet the purposes of PSB? In an attempt to address the question of the prospects for what might be termed “market-driven PSB”, Ofcom conducted a number of pieces of analysis that drew on the fundamental economics of pay-TV channels both in the UK and in the USA.

An HBO model for the UK?

- 7.21 If purely commercial broadcasters were to provide content that meets PSB purposes, they may well choose to do so via genre-specific subscription channels. Such channels are prevalent in the US, and so Ofcom, in conjunction with Mediatique, has conducted an exercise to gauge whether there might be some read-across between the US and UK markets.
- 7.22 In considering this issue, it is worth noting at the outset that subscription channels with large programme budgets and / or a specific genre focus – e.g. Discovery and HBO – are viable in the US due in part to the size of the US market. Specifically, the latter is sufficiently large that a 3 to 4% market share is enough to ensure both commercial viability and high programme budgets. HBO, for instance, spends around £400m in programme budgets in the US, whereas the aggregated programming budgets of E4, BBC Three, BBC Four, and ITV2 are closer to £200m.

7.23 A read-across from the HBO experience in the US is instructive with regard to the potential size of a UK HBO (which we will call "HBO UK"). HBO's two channels – HBO and Cinemax – are in 39m homes, out of a total of 107m television households in the US. This represents a penetration rate of around 36% in total, but we are informed by industry participants that the HBO channel alone has penetration of 25% in all US homes. If we take into account the 84% multichannel penetration rate overall, HBO is in around 30% of all multichannel homes in the US.

7.24 For the purposes of our analysis, we want to consider whether the HBO model might be feasible in the UK as we move closer to the fully digital world. As such, the analysis assumes a pay-TV penetration rate of 55% (as compared with the actual level in 2003 of around 40%). Assuming that 30% of multichannel homes subscribe to HBO UK, total UK subscribers would be around 4m. The following figure summarises our analysis.

Figure 7.4: Illustrative analysis of the HBO model

HBO US		HBO UK "Read Across"			
HBO Subs (HH, m)	27	Assumed subs (HH, m)	4		
Penetration Rate	30%				
Total HBO Revenue (\$m)	2,170				
Revenue per Subs (\$) (annualised)	80	Revenue	\$m	321	£m
Revenue per Subs (\$) (monthly)	6.7	EBITDA	100		54
EBITDA margin	31%				
EBITDA pre Subs (\$) (annualised)	25				
Total Programming Budget (\$m)	760	Programming Budget	113		61
Total Budget per Subs (\$)	28	Original Programming Budg	60		32
% of Budget on Original Programming	53%				

Source: Mediatique

7.25 HBO had revenues of \$3.1bn last year, of which we have assumed for illustrative purposes that 70% was derived from the HBO channel itself – this would imply a monthly per-month household contribution of \$6.70, thereby generating annual revenue of around \$80 per HBO household, and \$25 of per-household EBITDA⁷⁸.

7.26 We then calculated the programming budget per household (\$28) and the original programming budget per household (\$15)⁷⁹. If we translate into pounds, and multiply these per-household ratios against the implied penetration of HBO UK, the total programming budget would be £61m, of which £32m would be spent on originations.

7.27 This suggests that HBO UK would have a programming budget 50% greater than that of E4, but 30% less than that of BBC Three. In addition, we should note that HBO has significant movie and sports programming, and so an HBO UK, on this reading, would not be able to afford very much premium programming. Attempts to buy at least some such programming might tend to depress operating profit margins. More generally, it is important to recognise that, if the original programming budget for HBO UK were around £32m, this would only cover a limited number of hours of high quality programming.

7.28 This situation might change, however, if HBO UK were launched with pay-TV penetration at an even higher level. If we assume that take-up of the channel remains at 30% of pay-TV homes, and if UK pay-TV penetration rates were at the US level of

⁷⁸ These numbers contain all revenues (including subscription and programme sales). We have assumed that HBO UK would follow the same business model.

⁷⁹ Source: Mediatique estimates, and Deutsche Bank.

84%, then the channel would have 6.1m subscribing homes. This would imply a programme budget of £93m.

7.29 Therefore, even with very optimistic assumptions on pay-TV penetration, we do not arrive at a programme budget of any great size relative to other channels in the UK landscape. Indeed, this scenario takes HBO UK's programme spend to around the same level as BBC Three, but still well below that of Sky One, and half that of Five. As such, while an HBO-type channel could be viable in the UK market, it would most likely not possess the funds needed to make significant contributions to PSB purposes.

Lessons from the UK market

7.30 We supplemented the above analysis by addressing similar issues, but from a slightly different perspective. Rather than analysing whether the business model of an existing US channel might be viable in the UK, we adopted a forward-looking approach to consider whether – given our projections of digital take-up and other market conditions – “PSB-oriented” multichannel services might be increasingly viable propositions as we move closer to the digital future.

7.31 For the purposes of this analysis, a “PSB-orientated” channel was considered to be one which fulfilled the objectives identified in the Communications Act of providing quality programming with high production values, which caters for diverse audiences across a range of subject matter, and informs and educates audiences. More specifically, we considered hypothetical broadcast services that would be expected to make significant investments in original programming in genres most closely associated with PSB.

7.32 In order to consider whether such services might be viable – either as subscription services or free-to-air⁸⁰ – a number of important issues must be addressed. We need:

- realistic assumptions about the costs of programming (as well as the other costs associated with multichannel broadcasting);
- a view on viewing to and take-up of the channels in question;
- what this might mean for the revenues earned by such channels; and
- therefore, an estimate of their likely profitability.

7.33 We started by developing hypothetical cost bases for channels focusing on four different genres: children's, arts, drama and entertainment and news/current affairs. These categories were chosen as they correspond with the types of programming targeted by existing PSB obligations applied to the analogue terrestrial channels. We assumed four principal categories of cost:

- programming budgets;
- transmission;
- marketing; and
- other operational costs.

⁸⁰ A free-to-air broadcast strategy was assumed to involve transmission on the Freeview platform, and via the unencrypted DTH signal. In the latter case, a channel would be available to all households possessing a digital DTH set-top box (STB) and satellite dish; including both existing Sky subscribers and ex-subscribers, who retain their STB. The BBC has recently pursued such a strategy; moving its channels to unencrypted transmission on DTH.

7.34 Hypothetical programme budgets were developed by analysing benchmark data on existing digital channels, primarily those with significant expenditure on originated programming. For example, we drew on data on the programme spend of the BBC digital channels (as set out in the BBC's 2004 annual report), as well as data collected by Ofcom from other digital channels. Based on this benchmarking – and in the light of our HBO analysis reported above – our view was that a large programme budget would be needed to fulfil PSB objectives. The assumed programme budgets are set out in the table below.

Figure 7.5: Hypothetical programme budgets for “PSB-oriented” channels

	£m
Children's	20
Arts	23
Drama and entertainment	50
News / current affairs	17

Source: Ofcom estimates for 2004; programme budgets are assumed to grow at 4% per annum

- 7.35 Of the other costs, the most significant related to transmission and carriage costs. These were estimated separately for free-to-air and premium subscription delivery. Free-to-air channels were assumed to incur DTT transmission costs, as well as the bandwidth and electronic programme guide (EPG) charges associated with unencrypted DTH distribution⁸¹. EPG charges for DTH transmission were taken from Sky's published ratecard, and bandwidth costs were added to reflect the costs of transponder capacity on the Astra 2 satellites. Channels pursuing premium subscription access were also assumed to incur conditional access charges, with assumptions based on the rates publicly set by Sky.
- 7.36 On the revenue side, we calculated advertising revenues from free-to-air transmission and premium subscription income from DTH carriage separately. Advertising revenues from free-to-air broadcast were forecast using the TV NAR forecasts discussed in Section 6 above. The share of these revenues secured by a typical PSB-orientated channel was calculated by estimating the share of viewing likely to be achieved in DTT and satellite homes, translating this into a share of viewing across all TV homes, and adding an assumption of the likely power ratio. The sources of these assumptions are outlined below:
- the share of viewing in DTT and DTH homes was informed by the performance of existing PSB-orientated channels in Freeview and Sky subscriber homes⁸²;
 - this was converted into a share of the hours of viewing across all TV homes on the basis of the penetration of the DTT and DTH platforms and the average hours of TV viewing in households receiving these signals;

⁸¹ Unencrypted channels, broadcasting free-to-air, avoid conditional access (CA) charges levied upon subscription channels. Our assumptions of the costs charged by DTT multiplex operators were based on Ofcom analysis.

⁸² We assumed that the viewing share achieved by channels broadcasting unencrypted via DTH would be the same as current levels realised in paying homes. In practice, the viewing share achieved by unencrypted DTH channels is likely to be higher, as they compete with far less channels in ex-subscriber homes. However, as the number of such homes is small; around 800,000 (*Multichannel Quarterly*, Q4 2003), compared with over 7m Sky subscribers, this uplift to viewing share and NAR is likely to be of marginal impact.

- power ratio assumptions were taken from the levels forecast for the ‘Other free-to-air’ and ‘Other pay’ channel groupings⁸³ in the market analysis reported in Section 6.

7.37 Premium subscription revenues were modelled by taking a typical monthly charge for a stand-alone channel (i.e. for which a discrete fee is charged, in addition to a subscription package), and multiplying this by the subscriber numbers implied by the Ofcom platform uptake projections. The assumed monthly price for the channel was £6.00; an intermediate value between the fees charged by The Disney Channel (£5.00), Artsworld (£5.99) and FilmFour (£7.00). This was assumed to grow at a modest rate of 5% over the period.

7.38 Uptake among DTH subscribers was modelled as high, medium or low for each channel genre. Drama and entertainment were attributed ‘high’ appeal, children’s and arts channels were expected to have ‘medium’ appeal and news and current affairs were considered to have ‘low’ levels of adoption (reflecting the amount and quality of competition from free-to-air services in this sector). The adoption levels associated with a ‘high’, ‘medium’ or ‘low’ rating were drawn from current subscriber numbers for existing premium channels, such as The Disney Channel, Artsworld and FilmFour, with an uptick for the impact of improved programming budgets and viewer appeal, and modelled as a fixed proportion of the growing Sky subscriber base over the 2004-12 period.

7.39 Under these assumptions, we found in most cases that the prospects for ‘PSB-oriented’ channels are limited. It is expensive to run a channel that makes a significant contribution to PSB purposes – but such channels would not necessarily experience high appeal as commercial consumer propositions. Children’s channels show most promise, as premium subscription services. Arts channels might work as a premium offering, although the numbers are balanced. News services are most likely to succeed free-to-air, although here again their prospects are marginal. Drama and entertainment channels seem unlikely to be viable given the high programme spend required to make a significant contribution to PSB, as suggested by our analysis of ‘HBO UK’; they might work as premium subscription services, but only with relatively limited programme budgets.

Figure 7.6: Projected financial performance of hypothetical channels in 2012

	<i>Total costs in 2012 (£m)</i>			<i>Total revenues in 2012 (£m)</i>	
	Programme budget in 2012 (£m)	Premium subscription	FTA	Premium subscription	FTA
Children’s	27.4	33.5	35.4	37.5	30.7
Arts	31.5	38.4	40.3	37.5	18.4
Drama and entertainment	68.4	82.5	84.5	75.1	61.5
News / current affairs	23.3	28.6	30.5	9.4	30.7

Source: Ofcom analysis in conjunction with Spectrum Strategy Consultants

7.40 Therefore, benchmark information on UK channels suggests that some limited PSB-oriented services could be viable, but the market is unlikely to provide many channels that make a **major** contribution to the citizenship purposes of PSB. As such, services

⁸³ ‘Other free-to-air’ channels included all services available without subscription, excluding the digital services provided by the BBC and ITV. ‘Other pay’ channels covered all channels not available free-to-air, excluding E4 and FilmFour.

launched by commercial broadcasters are unlikely to fill the gap that might be left by diminished provision of PSB by the existing public service broadcasters.

The future of public service television broadcasting

- 7.41 Overall, our analysis in this paper has suggested that the changes underway in the broadcasting sector have brought about – and will continue to bring about – permanent and significant change. As we have seen, these changes will deliver many benefits for citizen-consumers – such as increased choice, and innovative new services. But the changes will also pose challenges for the public service broadcasters. The analysis reported in Section 6 suggested that financial pressures for the main broadcasters might bring about a decline in their commitment to the delivery of PSB purposes.
- 7.42 In addition, as we discussed earlier in this section, these pressures – allied to the move towards the fully digital world – may result in a situation in which commercial broadcasters decide to seek alternative routes to market which do not bring with them any PSB obligations. And, if this occurs, we have also seen that the prospects for market delivery of PSB are uncertain – “PSB-oriented” services could be viable, but would not fill the gap.
- 7.43 Therefore, the traditional model of PSB will not survive in the longer term, but a new model of PSB is unlikely to arise spontaneously as a replacement. If there is an enduring and significant role for PSB in the UK – and discussion of this important issue has been reserved for the main body of our Phase 2 report – as we look to the future, we believe that the purposes of PSB will need to be delivered in new and innovative ways.