

An Analysis of the Audience Impact of Page One EPG Prominence

A Report for Ofcom

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29.04.2013

Non-Confidential Version

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1. Executive Summary

The objective of this report, as set out in the Introduction (Section 2), is to assess the viewing impact of EPG prominence by analysing actual examples of recent (2010 - 2012) EPG reshuffles, and to use this evidence to generate a range of possible viewing impacts for Channel 3 (ITV) and Channel 5, were they to lose their prominent page one slots and move to slots near the bottom of the Entertainment sections of all the major EPGs.

In Section 3 we provide an overview of the various EPGs being operated by the different UK television platforms. We cover the key facts for the major players like Freeview, Sky and Virgin Media, and also discuss some of the other players like Freesat, TalkTalk and BT Vision. A noteworthy development in recent years has been the integration of internet connectivity in the latest set-top boxes being offered by all of the major television distribution platforms, as well as the associated introduction of Backwards EPGs designed to integrate live and catch-up content through the main EPG listings.

In Section 4 we review the evidence from 29 examples of actual EPG reshuffles that occurred over the 2010-2012 period. Of the 29 examples analysed, 25 examples (86%) support an argument that EPG positioning affects audience performance, 3 examples are inconclusive and 1 supports an argument that EPG positioning does not affect audience performance. It is also noteworthy that 3 of the examples where we were able to isolate and quantify very significant audience impacts were for reshuffles involving page one EPG slots. The evidence therefore strongly supports the view that EPG positioning is likely to have a significant impact on a channel's performance. Based on this evidence, we consider that if a major digital entertainment channel suffered a significant loss of EPG prominence, this would be associated with a 10-20% drop in audience Share on the Freeview platform and a 20-40% fall in audience Share on the Sky and Virgin Media platforms.

In Section 5 we outline our methodology for generating a range of audience impact forecasts for Channel 3 (ITV) and Channel 5 resulting from a significant loss of EPG prominence. Our methodology combines the empirical evidence from our analysis of actual EPG reshuffles with an algorithm designed to take account of the extent to which the uniqueness of the content and overall brand strength of ITV and Channel 5 are likely to mitigate the viewing impact of a significant move down the EPG. This results in a number of scenario options that vary in the extent to which they are tied to the available empirical evidence, and therefore also as to how speculative (and easy to predict) they are. For Channel 5, the range of predicted outcomes generated by the central (and hence more easily predictable) scenarios gives a minimum performance loss of 5.9% and a maximum loss of 24.3%. For ITV, on the other hand, the corresponding minimum readily predictable performance loss is close to negligible at 0.2%, with the maximum still remaining relatively small at 2.3%. That being said, a more speculative though not necessarily implausible scenario (given the strong empirical evidence for the very significant viewing impacts that can be associated with reshuffles involving page one EPG slots) puts the likely loss for ITV at between 7.9% and 15.8%. The corresponding loss under the same scenario for Channel 5 is between 13.1% and 26.3%.

2. Introduction

The Channel 3 (ITV) and Channel 5 public service broadcast (PSB) licences are due to expire on 31 December 2014, and under the provisions of the Communications Act 2003 may be renewed for a further period of 10 years. As part of the renewal process Ofcom must determine the financial terms on which the licences are to be renewed, and Ofcom's proposed approach to determining financial terms has been set out in a consultation document published on 21 February 2013.¹

One of the benefits of holding PSB licences is the right to an appropriate degree of prominence on EPGs (electronic programme guides), and in practice this has resulted in page one prominence in the case of ITV and Channel 5. Ofcom considers that this right to appropriate EPG prominence is 'likely to carry some value but that estimating that value is difficult'.² To help inform the valuation process, Ofcom has therefore commissioned FEH Media Insight to assess the viewing impact on ITV and Channel 5 if they were to lose this right and suffer a significant loss of EPG prominence on all the major broadcast platforms in the UK [i.e. Satellite (Sky and Freesat), Cable (Virgin Media) and Freeview (DTT)].

The current report is based on the recent empirical evidence from significant EPG reshuffles over the 2010 to 2012 period, and follows on from a previous report, completed in July 2010,³ which covered the evidence from 2006 to 2009.

We begin with an introductory overview of the EPGs currently operating in the UK market (Section 3). In order to assess whether the recent evidence still supports the existence of statistically significant causal links between EPG positioning changes and channel performance, we then study 29 actual examples where channels have changed EPG position between 2010 and 2012 (Section 4). Our current list of EPG reshuffle examples has been chosen on the basis of a rigorous selection criteria that is designed to incorporate as many major EPG reshuffles as possible (see Section 4.2 for details), and we believe that we have been able to cover the bulk of the major EPG changes that have occurred in the last 3 years and are suitable for analysis. Of these 29 recent examples 3 are from Freeview, 5 from Virgin Media and 21 from Sky,⁴ and split by year we have 3 examples from 2010, 19 from 2011 and 7 from 2012.⁵

Of particular significance, given that we are ultimately interested in assessing the viewing impact of ITV and Channel 5 losing their prominent page one EPG slots, is that our 29 recent examples include 2 examples of channels (Sky 2 and Pick TV) losing their slots on the 1st page of the Sky EPG, and one example of a channel (Sky Living) moving onto the 1st page of the Sky EPG. As all 3 of these examples (see Section 4.4 for details) result in statistically significant viewing impacts, this adds considerably to the available body of evidence for the likely viewing impact of page one EPG prominence.⁶

¹ See: http://stakeholders.ofcom.org.uk/binaries/consultations/c3-c5-finance/summary/Financial_methodology.pdf.

² Ibid., page 9, Section 3.33.

³ See: http://stakeholders.ofcom.org.uk/binaries/consultations/review_c3_c5_licences/statement/attentionalreport.pdf, referred to as the previous report from here onwards.

⁴ This is similar to the platform spread achieved in the previous report covering the 2006-2009 period, where of the 33 EPG reshuffles analysed 25 were from Sky and 4 each were from Freeview and Virgin Media.

⁵ A set of summary tables listing all the recent EPG reshuffles covered in the analysis can be found in Section 6.2, Confidential Appendix B, below. The details of these recent EPG reshuffles (i.e. reshuffle date, platform, channel rank change, etc.) as well as the associated analytical output tables constitute a major proprietary resource for FEH Media Insight and consequently Sections 6.2 through 6.9 of the Appendix are marked as confidential.

⁶ In the previous report there was only one UK based example of a timeshifted .channel (G.O.L.D.+1) losing its slot on the first page of the Sky EPG. An international example, of the Irish channel, 3e, gaining page one prominence on Sky's Irish EPG in October 2009 was also analysed (see previous

We also assess to what extent EPG change induced viewing impacts are likely to be permanent (Section 4.10) and conduct a correlation analysis between channel rank change and audience impact to provide further evidence of the link between EPG prominence and channel performance (Section 4.9).

Having analysed and presented the recent empirical evidence, we then incorporate this into an evidence based EPG impact model and generate a range of viewing impact estimates for ITV and Channel 5, were they to suffer a significant loss of EPG prominence on all of the major UK television platforms (Section 5). As part of this impact assessment we also take account of the extent to which the uniqueness of the content and overall brand strength of ITV and Channel 5 are likely to mitigate the viewing impact of significant moves down the major EPGs. It is also important to note that in line with Ofcom's proposed approach to determining financial terms, which aims to value the ITV and Channel 5 PSB licences from the perspective of a hypothetical new entrant bidding in an open auction,⁷ we do not assume that ITV or Channel 5 would move into the nearest prominent slots available to them through their digital channel portfolios,⁸ but that they would be in the position of a new entrant and therefore most likely end up in slots near the bottom of the Entertainment sections of all the major EPGs if they failed to secure a PSB licence.

report, p. 38), but the evidence for a persistent viewing impact proved to be somewhat ambivalent in the case of 3e.

⁷ See: http://stakeholders.ofcom.org.uk/binaries/consultations/c3-c5-finance/summary/Financial_methodology.pdf, Section 3, pp. 4 -15.

⁸ As would be the case, for example, if ITV were to move into ITV2's slot on Freeview, only 3 channel ranks below ITV's current Freeview EPG slot.

3. An Overview of the Different EPGs Operating in the UK Market

In this section we provide an overview of the various EPGs being operated by the different UK television platforms. We cover the key facts for the major players like Freeview, Sky and Virgin Media, and also discuss some of the other players like Freesat, TalkTalk and BT Vision. A noteworthy development in recent years has been the integration of internet connectivity in the latest set-top boxes being offered by all of the major television distribution platforms, as well as the associated introduction of Backwards EPGs designed to integrate live and catch-up content through the main EPG listings.

3.1. Primary UK Market EPGs (The Key Facts)

The main focus of our analysis in this report is on the EPGs of the three primary television distribution platforms operating in the UK: Sky (Digital Satellite), Virgin Media (Digital Cable) and Freeview (DTT – i.e. Digital Terrestrial Television).⁹ According to the BARB audience data, viewing on these platforms accounted for just under 96.8% of total UK television viewing (Total TV) in 2012, with Freeview having the greatest market Share at 44.8% of Total TV viewing in 2012, Sky coming in next at 38.4% and Virgin Media accounting for 13.6%.¹⁰ As the EPGs for these platforms are constantly evolving, with new channels being added, others going off-air, re-branding or moving into different EPG slots, even a very recent overview is likely to be out of date the moment it is published. Nevertheless, to give an idea of what a major loss of EPG prominence is likely to mean in practice under recent market conditions, it is worth giving an overview of the key features for the EPGs of each of these platforms as they stood at the beginning of the last quarter of 2012.

Based on an internet survey of published channel lists, and not counting radio stations or regional variations,¹¹ at the beginning of October 2012 there were 563 channels listed on the Sky EPG across 17 genre groupings,¹² 261 channels listed on the Virgin Media EPG across 13 genre groupings,¹³ and 99 channels listed on the Freeview EPG across 7 genre groupings.¹⁴ While channel rankings and availability do vary across the different EPGs, what all three have in common is that they always start off with the Entertainment channels

⁹ Freeview has become the generic catch-all term for what is technically speaking the DTT platform, and we use the terms interchangeably in this report. It must, however, be kept in mind that Freeview does include a growing number of DTT based 'over-the-top' services like YouView, BT Vision, Top-Up TV and TalkTalk Plus TV, which provide access to a range of pay-tv channels and VOD/catch-up services. That being said, it is also the case that all of these services must follow the LCNs (logical channel numbers) of the underlying DTT platform, and can therefore be classed together as representing the same underlying channel rankings and associated EPG structure. This is discussed further in Section 3.2 below.

¹⁰ The Sky figures do not include viewing on Freesat which is discussed separately in Section 3.2 below.

¹¹ On Sky we also exclude the Pub Channel (only available to licensed premises) and Sky Insider HD (only available to Sky employees). Although we exclude channel listings that are only available in a limited number of regions, we do include regional variants of the main PSB channels that are available to the majority of subscribers in the *Regions* section of the Virgin Media and Sky EPGs.

¹² The 17 Sky EPG genres groupings were: *Entertainment, Lifestyle and Culture, Movies, Music, Sports, News, Documentaries, Religious, Kids, Shopping, Box Office, International, Gaming and Dating, Specialist, Sky Information, Adult, and Regions.*

¹³ The 13 Virgin Media EPG genre groupings were: *Entertainment, Factual, Lifestyle, Music, Movies, Adult, Sport, News, Kids, Shopping, International, Regions and Audio Description, and Information.*

¹⁴ The 7 Freeview EPG genre groupings were: *General Entertainment, High-definition, Children's, News, Adult, Text and MHEG services, and Interactive.*

headed by the 5 terrestrial PSBs (BBC1, BBC2, ITV, Channel 4 and Channel 5). The Entertainment channels also constituted the single largest channel genre group on each of the EPGs under consideration, with 118 channels listed in the Entertainment section of Sky EPG in early October 2012, 74 channels listed in the Entertainment section of the Virgin Media EPG, and 49 channels listed in the Entertainment section of the Freeview EPG. On Sky and Virgin Media what channels can actually be accessed by any given customer will depend on their subscription, with Sky offering various packages defined by content (i.e. Entertainment Pack, Movies Pack, Sports Pack, etc.) and Virgin Media using size (i.e. number of channel) based packages ranging from the basic Size M to the premium Size XL.¹⁵ On Freeview the channel availability largely depends on the coverage of the local DTT transmitters, with around 98.5% of the country now being able to receive at least some of the Freeview channels.¹⁶ Coverage depending, the small number of pay-tv channels listed on the Freeview EPG (like Gold, Home, ESPN and Sky Sports 1 & 2) are also available on the DTT platform through services like Top-Up TV and BT Vision.

As for EPG navigation, on Sky and Virgin Media viewers have the option of either accessing the entire channel list, or using one of the genre filtering options to restrict the list to the channels within a specific channel genre section. Due to bandwidth restrictions there is no channel genre filtering option currently available on the Freeview EPG, with viewers having to access the entire channel list.¹⁷ It is also worth keeping in mind that although channels are always ranked in ascending order by EPG channel number, the number of channels listed per EPG page will depend on the equipment used. On Freeview, for example, this can vary from 5 channels per EPG page to as many as 12 channels per page, depending on the type of set-top box or TV with built in Freeview reception being utilised. On Virgin Media the number of channels listed is also likely to range from 6 to 8 channels per EPG page depending on whether one is using an old/basic set-top boxes or one of the later V+ HD or TiVo PVRs. It is a similar story on the Sky platform, where the older Sky boxes display 10 channels per EPG page, but the EPG displayed by SKY+ HD boxes has fewer channels per page (currently 8 channels per page on the latest version of the EPG, which Sky began rolling out to its Sky+ HD customers in June 2012).¹⁸

An important development in recent years has been the integration of internet connectivity in the latest set-top box devices being offered by all of the major television distribution platforms. While Virgin Media's cable network has meant that it has been able to offer true VOD and catch-up services to its customers on their main television sets for many years,¹⁹ it has only been relatively recently that Sky has been able to follow suit with the rollout of its Sky Anytime+ service in October 2010.²⁰ The recent launch of YouView (in July 2012),

¹⁵ Virgin customers can also subscribe to premium Sky Sports and Movie channels for an additional charge.

¹⁶ See for example: http://www.digitaluk.co.uk/_data/assets/pdf_file/0019/82324/DigitalUK_Switchoverfinal_report_Nov2012.pdf, and: <http://www.freeview.co.uk/articles/fag/before-you-buy/how-does-the-freeview-coverage-checker-predict-if-i-am-in-coverage.html>

¹⁷ It should be noted, however, that some DTT equipment does offer a programme genre based filtering option, where viewers can bring up things like the Films or News/Factual programmes listed on the EPG, but this isn't quite the same as simply being able to select the News, Children's or HD channels from the main EPG channel list.

¹⁸ Another major difference between the EPGs displayed by Sky+ HD and the older Sky set-top boxes is that on 01/02/2011 Sky instigated an SD/HD channel swap whereby, for Sky+ HD subscribers only, the majority of HD (High Definition) channels swapped EPG places with their SD (Standard Definition) counterparts, though (due to issues with their regional variants) the 5 main terrestrial PSB channels remain a notable exception to this rule.

¹⁹ Telewest and NTL (who merged to become Virgin Media in 2006) launched their VOD services in the United Kingdom in 2005. See: http://en.wikipedia.org/wiki/Video_on_demand.

²⁰ Sky did operate Sky Anytime, a push (i.e. automatic PVR recording based) VOD service since 2007, but it was not until October 2010 that a true television based VOD/Catch-up service became available with the launch of Sky Anytime+. An online based VOD/Catch-up service (initially called 'Sky

offering a combination of Freeview channels with catch-up/VOD content through the internet, also reflects a growing trend for combining Freeview reception with internet connectivity on the DTT platform. While such Freeview based 'over-the-top' services are nothing new, and have been available in various forms on devices ranging from games consoles to connected/smart TVs and PVRs for a number of years, it is noteworthy that BT and TalkTalk, veteran operators of their own hybrid DTT/IPTV services, are significant partners in the YouView venture. Both BT and TalkTalk are currently offering their broadband customers a free YouView box, where, for an additional charge, they will have the option of accessing pay-tv channels and a range of extra VOD content through BT Vision and TalkTalk player applications within the main YouView menu. Indeed, to facilitate this growing trend, DMOL, the organisation responsible for managing the Freeview EPG,²¹ announced in July 2012 that it would allocate 100 Freeview EPG slots, from LCN (Logical Channel Number) 400 to 499, to accommodate the future launch of IPTV services on the DTT platform, and that there was scope for allocating even more slots if this should prove necessary in the future.²²

A particularly relevant development, regarding the viewing impact of EPG prominence, to come out of this growing trend towards internet connectivity, is the introduction of Backwards EPGs, which integrate live and catch-up content through the main EPG listings.²³ Indeed, the Advertising Standards Authority recently upheld a complaint against YouView for claiming to be the only UK platform offering a Backwards EPG, with Virgin's TiVo and Freesat's 'Freetime' box both also offering a Backwards EPG function.²⁴ This highlights the continued importance of the main EPG channel listings as a means of discovering and selecting television content (whether live or on-demand), and trawling through the primary EPG listings is likely to remain a significant element in the way we select the unplanned portion of our television viewing in the future.

3.2. Other UK Market EPGs

As already noted above, although Freeview includes a number of DTT based 'over-the-top' and hybrid DTT/IPTV services like YouView, BT Vision, Top-Up TV and TalkTalk Plus TV, they all follow the standard LCNs of the DTT platform, and therefore share the same channel rankings and basic underlying EPG structure.²⁵ More generally speaking, this also applies to any connected TV or TV connected device with built in DTT reception, that offers a Freeview service supplemented with IP delivered channels and content. A notable exception is the older TalkTalk hybrid IPTV/DTT service TalkTalk TV,²⁶ which, apart from the main five PSB

By Broadband' and now rebranded as 'Sky Go') has been available since January 2006. See: http://en.wikipedia.org/wiki/Sky_Anytime, http://en.wikipedia.org/wiki/Sky_Go, and http://en.wikipedia.org/wiki/Video_on_Demand.

²¹ DMOL recently merged with Digital UK (the organisation set-up to manage the digital switchover), which has taken on all of DMOL's responsibilities.

²² See: http://www.digitaluk.co.uk/_data/assets/pdf_file/0009/78237/DMOL_LCN_Consultation_Statement_30Jul12_Final.pdf, Figure 1, p.6, and '2.11 Decision on IP delivered services', pp. 31 – 32.

²³ See: <http://decipherconsultancy.wordpress.com/2012/09/28/a-few-of-our-favourite-things/>, for a recent discussion of some Backwards EPG enabled devices.

²⁴ See: http://www.asa.org.uk/Rulings/Adjudications/2013/4/YouView-TV-Ltd/SHP_ADJ_213476.aspx, and: <http://www.guardian.co.uk/media/2013/apr/17/youview-launch-adverts-banned>.

²⁵ Of all these services BT Vision is currently the largest, accounting for around 2% of Total TV viewing in 2012 as measured by BARB, with the other services currently being either too small or new to register significantly on the BARB audience panel. It should also be mentioned that BT Vision has recently secured a number of deals to stream pay-tv channels on its service, though it will remain tied to the basic DTT LCN structure and associated channel rankings for the Freeview channels listed on the BT Vision EPG, with the IP channels being listed separately in a dedicated IP channels section. See: http://www.btplc.com/Thegroup/RegulatoryandPublicAffairs/RegulationsintheUK/BT_Vision_EPG_Listing_Policy.pdf, and: http://en.wikipedia.org/wiki/BT_Vision.

²⁶ Not to be confused with TalkTalk's new YouView based service TalkTalk Plus TV, where the content and pay-tv channels that TalkTalk provides through its IPTV service are available from the

channels being at the top, has its own unique channel rankings that differ from all the other EPGs. The service, however, only has very limited market penetration and has no longer been made available to new customers since early 2011, though it does continue to operate for existing customers.

Other minor services that have their own unique EPGs and channel rankings are Smallworld Cable (a small independent cable television provider serving around 40 thousand homes in the west of Scotland and north-west England),²⁷ and WightFiber (the only provider of commercial and residential cable television services on the Isle of Wight).²⁸ Both, however, are too small and regionalised to be effectively captured by the BARB audience panel in any meaningful way.

Freesat, on the other hand, the free-to-air digital satellite television service that was established as a joint venture between the BBC and ITV plc as an alternative to Freeview, is a platform that combines significant market penetration with its own unique EPG and channel rankings, and so deserves closer scrutiny.²⁹ On the Freesat EPG, channels within a given genre section are generally grouped by 'family', so that all the channels in a given portfolio tend to be grouped together within a given genre section, with the standard exception of the 5 main terrestrial PSB channels which are in their usual slots at the top of the EPG. Based on an internet survey of published channel lists, and not counting radio stations or regional variations,³⁰ in early October 2012 there were 145 channels listed on the Freesat EPG across 11 genre groupings,³¹ with the Entertainment section being the largest genre group with 41 channels. As with the Sky and Virgin Media EPGs, viewers on Freesat also have a channel genre filtering option when accessing the channel list, and Freesat has recently introduced a Backwards EPG with its latest 'Freetime' set-top box.

It is also possible to separate out Freesat from Sky viewing in the BARB television audience data, and this suggests that Freesat penetration has begun to slow, with the platform more than doubling its proportion of Total TV viewing from 1% in 2010 to 2.2% in 2011, but then only rising to 2.5% of Total TV viewing in 2012. As will be seen in Section 4 below, we also made use of the ability to separate Freesat from Sky viewing in the BARB data in our analysis of the 2010 to 2012 EPG reshuffle examples, splitting out Sky and Freesat viewing on the Satellite platform to more accurately identify Sky EPG reshuffle based viewing impacts, and, occasionally, also using Freesat viewing as an alternative reference benchmark.

TalkTalk Player application within the main YouView menu, and with the Freeview channels being ranked according to the DTT LCNs in the primary YouView EPG channel listings. Also see: <http://www.radioandtelly.co.uk/digitaltv.html>, <http://en.wikipedia.org/wiki/YouView>, and http://en.wikipedia.org/wiki/TalkTalk_TV.

²⁷ See: <http://www.smallworldcable.com/Cable-TV>.

²⁸ See: <http://www.wightfibre.com/tv/essential>.

²⁹ Freesat should not be confused with the free satellite television service that is offered by Sky, and which is generally (and rather confusingly) referred to as Freesat from Sky. The latter is simply a subscription free Sky service (currently available for a one-off payment of £175), and therefore uses the standard Sky EPG and channel rankings with viewers having access to all the free-to-air/free-to-view channels. See: <http://www.sky.com/shop/freesat/home/>. Users can also easily upgrade to one of the subscription packages.

³⁰ Although we exclude channel listings that are only available in a limited number of regions, we do include regional variants of the main PSB channels that are available to the majority of viewers in the *Regional* section of the Freesat EPG.

³¹ The 11 Freesat EPG genre groupings were: *Entertainment, News and Sport, Movies, Lifestyle, Music, Children, Special interest, Shopping, Adult, On-Demand, and Regional*.

4. Evaluating the Recent (2010 to 2012) Empirical Evidence for the Viewing Impact of EPG Prominence

In this section we review the evidence from 29 examples of actual EPG reshuffles that occurred over the 2010-2012 period. Of the 29 examples analysed, 25 examples (86%) support an argument that EPG positioning affects audience performance, 3 examples are inconclusive and 1 supports an argument that EPG positioning does not affect audience performance. It is also noteworthy that 3 of the examples where we were able to isolate and quantify very significant audience impacts were for reshuffles involving page one EPG slots. The evidence therefore strongly supports the view that EPG positioning is likely to have a significant impact on a channel's performance. Based on this evidence, we consider that if a major digital entertainment channel suffered a significant loss of EPG prominence, this would be associated with a 10-20% drop in audience Share on the Freeview platform and a 20-40% fall in audience Share on the Sky and Virgin Media platforms.

4.1. Methodology for Assessing and Quantifying EPG Change Induced Viewing Impacts

Our methodology is based on comparing the daily channel Shares (Individuals 4+ Share for the broadcasting platform under consideration) in the 6 weeks before and the 6 weeks after a given EPG change has taken place.³² The choice of a 6-week period either side of an EPG change is a compromise between ensuring that we have enough data points to establish that any observed differences are significant and persistent, whilst minimising the possibility of other structural factors (like significant scheduling changes or the launch of a competing channel or programme) coming into play. We do, however, occasionally use longer time frames if this helps to disentangle more complex impact chronologies, or to assess any potential longer term benefits that might be associated with EPG prominence if the shorter term analysis proves inconclusive.³³

As daily channel Shares can be highly variable, any observed differences between the pre- and post-EPG change averages also need to be tested for statistical significance to rule out the possibility that these may simply be a product of the underlying variances in the data. We do this using an independent sample t-test. While a t-test can tell us if there is a statistically significant difference between the average of the daily channel Shares six weeks before, versus those six weeks after, an EPG change, it is also important to consider the possibility that this may be the result of an underlying time-trend in the channel Share time-series rather than a step change at the time of the EPG change. This would be the case, for example, if there were a consistent rise or fall in a given channel's daily viewing Share over the 12-week period in question. Nor does the presence of a significant time-trend necessarily rule out the existence of a step change (i.e. structural break) at the time of an EPG change. Indeed, if a time-trend is moving in the opposite direction to a step change (e.g. an upward trend with a downward step change) it is possible that an independent sample t-test would

³² This is consistent with the methodology used in the previous report, where a detailed description can be found on: http://stakeholders.ofcom.org.uk/binaries/consultations/review_c3_c5_licences/statement/attentionalreport.pdf, pp. 16-18.

³³ All of the viewing figures used in the analysis are based on the official consolidated BARB audience data. It should also be noted that the platform level viewing figures, which are used throughout the analysis, are based on people watching specific television sets (rather than just being allocated according to the platform of the primary television set in a given household) and so correctly allocate viewing on secondary sets, which may be on a different platform to a household's main television set.

fail to detect any significant difference, as the pre- and post-EPG change channel Share averages could potentially be very similar. As a result, we also conduct a regression based structural break test that combines a time-trend with a dummy variable to test for any significant step changes at the time of a given EPG change. This is designed to account for any underlying time-trends, where present.

As any given channel will generally go out on more than one platform, but is usually subject to an EPG change on only one, we also analyse its performance on the platform where it hasn't moved within the EPG, using the same techniques outlined above. This provides us with a robust 'no EPG change' reference benchmark, which allows us to account for the influence of confounding factors, like scheduling changes, that will influence a channel's performance across all the platforms on which it was broadcast.³⁴ With this in mind, it is noteworthy that we were able to provide suitable reference benchmarks for all 29 of the recent EPG change examples analysed in this report.

Factors like whether or not a reshuffle also involves a primary channel being split from its timeshifted counterpart or vice versa, are also accounted for in the final EPG change viewing impact estimate. The overall aim being to effectively isolate the likely EPG change induced viewing impact (if any) of a given reshuffle.

4.2. Selection Criteria for EPG Reshuffle Examples Analysed

While our selection of 29 major EPG reshuffle examples,³⁵ covering the 2010 to 2012 period, is extensive, it cannot be said to cover all of the EPG changes that will have occurred in the last 3 years. However, on the basis of the selection criteria outlined below, we do believe that it represents the bulk of the available examples that are suitable for analysis:

1. Any reshuffle examples selected for analysis must be properly validated in terms of the date and the channel rank changes that occurred.
2. Selected channels must be BARB measured, and even where they are BARB measured they must record enough consistent day-by-day viewing levels to be subject to a robust statistical analysis. For example, while BBC HD was theoretically being BARB measured on Freeview in 2010, viewing levels on the BARB panel were too low to register meaningful results with most days recording zero audiences.
3. Small changes of a few channel ranks have not been considered, with a change of 5 channel ranks being the smallest to be included in our reshuffle examples. We know from past experience that minor positioning changes or the tidying-up/closing of numbering gaps on EPGs (as was the case with the Sky EPG reshuffle on 03/07/2012 from which no examples have been considered) are not suitable for a viewing impact analysis, as any potential viewing impacts are likely to be too small to be distinguishable from the underlying statistical variances of the BARB viewing estimates.

³⁴ As they have the same schedules, a primary channel can also act as a reference benchmark for its timeshifted counterpart or vice versa. It is also possible to use a timeshifted or primary channel variant on the same platform as the reference benchmark, provided, of course, that it hasn't been subject to an EPG move as well. When doing the latter, however, one must also be mindful of any potential confounding influence resulting from a primary/timeshifted channel pair being split-up or coming together on the EPG.

³⁵ A summary list of these can be found in Section 6.2, Confidential Appendix B, below.

4. Due to the aforementioned difficulty associated with accounting for confounding influences in an environment where the underlying data has a high natural variance, we have also not considered examples where a minor positioning change (of between 5 and 10 channel ranks) coincides with significant confounding influences like a major reduction in broadcast hours or a scenario where a minor positioning change also coincides with a primary/timeshifted channel split. The only exception to this rule is the case of Sky Living moving up 5 channel ranks on the Sky EPG on 01/02/2012, a move which also involved it being split from its timeshifted counterpart. The reason for this exception is that this is a unique recent example of a channel gaining page 1 EPG prominence, and therefore deserves special attention, and there is also the a priori expectation that a move onto the first page of any EPG (even if this only represents a minor improvement in terms of channel ranks) is likely to result in a substantial viewing impact. In a nutshell, we have therefore avoided reshuffle examples for analysis where the a priori probability of getting an inconclusive result (which does not make the case either for or against the viewing impact of EPG prominence) is likely to be very high.

The overall aim of applying these selection criteria is to provide as comprehensive a selection as possible of those EPG reshuffle examples where the evidence, either for or against an EPG change induced viewing impact having occurred, can be properly assessed.

4.3. Classification of the Results

The most logical basis for categorising our results is according to how credibly we were able to isolate the likely EPG change induced viewing impact (if any) of a given reshuffle; and, with this in mind, we have therefore grouped our results into 5 distinct categories:³⁶

- **Highly Significant:** EPG change examples where the evidence in support of a viewing impact is highly significant, covering all those examples where we were able to isolate and quantify the EPG change viewing impacts with a high degree of certainty, and this includes a number of examples where the reference benchmark was also subject to a significant, but (crucially) fully accountable, impact.
- **Significant:** EPG change examples where the evidence in support of a viewing impact is significant, covering all those examples where our ability to isolate and quantify the EPG change viewing impacts was somewhat less certain, but that, on balance, still provided compelling evidence in favour of an EPG change viewing impact.
- **Weakly Significant:** EPG change examples where the evidence in support of a viewing impact is weakly significant, covering all those examples where the balance of the evidence was at least marginally in favour of an EPG change viewing impact, but it proved impossible to isolate and quantify this with any degree of certainty.
- **Inconclusive:** EPG change examples where the evidence, both for and against a viewing impact, is evenly balanced, including any examples where major confounding influences made it impossible to find reliable evidence either for or against an EPG change viewing impact having occurred.
- **Does not support a viewing Impact:** EPG change examples where the evidence does not support a viewing impact, covering those examples where, in the absence of any clear confounding influences, major moves up or down an EPG did not

³⁶ These are the same categories as those used in the previous report.

coincide with any appreciable viewing impacts, or could be credibly attributed to other factors if they did.

A summary of the headline results of our analysis for each of the 5 aforementioned categories is given in Table 1 below, followed by more detailed discussions in the subsequent sections.

Table 1: Headline Results Summary of the 2010-2012 EPG Change Viewing Impact Analysis

Evidence in Support of an EPG Change Viewing Impact	Type of EPG Move	No of Examples	Final Viewing Impact Attributable to EPG Change
Highly Significant	Loss of Prominence	7	Performance Losses of between 25% and 52%
	Gain in Prominence	11	Performance Gains of between 16% and 371%
Significant	Loss of Prominence	5	Performance Losses of between 16% and 44%
	Gain in Prominence	1	Performance Gain of around 62%
Weakly Significant	Loss of Prominence	0	The balance of the evidence was at least marginally in favour of an EPG change viewing impact, but it wasn't possible to isolate and quantify this with any degree of certainty.
	Gain in Prominence	1	
Inconclusive	Loss of Prominence	1	The evidence for/against an impact was either evenly balanced, or there were major confounding influences making it impossible to reach a reliable conclusion
	Gain in Prominence	3	
None	Loss of Prominence	0	The evidence suggests that this EPG change did not result in a significant viewing impact.
	Gain in Prominence	1	

Source: FEHMI / BARB

4.4. EPG Reshuffle Examples where the Evidence in Support of a Viewing Impact is Highly Significant

Of the 29 EPG reshuffle examples that we analysed, 18 (62%) provided Highly Significant support for the thesis that EPG positioning has an impact on channel performance. Of these 18 examples, 16 were from the Sky EPG and 2 were from the Virgin Media EPG. A summary overview of the Highly Significant results (in chronological order by reshuffle date) is given in Section 6.3 (Confidential Appendix C) below, and full analytical output tables and charts can be found in Section 6.5 (Confidential Appendix E). Each of the 18 Highly Significant examples is discussed in turn below.

- **Highly Significant: Example 1**

To accommodate the launch of Sky 1 HD on the Virgin Media platform Sky 3 (rebranded as Pick TV on 28/02/2011) was moved 44 channel ranks down the Entertainment section of the of the EPG on 22/09/2010, with Sky 2 moving down 1 channel rank into Sky 3's old slot at no. 123, and Sky 1 HD moving into Sky 2's previous slot at no. 122.

This is a very clear-cut example of the negative viewing impact of a significant loss of EPG prominence, with a statistically significant downward step change of 39.6% (a drop of 0.195 Share points) in Sky 3 daily Share time-series on the Virgin Media platform at the time of reshuffle. The unequivocal significance of this result is confirmed by the fact that the reference benchmark (Sky 3 on the Sky platform, which was not subject to an EPG positioning change) remained statistically stable.

- **Highly Significant: Example 2**

This reshuffle was a result of the fact that ITV needed to accommodate the launch of ITV1+1 on the Sky EPG. On the Virgin Media EPG ITV1+1 launched in the 114 slot, and by using the vacant 115 slot none of the other channels in ITV's portfolio had to move to less prominent slots near the bottom of the Entertainment section. On the Sky EPG, however, the only option was for ITV1+1 to take ITV2+1's slot at 131, and for ITV2+1 to move down 43 channel ranks into the 179 slot.

This move did not constitute a timeshifted/primary channel split, as ITV2+1 was already positioned well below ITV2 on the Sky EPG. As ITV2 did not change position on any of the EPGs under consideration, its performance across all platforms acts as a good reference benchmark, and the same is true of ITV2+1 on Virgin, although it is likely to have been subject to some additional negative pressure as a result of having ITV1+1 launch directly ahead of it on the Virgin Media EPG. In any case, both reference benchmarks were not subject to any statistically significant viewing impacts. This is in stark contrast to ITV2+1's performance Sky, where its move of 43 channel ranks down the Sky EPG coincided with a statistically highly significant 43.8% drop in its Share of viewing on the Sky platform.

- **Highly Significant: Example 3**

An 11 channel rank move down the Sky EPG for Challenge+1 coincided with a statistically significant 25.5% drop in its performance on the Sky platform at the time of the reshuffle. By contrast, our first referenced benchmark, Challenge on Sky, was up by a significant 21.2%, and this cannot be attributed to a potential reduction in cannibalization due to a split from Challenge+1, as the latter was already positioned well below its primary counterpart at the time of the reshuffle. A case can therefore be made that the negative viewing impact of this loss of prominence was even greater than the observed 25.5% drop.

On the other hand, although our second reference benchmark, Challenge on Virgin Media, was also up by 12.6%, this did not prove to be statistically significant, and this is despite some likely upward pressure on its performance as a result of being moved from the M+ to M package at the time. On balance it is therefore best to err on the side of caution and to

only attribute the directly observed drop in Challenge+1 performance to its loss of EPG prominence.

- **Highly Significant: Example 4**

Comedy Central's 11 channel rank move up the Sky EPG coincided with a significant upturn of 46.4% in its performance in the 6 weeks after versus the 6 weeks before the reshuffle, while 2 of our 3 reference benchmarks (Comedy Central and Comedy Central +1 on Virgin Media) showed no statistically significant variations in their performance. There was also a significant positive time trend affecting Comedy Central's performance on Sky over the 12-week period under consideration. When this is factored in, the boost to Comedy Central's performance that can be more directly associated with the EPG reshuffle is a more moderate, though still statistically significant, boost of 22.5%.

Another possibility to consider is that as this move also involved Comedy Central being split from Comedy Central+1, which remained at no. 127 on the Sky EPG, it may also have benefitted from a reduction in cannibalization by its timeshifted counterpart, as well as the additional benefit of a gain in EPG prominence. On the other hand, one would normally expect this to lead to a drop in Comedy Central+1 performance on Sky (our third reference benchmark), but it actually rose by a statistically significant 14.2% in the 6 weeks following the reshuffle. This may well be a product of the fact that there appears to have been significant underlying upward pressure on Comedy Central's performance on Sky at the time of the reshuffle, as reflected in the statistically significant underlying positive (i.e. upwards) time-trend. Comedy Central+1 may, at least initially, also have benefitted from the increased prominence of Comedy Central, as, despite being split up, they remained relatively close to each other on the Sky EPG. This makes it difficult to assess if, as well as benefitting from its gain in prominence, Comedy Central also benefitted significantly from any reduction in the cannibalization of its audience by Comedy Central+1. As noted in the previous report,³⁷ while there is good evidence to suggest that moving next to or away from its primary will have a significant impact on a timeshifted channel's performance, the evidence for how much the primary channel is likely to be affected is much more ambiguous.³⁸

That being said, it is best to try and quantify this impact so it can be factored into our EPG change viewing impact estimates where appropriate. As established in the previous report,³⁹ the likely performance gain/loss to a timeshifted channel resulting from it being next-to/away-from its primary counterpart on an EPG is around 20%. If we then assume, as is reasonable in the absence of any concrete evidence to the contrary, that half of this performance impact comes directly from the primary channel in the form of cannibalization, while the other half is a result of the extent to which the proximity of the primary channel helps promote the content of its timeshifted variant, then the direct impact on the primary channel can be plausibly put at around 10% of the timeshifted channel's performance.

Factoring this into the current example, we know that the pre-reshuffle Share of Comedy Central+1 on Sky was 0.317, of which 10% is 0.0317. Reducing the EPG impact estimate for Comedy Central on Sky from our structural break model (a gain of 0.112 Share points) by this amount to reflect the likely reduction in cannibalisation due to its move away from Comedy Central+1, puts the final impact estimate of Comedy Central's gain in EPG prominence at 0.080 Share points, a performance gain of 16.2%.

While somewhat more complex than the previous examples, this still constitutes a Highly Significant result, as we were able to account for all the major confounding influences and thus isolate the pure EPG change induced viewing impact.

³⁷ See: http://stakeholders.ofcom.org.uk/binaries/consultations/review_c3_c5_licences/statement/attentionalreport.pdf, pp. 22-24.

³⁸ It must also be remembered that moving next to or away from an existing +1 channel is not the same as having a completely new timeshifted channel launch next to its primary on an EPG.

³⁹ Ibid., pp. 22-23.

- **Highly Significant: Example 5**

This reshuffle involved FX (now rebranded as FOX) moving up 32 channel ranks from the middle of page 6 to near the top of page 3 (assuming 10 channels per page)⁴⁰ of the Entertainment section of the Sky EPG.

There were, however, also a number of significant confounding influences that needed to be taken into account. The first was the start of the new series of True Blood on 13/01/11, and the second was the start of the new series of NCIS on 01/03/11, both being significant scheduling events falling close to the time of the EPG reshuffle on 01/02/11. Fortunately, there was enough time separating these events to test for and potentially isolate their separate impacts, and to do this we made a small extension to the usual 12-week analytical timeframe and built a more complex structural break model with additional variables to capture the scheduling change impacts.

The results are clear cut with the reference benchmark (FX on Virgin Media) showing the scheduling change impacts but, crucially, no additional viewing impact at the time of the reshuffle. This is in contrast to FX on Sky, which clearly shows an additional positive viewing impact of 0.137 Share points (up 35.5%) at the time of the reshuffle. We also need to consider the additional performance benefit resulting from a reduction in cannibalization due to FX having been split from its timeshifted counterpart. In the period after the launch of the new series of True Blood, but before the EPG Reshuffle, FX+1 was averaging 0.148 Share points on the Sky platform, and if we attribute 10% of this (0.015 Share points) to cannibalization of the FX audience, then this puts the performance gain attributable to FX's gain in EPG prominence alone at 0.122 Share points (up 31.6%).⁴¹

- **Highly Significant: Example 6**

This MTV reshuffle is a rare example of a channel changing EPG genres, and what is particularly interesting is that this involved MTV moving from the top (Gatekeeper position) of the Music section to the middle of the 3rd page of the Entertainment section of the Sky EPG,⁴² prime real-estate as far as EPG positioning is concerned.

The impact on MTV's Share of viewing on the Sky platform was dramatic with a 149.8% rise, and with the reference benchmark (MTV on Virgin Media) also showing a negative performance time-trend over the period in question, there is the possibility that the benefit from MTV's gain in prominence on the Sky EPG may have been even higher. This substantial performance gain is only marginally reduced to 144.7% when we factor in the additional benefit to MTV resulting from less cannibalization due to its move away from MTV+1.

⁴⁰ It should be noted that this page designation is based on the Sky EPG displayed by the older Sky boxes, which display 10 channels per EPG page and would still have been what was seen on the majority of Sky enabled television sets at the time of this reshuffle. The EPG displayed by SKY+ HD boxes, however, has fewer channels per page (currently 8 channels per page on the latest version of the EPG, which Sky began rolling out to its Sky+ HD customers in June 2012) and there has been a rapid proliferation of SKY+ HD subscribers in recent years, with Sky putting the number of HD subscribers at 4.3 million in June 2012 (42% of its TV customers), up from 2.9 million in June 2010 (30% of its TV customers). See: http://corporate.sky.com/documents/pdf/latest_results/fy_press_release_1112, p. 14.

⁴¹ It is also interesting to speculate about the likely impact on FX+1's performance of being split from its primary counterpart. The expected order of magnitude of such an impact, however, would be significantly lower than the impact we were able to isolate for FX, making a robust analysis impractical due to the added complication of the complex scheduling changes around the time of the EPG reshuffle.

⁴² This is based on there being 10 channels per EPG page; see Footnote 40 above for further details.

- **Highly Significant: Example 7**

This is the first of our Highly Significant EPG reshuffle examples relating to a loss of page 1 EPG prominence.⁴³

In the 6 weeks after Pick TV (formerly Sky 3) moved down 41 channel ranks from its prominent slot on the first page of the Sky EPG, its Share of viewing on the Satellite Platform was down by just over 70% compared with its performance 6 weeks before the move. There was, however, also a negative underlying time-trend over the 12-week period in question (also evident in Pick TV on Virgin Media, but not on Freeview) suggesting the presence of additional downward pressure on Pick TV's performance, possibly as a result of competitive scheduling by pay-tv channels (including, on Sky only though, the newly launched Sky Atlantic, which launched in Pick TV's old Sky EPG slot at no. 108) on the Sky and Virgin platforms at the time of the reshuffle. Factoring in this negative performance time-trend using our structural break model, however, still suggests that the EPG move can be associated with a 45.5% downward step change (of 0.30 Share points) in Pick TV's performance at the time of the reshuffle.

We must also factor in the additional negative impact from Pick TV moving directly next to its timeshifted counterpart. Pick TV+1's Share of viewing in the 6 weeks following this reshuffle was 0.105 Share points and our formula (discussed in detail in Example 4 above) suggests that 10% of this (0.0105 Share points) is likely to have been cannibalised from Pick TV. Reducing the impact estimate from our structural break model by this amount gives us a final negative viewing impact of 0.289 Share points (down 43.9%) which is directly attributable to Pick TV's loss of EPG prominence.

- **Highly Significant: Example 8**

Pick TV+1's (formerly Sky 3+1) Share of viewing on the Sky platform rose by just under 270.7% (up 0.077 Share points) following its 49 channel ranks move up the Sky EPG into the slot just below its primary counterpart. There was no underlying performance time-trend and the reference benchmark (Pick TV+1 on Freeview) was also highly stable over the 12 week period under consideration.

Its new proximity to Pick TV will also have contributed significantly to its performance uplift, and we know that this is likely to have accounted for around 20% of its post EPG reshuffle performance of 0.105 Share points.⁴⁴ In other words, its close proximity of Pick TV is likely to have contributed 0.021 Share points to its performance on the Sky platform above and beyond any benefits that can be associated with its move up the EPG. This gives us a final performance impact estimate of 0.056 Share points (an uplift of 196.5%) that can be directly attributed to Pick TV+1's gain in Sky EPG prominence.

- **Highly Significant: Example 9**

This is the second of our Highly Significant EPG reshuffle examples relating to a loss of page 1 EPG prominence.⁴⁵

The loss of Sky 2's prominent (page 1) EPG slot coincided with a statistically significant 52.1% drop in its Share of viewing on the Sky platform (down 0.345 Share points). There were no underlying performance time-trends and the reference benchmark (Sky 2 on Virgin Media) also remained highly stable over the 12-week period in question. This suggests that,

⁴³ Ranked 8th on the Sky EPG, Pick TV would be displayed on the first page of the EPG whether or not the relevant Sky set-top box displayed 10 or 8 channels per EPG page. Also see Footnote 38 above for further details.

⁴⁴ See Example 4 above for a more detailed discussion of the evidence relating to the viewing impacts of primary/timeshifted channels being split-up or brought together on an EPG.

⁴⁵ Ranked 7th on the Sky EPG, Sky 2 would be displayed on the first page of the EPG whether or not the relevant Sky set-top box displayed 10 or 8 channels per EPG page. Also see Footnote 38 above for further details.

despite having the newly revamped Sky Living move into its old EPG slot at no. 107, Sky 2 appears to have been less vulnerable to competitive pay-tv scheduling than Pick TV (see Example 7 above), which also lost its page 1 slot as part of this major (01/02/2011) Sky EPG reshuffle. We can therefore attribute the full impact of the post reshuffle downturn to Sky 2's loss of EPG prominence, a very clear-cut result.

- **Highly Significant: Example 10**

This is the third, and final, of our Highly Significant EPG reshuffle examples relating to page 1 EPG prominence, this time concerning a gain in prominence.⁴⁶

Although Sky Living only moved up the Sky EPG by 5 channel ranks (albeit from the 2nd to the 1st page of the Sky EPG), this coincided with a highly significant 40.4% uplift in its Share of viewing on the Sky platform. As there were no underlying time-trends and the reference benchmark (Sky Living on Virgin Media) remained highly stable, there is no evidence to suggest that this was the result of any significant changes in Sky Living's schedule at the time of the reshuffle.

There is, however, likely to have been an additional performance benefit resulting from a reduction in cannibalization due to Living having been split from its timeshifted counterpart. In the 6 weeks before the reshuffle Sky Living+1 was averaging 0.455 Share points on the Sky platform, and if we attribute 10% of this (0.046 Share points) to cannibalization of the Sky Living audience, this then puts the performance gain attributable to Sky Living's gain in EPG prominence alone at 0.289 Share points (up 34.9%).⁴⁷

This would therefore still appear to be a very sizeable gain for such a small rise of only 5 channel ranks, and the most likely explanation is that it moved into a very prominent slot (just below Sky 1 and ahead of Sky Atlantic) on the first page of the Sky EPG, suggesting that being on the first page of an EPG is likely to give a channel an additional boost in EPG prominence that cannot simply be measured in terms of a gain in channel ranks.

- **Highly Significant: Example 11**

Sky Livingit+1's Share of viewing on the Sky platform rose by just under 285.1% following its 42 channel ranks move up the Sky EPG into the slot just below its primary counterpart. There was no underlying performance time-trend and the reference benchmarks were also highly stable over the 12-week period under consideration.

Its new proximity to Sky Livingit will also have contributed significantly to its performance uplift, and we know that this is likely to have accounted for around 20% of its post EPG reshuffle performance of 0.187 Share points on Sky. This suggests that the close proximity of its primary counterpart is likely to have contributed 0.0375 Share points to its performance on the Sky platform above and beyond any benefits that can be associated with its move up the EPG. This gives us a final performance impact estimate of 0.101 Share points (an uplift of 208.0%) that can be directly attributed to Sky Livingit+1's gain in EPG prominence.⁴⁸

⁴⁶ As part of this reshuffle Sky Living became the 7th channel listed on the Sky EPG, and so would be displayed on the first page of the EPG whether or not the relevant Sky set-top box displayed 10 or 8 channels per EPG page. Also see Footnote 38 above for further details.

⁴⁷ It is also interesting to speculate about the likely impact on Sky Living+1's performance of being split from its primary counterpart, and its Share of viewing on the Sky platform was indeed down a statistically significant 23% in the 6-weeks after the reshuffle. Unfortunately Sky Living+1 also moved down 7 channel ranks as part of the 01/02/2011 Sky EPG reshuffle, and we cannot effectively isolate the likely viewing impact of this relatively minor loss of prominence from the additional negative impact of SKY LIVING+1 being split from SKY LIVING as a result of this reshuffle.

⁴⁸ It is also interesting to speculate about the likely impact on Sky Livingit's performance caused by having Livingit+1 move next to it on the EPG, and its Share of viewing on the Sky platform was indeed down by 9.4% in the 6-weeks after the reshuffle, though this was too small to prove statistically significant. It is also the case that Sky Livingit moved down 7 channel ranks as part of the 01/02/2011 Sky EPG reshuffle, and we cannot effectively isolate the likely viewing impact of this relatively minor

- **Highly Significant: Example 12**

Syfy's 12 channel rank move up the Sky EPG coincided with a statistically significant 19.0% rise in its Share of viewing on the Satellite Platform. There were no underlying performance time-trends and the reference benchmark (Syfy on Virgin Media) was also extremely stable over the period under consideration, suggesting that there were no significant scheduling changes at the time that might have resulted in Syfy's performance upturn on Sky. This is therefore a very clear-cut example demonstrating the positive viewing impact of a gain in EPG prominence.

- **Highly Significant: Examples 13, 14 and 15**

These 3 examples relate to ITV2 HD, ITV3 HD and ITV4 HD, and it is worth giving some more background detail. As part of the major Sky EPG reshuffle on 01/02/2011, there was also an SD/HD channel swap, whereby for Sky+ HD subscribers only, HD channels swapped places with their SD variants on the Sky EPG. Although there were a large number of HD/SD channel swaps as part of the 01/02/2012 reshuffle (though, due to regional variant issues, notably not for the 5 main terrestrials), only a few HD channels are recorded separately by BARB and of those only ITV's spin-off channels had the right combination of a sizable EPG move coupled with significant BARB recorded HD viewing levels to meet our selection criteria. As ITV2, ITV3 and ITV4 do not have HD variants on Virgin Media or Freeview, we have used their SD variants on these platforms as the no EPG change reference benchmarks.

Starting with ITV2 HD, we find that its 84 channel rank move up the Sky EPG coincided with a highly significant 259.4% increase in its Share of viewing, up 0.215 Share points. The reference benchmarks were also stable, with only some very minor downward pressure (i.e. in the opposite direction of the EPG change viewing impact) on Freeview. This suggests that before the reshuffle hardly any Sky+ HD subscribers were bothering to find ITV2 HD near the bottom of the Entertainment section of the Sky EPG, preferring the convenience of watching the lower picture quality but easily reachable SD variant 84 channel ranks further up the EPG. It is a very similar story for ITV3 HD and ITV4 HD, with highly significant performance rises of 294.7% (up 0.172 Share points) and 370.6% (up 0.121 Share points) respectively, coinciding with their gains in EPG prominence.

- **Highly Significant: Example 16**

On 21/02/2012 Sky Arts 1 and Sky Arts 2 moved up nearly 90 channel ranks from the first page of the Lifestyle & Culture section into the 28th and 29th channel slots in the Entertainment section of the Sky EPG. With some significant event based programming (e.g. live concert coverage) the viewing to the Sky Arts channels can be highly volatile and so it is best to analyse their combined Share of viewing to generate a more stable set of results. A further complicating factor is that the Sky Arts EPG reshuffle also coincided with a significant drive by Sky to raise the profile and appeal of the Sky Arts channels, with a raft of new programmes, paid for by a three-fold increase in programming budgets, being broadcast in 2012. As a result, there was a statistically significant increase in the Share of viewing of the Sky Arts channels on both the Sky and Virgin Media platforms at the time of the Sky EPG reshuffle, even though they didn't change position on the Virgin Media EPG.

Crucially, however, the performance boost was substantially higher on the Sky platform (up 118% in the 6 weeks after versus the 6 weeks before the EPG reshuffle on Sky, with only a 54% increase over the same timeframe on Virgin), suggesting that as well as the new content there was an additional benefit from being in a much more prominent EPG slot on Sky. Our structural break model also suggests that, as there was a significant negative time-trend evident in Sky Arts 1 & 2's Share of viewing time-series on the Sky platform, the performance boost that can be associated with the combined impact of the new content and

loss of prominence from any additional cannibalization caused by Sky Livingit+1 moving next to it on the Sky EPG.

the gain in EPG prominence could have been as high as 190%. In view of the fact that no such time-trend is evident in the reference benchmark, however, it is best to err on the side of caution and assume that the combined gain is only as high as the directly observed increase of 118%. Adjusting this for the boost that can be attributed to the new content (i.e. the 54% gain that can be observed on Virgin Media), gives us a final performance boost of 64% (up 0.066 Share points) that can be attributed to the gain in EPG prominence.

- **Highly Significant: Example 17**

As part of the 21/02/2012 reshuffle, to help accommodate the move of Sky Arts 1 and 2 from the Lifestyle & Culture to the Entertainment section of the Sky EPG,⁴⁹ Sky Livingit+1 lost its prominent slot just below Sky Livingit and was moved 90 channel ranks down the Sky EPG. This coincided with Sky Livingit+1 Share of viewing on the Sky platform falling by 81.6% (down 0.136 Share points) in the 6-week period after (versus the 6-week period before) the reshuffle, and this proved to be statistically significant on the t-test. The structural break model also revealed a significant negative performance time-trend over the 12-week period in question, combined with a downward step change of 0.109 Share points (-65.3%) at the time of the reshuffle. This significant downward trend is also mirrored in Sky Livingit's performance on Sky, which was down 7.5% (despite any likely benefit it may have had from being split from Sky Livingit+1) suggesting that there was some additional underlying downward pressure on the Sky platform. Sky Livingit on Virgin Media was also down, though only by a statistically insignificant 3.2%, but in sharp contrast Sky Livingit+1 on Virgin Media was up a statistically significant 32.3% at the time of the reshuffle.

The latter would suggest that the negative viewing impact of the reshuffle on Sky may have been even greater, but as this is not reflected in the other benchmarks (and given Sky Livingit+1's very small Share on Virgin Media, which is likely to make it more prone to spurious fluctuations) it is best to err on the side of caution and go with the forecast of the structural break model, particularly as the confounding negative time-trend is evident in both Sky Living and Sky Livingit+1 daily Share time-series on Sky. This then leaves us with a 65.3% downturn, and when this is adjusted to reflect the fact that this reshuffle also involved a primary/timeshifted channel split, we are left with a final EPG change viewing impact for Sky Livingit+1 of -45.3% (down 0.075 Share points).

- **Highly Significant: Example 18**

To make room for the Launch of Alibi HD, Alibi+1 was moved from its prominent slot just below Alibi, to a much less prominent position 42 channel ranks further down the Virgin Media EPG.

The analysis of this example is complicated by the fact that on 05/08/2012 (i.e. within our standard timeframe of 6 weeks either side of the reshuffle date) there was a dramatic uplift in Alibi+1's performance on the Virgin Media platform with an almost 5 fold increase in its Share of viewing that persisted until the end of the year, with a drastic downturn in Jan-2013 putting Alibi+1's Share of viewing back to its July-2012 level. This was almost certainly the result of Alibi+1, normally only available to XL customers, becoming temporarily available on the lower tier M, M+ and L Virgin Media TV packages. This is not a particularly unusual occurrence on the Virgin Media platform, and is designed to entice lower tier customers into upgrading to higher tier packages.

This makes it more difficult to isolate the viewing impact of the EPG reshuffle on 03/07/2012, as it drastically increases the variance of Alibi+1's daily Share time-series over the course of our standard 12-week timeframe. However, by extending the timeframe of our analysis to cover the two calendar months either side of the reshuffle and adapting our structural break model to test for statistically significant step changes on both the reshuffle date (03/07/2012) and the date when Alibi+1 became temporarily available to lower tier customers (05/08/2012), it becomes possible to isolate the viewing impact that can be associated with

⁴⁹ This also involved the closure of Sky Living Loves, thus freeing up slot no. 130.

the EPG reshuffle. This tells us that there was a statistically significant downward step change of 0.089 Share points (down 57.8%) at the time of the EPG reshuffle, with all the reference benchmarks also proving highly stable. Adjusting this to reflect the fact that this reshuffle also involved a primary/timeshifted channel split, we are left with a final EPG change viewing impact of -37.8% (down 0.059 Share points).

4.5. EPG Reshuffle Examples where the Evidence in Support of a Viewing Impact is Significant

Of the 29 EPG reshuffle examples that we analysed, 6 (21%) provided Significant support for the thesis that EPG positioning has an impact on channel performance. Of the 6 examples in this category, 3 were from the Virgin Media EPG, 2 were from the Sky EPG and 1 was from the Freeview EPG. A summary overview of the Significant results (in chronological order by reshuffle date) is given in Section 6.3 (Confidential Appendix C) below, and full analytical output tables and charts can be found in Section 6.6 (Confidential Appendix F). Each of the 6 Significant examples is discussed in turn below.

• Significant: Example 1

BBC HD suffered a major loss of EPG prominence on the Virgin Media EPG on 27/10/2010 when it was moved down 63 channel ranks to make room for the launch of BBC1 HD in BBC HD's vacated slot. This move coincided with a highly significant downturn in BBC HD's performance on the Virgin Media platform, with a 67.7% decline in its Share of viewing. As well as the likely negative impact of this substantial loss of EPG prominence, however, a significant proportion of this decline in viewing is also likely to have been caused by the additional negative impact of BBC HD's content switching from being a showcase for the HD content of all the BBC channels, to covering all channels except BBC 1, as well as any additional cannibalization resulting from BBC 1 HD launching in BBC HD's old slot.

On the other hand, there can be little doubt that the loss of EPG prominence played a significant role in the viewing downturn of BBC HD on the Virgin Media platform, with the reference benchmark (BBC HD on Freesat) suggesting that the negative impact of the content change and cannibalization from BBC 1 HD alone would have been a performance downturn of around 35.9% in the 6-weeks following the reshuffle on 27/10/2010. Subtracting this percentage downturn in the reference benchmark from the 67.7% performance downturn on the Virgin Media platform, suggests that the loss of EPG prominence on its own would have resulted in a 31.8% decline in BBC HD's Share of viewing on the Virgin Media platform, a fall of around 0.182 Share points.

We have classified this reshuffle example as Significant rather than Highly Significant to acknowledge the fact that the reference benchmark is based on the much smaller (and at the time also relatively new) Freesat platform, making the BARB viewing estimates somewhat less robust due to the smaller sample sizes involved.⁵⁰

• Significant: Example 2

BBC HD suffered a major loss of EPG prominence on the Sky EPG on 03/11/2010 when it was moved down 23 channel ranks to make room for the launch of BBC1 HD in BBC HD's vacated slot. This move coincided with a highly significant downturn in BBC HD's performance on the Sky platform, with a 74.3% decline in its Share of viewing. As well as the likely negative impact of this substantial loss of EPG prominence, however, a significant

⁵⁰ At the time of this reshuffle viewing on Freesat accounted for only around 1.3% of total television viewing, though it did account for around 15% of BBC HD viewing. It should also be noted that although BBC HD was also on Freeview at the time of this reshuffle, the BARB panel was still not registering significant HD viewing levels on DTT platform at the time, thus precluding its use as a reference benchmark.

proportion of this decline in viewing is also likely to have been caused by the additional negative impact of BBC HD's content switching from being a showcase for the HD content of all the BBC channels, to covering all channels except BBC1, as well as any additional cannibalization resulting from BBC 1 HD launching in BBC HD's old slot.

On the other hand, there can be little doubt that the loss of EPG prominence played a significant role in the viewing downturn of BBC HD on Sky, with the reference benchmark (BBC HD on Freesat) suggesting that the negative impact of the content change and cannibalization from BBC 1 HD alone would have been a performance downturn of around 50.6% in the 6-weeks following the reshuffle on 03/11/2010. Subtracting this percentage downturn in the reference benchmark from the 74.3% performance downturn on Sky, suggests that the loss of EPG prominence on its own would have resulted in a 23.7% decline in BBC HD's Share of viewing on the Sky platform, a fall of around 0.10 Share points.

As with the previous example, we have classified this reshuffle as Significant rather than Highly Significant to acknowledge the fact that the reference benchmark is based on the smaller Freesat platform.⁵¹

- **Significant: Example 3**

Sky Living Loves 34 channel rank move from the lower half into the top third of the Sky EPG's Entertainment section coincided with a statistically significant 32.3% rise in its Share of viewing in the 6 weeks after the reshuffle. We must, however, also consider the fact that the reference benchmark (Sky Living Loves on Virgin Media) was actually down by a statistically significant 33.2%, suggesting that the uplift in Sky Living Loves' performance resulting from its gain in EPG prominence on Sky could be substantially higher.

With this in mind, it becomes noteworthy that there was also a moderately significant (i.e. significant at the 8% rather than the more usual 5% error level) underlying downward time-trend in Sky Living Loves' performance on the Sky platform over the period under consideration,⁵² and this has been retained in the final model as it is likely to be capturing the downward pressure on Sky Living Love's performance clearly evident in the reference benchmark and is therefore critical to isolating the true viewing impact of the reshuffle. Factoring this into our structural break model suggests that Sky Living Loves' gain in EPG prominence can be associated with a 61% rise in its Share of viewing on the Sky platform.

We have classified this example as Significant rather than Highly Significant, to reflect the fact that there is some uncertainty about the extent of the confounding influences on Sky Living Loves performance.

- **Significant: Example 4**

To make room for the Launch of Dave HD, Dave ja vu was moved from its prominent slot just below Dave, to a much less prominent position 41 channel ranks further down the Virgin Media EPG. This coincided with its Share of viewing on the Virgin Media platform falling by 56.1% (down 0.232 Share points) in the 6-week period after (versus the 6-week period before) the reshuffle. This also proved to be statistically significant on the t-test, but could not be precisely associated with the exact date of the reshuffle, with the structural break model favouring a very strong negative time-trend over a downward step change. All the reference benchmarks, however, were statistically stable, with even Dave on Virgin Media (which is likely to have benefitted from less cannibalization as a result of being split from Dave ja vu) only up by a non-statistically significant 5.9%.

⁵¹ Also see footnote 50 above for further details.

⁵² This underlying negative time-trend proved to be significant at an 8% error level, and while this is slightly less robust than the standard statistical significance threshold (normally set at a 5% error level), it is still notable (given the high variance nature of the underlying data) and is best described as moderately significant.

The most logical conclusion must therefore be that the observed downturn in Dave ja vu's performance on Virgin Media can indeed be associated with its loss of EPG prominence, with the high variance nature of Dave ja vu's daily Share time-series simply making it more difficult to associate this downturn with a very specific point in time. Indeed, if we compare Dave ja vu's monthly Share time-series on Virgin Media and Sky over the last 3 calendar years (2010 to 2012), there can be very little doubt about the performance impact of this EPG reshuffle, with a very pronounced downward step-change in October 2011 on Virgin Media that is totally absent on Sky (see Figure 5 in Section 4.10 below). We must also account for the fact that 20% of Dave Ja vu's pre-reshuffle performance is likely to have been the result of its close proximity to Dave, and taking this into account gives us a final performance impact estimate of -36.1% (a drop of 0.149 Share points) that can be directly attributed to Dave Ja vu's loss of EPG prominence on the Virgin Media platform.

Although this is a compelling example, we have classed it as Significant rather than Highly Significant to reflect some of the difficulties associated with tying the EPG viewing impact to a very precise point in time.

- **Significant: Example 5**

To make room for the Launch of Watch HD, Watch+1 was moved from its prominent slot just below Watch, to a much less prominent position 44 channel ranks further down the Virgin Media EPG. This coincided with its Share of viewing on the Virgin Media platform falling by 64% (down 0.130 Share points) in the 6-week period after (versus the 6-week period before) the reshuffle, and this proved to be statistically significant on the t-test. The structural break model, however, also revealed the presence of a negative performance time-trend combined with a proportionally smaller downward step change of 40.3% (down 0.082 Share points) at the time of the reshuffle. There was, however, no corresponding negative performance time-trend in any of the reference benchmarks. Indeed, Watch on Virgin Media was up a statistically significant 23.4% at the time of the reshuffle. We would, of course, expect Watch on Virgin Media to benefit as a result of its split from Watch+1, but there is little evidence to suggest that it would benefit to such a large extent.⁵³

This then raises the possibility that the impact of this underlying negative time-trend should also be attributed to the EPG reshuffle, and in view of what we were able to learn from the Dave ja vu reshuffle example above (which was, after all, part of the same Virgin Media EPG reshuffle), this does seem to be the most logical conclusion. This then leaves us with a 64% downturn, and when this is adjusted to reflect the fact that this reshuffle also involved a primary/timeshifted channel split, we are left with a final EPG change viewing impact of -44% (down 0.090 Share points).

- **Significant: Example 6**

On 19/09/2012, Yesterday swapped Freeview EPG slots with Dave, moving down 7 channel ranks from LCN 12 to 19. This loss of EPG prominence coincided with a statistically significant downward step change of 15.5% (a drop of 0.317 Share points) in Yesterday's daily Share time-series on Freeview and there was no evidence of any confounding underlying performance time-trends. Our first reference benchmark, Yesterday on Virgin Media, was also highly stable, with a statistically insignificant rise of just 0.8%. Our second reference benchmark, however, was up by a significant 25%, and this is a paradox that needs further investigation.

Upon closer scrutiny it all seems to come down to a matter of scale and positioning. To begin with, it is noteworthy that on the Freeview platform Yesterday is a substantial player in

⁵³ As noted earlier (see 'Highly Significant: Example 4' in Section 4.4 above for a more detailed discussion) the evidence of how much a primary channel benefits by being split from its timeshifted variant is somewhat ambivalent. It is also notable that in the previous example Dave was only up by a non-statistically significant 6% following its split from Dave ja vu.

the General Entertainment section, averaging over 2 Share points in the 6 weeks before the reshuffle. This must be contrasted with 0.349 Share points on Virgin Media and 0.122 Share points on Sky, both of which are substantially lower, though it must also be noted that Yesterday's Share on Virgin Media is actually nearly 3 times the size of its Share on Sky. On both these platforms Yesterday sits in the Documentaries section of the EPG, but while it holds the coveted 'Gatekeeper' position (first EPG slot in a genre section) on the Virgin Media EPG, it is more than halfway down the Documentaries section on the Sky EPG. Yesterday's lack of prominence in the Documentaries section explains why it has such a low Share of viewing on Sky, and also makes it much more vulnerable to competitive scheduling from close rivals, with a much higher probability of significant upswings and downturns in its daily Share time-series on the Sky platform. With this in mind, we must consider Yesterday's performance on Virgin Media to be the more reliable reference benchmark, and as this was highly stable over the 12-week period under consideration, we can conclude that the 15.5% downturn in Yesterday's performance on the Freeview platform was the result of its loss of EPG prominence.

4.6. EPG Reshuffle Examples where the Evidence in Support of a Viewing Impact is Weakly Significant

Of the 29 EPG reshuffle examples that we analysed only 1 example (from the Sky EPG) provided Weakly Significant support for the thesis that EPG positioning has an impact on channel performance. A summary overview of this result is given in Section 6.3 (Confidential Appendix C) below, and full analytical output tables and charts can be found in Section 6.7 (Confidential Appendix G).

• Weakly Significant: Example 1

Like its primary counterpart, MTV+1 also moved from a prominent slot in the Music to the Entertainment section of the Sky EPG, but unlike its primary counterpart it did not manage to gain a slot on the first three pages, but only managed to get a slot in the middle of the 6th page of the Entertainment section. This, coupled with the negative impact of the loss of proximity to MTV (it had been placed just below MTV in the second slot of the Music section), is likely to have acted against any potential performance uplifts resulting from this reshuffle.

With this in mind, it is perhaps not too surprising to note that MTV+1's Share of viewing on the Sky platform was only up by 16.7% following the reshuffle, and that (in view of the high level of variance in MTV+1 daily Share time-series) this was not large enough to prove statistically significant on the t-test, though there was at least a moderately significant positive performance time-trend over the 12-week period in question,⁵⁴ suggesting at least some upward pressure on MTV+1's performance on Sky. When this is coupled with the fact that the reference benchmark (MTV on Virgin Media) had a negative performance time-trend over the same period (suggesting that there was some additional downward pressure on MTV's performance at the time of the reshuffle that was being counteracted by MTV+1 on Sky), then the balance of the evidence does suggest that there was at least some benefit to MTV+1 resulting from its move into the Entertainment section of the Sky EPG.

In view of the strong conflicting pressures acting on MTV+1's performance, however, it is not possible to quantify this benefit with any degree of certainty, and on balance this reshuffle example must therefore be classed as only Weakly Significant.

⁵⁴ MTV+1's positive time-trend on the Sky platform proved to be significant at an 8% error level, and while this is slightly less robust than the standard statistical significance threshold (normally set at a 5% error level), it is still notable (given the high variance nature of the underlying data) and is best described as moderately significant. It has been retained in our final analysis as it is likely to be capturing the significant but conflicting pressures on MTV+1's performance at the time.

4.7. EPG Reshuffle Examples where the Evidence in Support of a Viewing Impact is Inconclusive

Of the 29 EPG reshuffle examples that we analysed, 3 (10%) proved to be Inconclusive. Of these 3 examples, 2 were from the Sky EPG and 1 was from the Freeview EPG. A summary overview of the Inconclusive results (in chronological order by reshuffle date) is given in Section 6.3 (Confidential Appendix C) below, and full analytical output tables and charts can be found in Section 6.8 (Confidential Appendix H). Each of the 3 Inconclusive examples is discussed in turn below.

- **Inconclusive: Example 1**

There was a 27.4% rise in Universal's Share of viewing on the Sky platform following its 14 channel rank move up the Entertainment section of the Sky EPG, and this proved to be statistically significant on the t-test. There was, however, also a statistically significant (upward) performance time-trend over the period in question, and using the structural break test we were unable to isolate a significant upward step change at the time of the reshuffle due to the confounding influence of this positive performance time-trend. This underlying upward pressure on Universal's performance is even more evident in all the reference benchmarks (Universal on Virgin Media), where there was a significant 53.3% boost in performance manifesting itself as a statistically significant step change at the time of the Sky EPG reshuffle, though Universal's EPG position on Virgin Media remained unchanged.

The most likely explanation is that there were some major scheduling changes very close to the time of the Sky EPG reshuffle on 01/02/2011. Indeed, the 16th of January saw the UK premieres of Series 8 of Monk and Series 4 of Psych on Universal, and for good measure there was also the premiere of the latest series of Law & Order: SVU on the 27th of February, though the latter was at least somewhat further removed in time from the date of the EPG reshuffle. However, while we were able to account for the influence of such significant scheduling events in our earlier analysis of FX (see 'Highly Significant: Example 5' in Section 4.4 above), the very close temporal proximity of not one, but two, premieres on the Universal channel in mid-January makes it impossible to isolate any likely EPG change viewing impact resulting from Universal's subsequent move up the Sky EPG. In the absence of any other evidence, what we are left with is that the reference benchmark shows a more significant performance uplift than the channel which gained in EPG prominence, which would make this an example that contradicts the thesis that EPG prominence has a significant viewing impact.

On the other hand, given that strong evidence in favour of EPG change viewing impacts from the other 01/02/2011 Sky EPG reshuffles, it is worth considering the possibility that the very strong uplift in Universal's performance on Virgin Media at the time of the reshuffle is due to a particularly strong fan base for the premieres that were taking place at the time. With this in mind, it is also noteworthy that Universal is available on the lower tier M+ package on Virgin Media, meaning that many of its viewers will not have access to the premium L and XL pay-tv entertainment channels like FX, Syfy, Comedy Central, Alibi and Watch, all of which are available on the basic Entertainment package on Sky. With less premium pay-tv entertainment content to choose from, it is possible that the viewing impact of a premier on Universal could well be more pronounced on Virgin Media than on Sky.

As this reshuffle took place over 2 years ago, we are also in a position to look at Universal's long-run (monthly) performance time-trends on the Sky and Virgin Media Platform covering the last 3 calendar years. Doing so confirms that Universal on Virgin Media is indeed prone to violent (almost certainly schedule based) fluctuations in its performance. While also quite erratic, there is less evidence of such extreme upswings and downturn in Universal monthly Share time-series on Sky. It also appears that the EPG reshuffle on 01/01/2011 marked the beginning of a moderate but persistent underlying upturn in Universal's performance on Sky, while Universal's major upswing on Virgin Media simply collapses at the end of the year. The

overall result is that over the entire 2010 to 2012 period, Universal on Sky exhibits a statistically significant positive performance time-trend (up 17% overall since the reshuffle), while Universal on Virgin Media has a statistically significant negative performance time-trend (Down 7.4% overall since the reshuffle, despite its massive upswing between Feb- and Nov-2011).

In view of this additional evidence, we cannot entirely rule out the possibility that Universal derived at least some benefit from its gain in EPG prominence on Sky, and we have therefore classed this example as Inconclusive.

- **Inconclusive: Example 2**

As part of the 21/02/2012 reshuffle, to help accommodate the move of Sky Arts 1 and 2 from the Lifestyle & Culture to the Entertainment section of the Sky EPG,⁵⁵ Sky 2 moved up 8 channel ranks from slot no. 129 to slot no. 121. There is no direct evidence that this had any significant impact on Sky 2's performance, with its Share of viewing on the Sky platform only rising by a marginal 2.5% in the 6-week period after (versus the 6-week period before) the reshuffle, and this did not prove to be statistically significant on any of our tests. On the other hand, it must be acknowledged that the reference benchmark, Sky 2 on Virgin Media, was down by 6.3%, and although this did not prove statistically significant on the t-test there was a significant negative time-trend suggesting that this was the result of some underlying downward pressure on Sky 2's performance.

We cannot therefore rule out the possibility that Sky 2 may have benefitted (at least marginally) from this gain in EPG prominence and comparing Sky 2's performance on Sky with its performance on Virgin Media in the 12 months before versus the 12 months after the 21/02/2012 reshuffle does support this view. Indeed, since Sky 2 lost its page 1 EPG prominence on the Sky EPG in February 2011, its Share of viewing on the Sky platform has been consistently lower than its Share on Virgin Media, but it is notable how this gap narrowed significantly after the 21/02/2012 reshuffle.⁵⁶ In the 12 months before the 21/02/2012 reshuffle Sky 2's Individuals 4+ Share on Virgin Media was on average 0.241 Share points higher than on Sky, but this fell to only being 0.171 Share points higher (a drop of 29%) in the 12 months after the reshuffle.

While there is therefore a case to be made for classifying this example as Weakly Significant, we have erred on the side of caution and classified it as Inconclusive instead.

- **Inconclusive: Example 3**

On 17/10/2012, the HD channels on Freeview (BBC1HD, BBC HD, ITV HD and Ch4HD) were moved down the EPG as a group from just below the General Entertainment section (which had begun to overflow) to below the News and Children's channel sections, a decline in EPG prominence of approximately 12 channel ranks. This did not coincide with any statistically significant impact on their performance on Freeview, though it is noteworthy that 2 out of the 3 reference benchmarks showed statistically significant performance gains (manifesting themselves as positive time-trends and with the overall performance uplifts also being significant on the t-test) over the 12-week period under consideration.

This raises the possibility that the loss of EPG prominence may have been counteracting an underlying growth trend on the Freeview platform, with the net result that the HD channels showed no significant performance impact at the time of the reshuffle. On balance, however, it is best to be cautious and on the basis of the available evidence the most plausible conclusion is that this is an Inconclusive result.

⁵⁵ This also involved the closure of Sky Living Loves, thus freeing up slot no. 130.

⁵⁶ Also see Figure 1 in Section 4.10 below

4.8. EPG Reshuffle Examples where the Evidence Does Not Support a Viewing Impact

Of the 29 EPG reshuffle examples that we analysed only 1 example (from the Freeview EPG) provided no support for the thesis that EPG positioning has an impact on channel performance. A summary overview of this result is given in Section 6.3 (Confidential Appendix C) below, and full analytical output tables and charts can be found in Section 6.9 (Confidential Appendix I).

- **Does Not Support a Viewing Impact: Example 1**

On 19/09/2012, Dave swapped Freeview EPG slots with Yesterday, moving up 7 channel ranks from LCN 19 to 12. This coincided with its Share of viewing on Freeview rising by 11.3% (up 0.144 Share points) in the 6-week period after (versus the 6-week period before) the reshuffle, and this proved to be statistically significant on the t-test, but could not be precisely associated with the exact date of the reshuffle, with the structural break model favouring a positive underlying time-trend over a upward step change.

It is, however, a very similar story for the reference benchmarks, with both exhibiting similar positive performance time-trends, with Dave on Sky also up 11.2% (though this fails to make the statistical significance threshold on the t-test), and Dave on Virgin up 20.6% (which is significant on the t-test). There are also no performance scale issues (as we had with Yesterday's reference benchmarks; see 'Significant: Example 6' in Section 4.5 above), and as this is a relatively recent example a longer term performance trend analysis (which might highlight any potential longer term benefits associated with EPG prominence) is also impractical.

On balance we must therefore conclude that, on the basis of the available evidence, this example does not support the hypothesis that a viewing impact occurred as a result of Dave's (7 channel rank) gain in EPG prominence on Freeview.

4.9. Correlation between Channel Rank Change and Audience Impact

Given that we have been able to isolate and quantify EPG change induced viewing impacts for 24 out of our 29 EPG reshuffle examples, this gives us the opportunity to conduct a correlation/regression analysis between channel rank change and audience impact, the aim being to assess how the size of a given channel rank change relates to the size of the corresponding audience impact. The detailed analytical output tables and charts for this analysis can be found in Section 6.4 (Confidential Appendix D) below.

From the empirical evidence outlined above, it is clear that EPG channel rank changes do result in statistically significant viewing impacts, but what is less clear is to what extent the relative size of a channel rank change relates to the relative size of the corresponding audience impact. The most logical assumption would be that, on average at least (as there will always be exceptions), the larger the channel rank change the larger the corresponding viewing impact. To test how well our data supports this thesis we use a simple linear regression analysis and look at the corresponding R^2 value of the linear regression model to assess how well this fits the actual impact data. The R^2 (pronounced 'R squared' and also known as the 'coefficient of determination') tells us how well a model explains the variations in the data being modelled, and has a value range between 0 and 1, with a value of 1 meaning that the model explains all variation in the data and a value of 0 meaning that it explains none of the variation and so is no better than a simple average. Within the context of the current analysis, where the underlying data can be highly variable, an R^2 of between 0.4 and 0.6 would be considered notable, while anything above 0.6 (and certainly above 0.8) is likely to be indicative of a more significant relationship.

Starting with a linear regression analysis of Share point change (as the dependent variable) versus channel rank change (as the independent variable) we have an R^2 of 0.490, but when we look at the relationship between % change in Share versus channel rank change this rises to 0.635. If we then exclude the very high gain outliers that more than double their Share of viewing after significant gains in EPG prominence,⁵⁷ then the R^2 rises to 0.807. This suggests that channel rank change is on average a good indicator of the proportionate size of the corresponding viewing impact, so that the higher the gain or loss in EPG channel ranks the higher (on average) the corresponding percentage gain or loss in channel performance is likely to be.

That being said, we need to be mindful that there are always going to be significant exceptions and limitations to any such general rule.⁵⁸ For one, there is evidence to suggest that a page 1 loss/gain (or more generally a loss/gain relating to any very prominent EPG slots) will have a more significant impact even if the associated channel rank change is small. Sky Living, for example, had a very sizeable 35% performance boost after only a small 5 channel rank gain put it on page 1 of the Sky EPG, while Sky 2 lost 52% of its audience after a 21 channel rank fall from its page 1 slot, which must be contrasted with Sky Livingit+1 losing only 45% of its audience as a result of moving 90 channel ranks down the Sky EPG.⁵⁹ Any incremental viewing impacts are also likely to diminish and eventually become negligible once we move beyond a certain channel rank change, particularly in relation to EPG prominence losses, with the available evidence suggesting that channels are unlikely to lose much more than half their audiences following a major loss of EPG prominence, and that anything approaching a loss of 40 to 50 channel ranks is likely to constitute such a major change.

4.10. Determining if EPG Change Induced Viewing Impacts are Likely to be Permanent

It is also important to establish whether or not EPG change induced viewing impacts are likely to be permanent. As noted in Section 4.1 above, the reason for usually restricting our analytical timeframe to 6 weeks either side of an EPG change is to minimise the influence of confounding factors (like scheduling changes, rival channel launches, major programming events, seasonal viewing fluctuations, etc.) coming into play when trying to isolate the pure viewing impact of the reshuffle in question. That being said, longer analytical timeframes can sometimes prove useful, as demonstrated by the fact that they have played a role in a number of the reshuffles discussed above. To illustrate the persistence of EPG change induced viewing impacts we have therefore selected a number of major reshuffle scenarios (including our three page 1 examples) for analysis over a much longer 3-year (2010 to 2012) timeframe.⁶⁰

⁵⁷ There are 6 such outliers all relating to low Share channels averaging around 0.1 Share points or less pre-reshuffle, leaving us with 18 examples with which to conduct the regression analysis.

⁵⁸ With this in mind, it must also be noted that in the previous report the evidence (based on EPG reshuffle examples from the 2006-2009 period) for a more prescriptive relationship between the size of an EPG move and the size of the corresponding viewing impact was less compelling (see Previous Report, Section 4.10, pp. 39 – 40).

⁵⁹ See 'Highly Significant: Examples 9', '10' and '17' in Section 4.4 above.

⁶⁰ Our examples cover both the Sky and Virgin Media EPGs, though we were unable to include any Freeview examples as they all relate to very recent EPG moves, with the only Significant example (see 'Significant: Example 6' in Section 4.5 above) taking place on 19/09/2012. This does not leave enough data points within our 2010 to 2012 analytical timeframe for a long run trend analysis on Freeview, but in view of the compelling evidence from the other platforms, as well as the fact that a long run Freeview example was included in the previous report (see Previous Report, Section 4.8, pp. 32 - 37), there is still a strong case to be made for the likely long run persistence of EPG change induced viewing impacts across all the major broadcasting platforms.

The 1st example relates to Sky 2, which was subject to 2 separate reshuffles on the Sky EPG over the 2010 to 2012 period. The first Sky 2 reshuffle (on 01/02/2011) resulted in it losing its prominent page 1 slot and moving 21 channel ranks further down the Sky EPG, while the second resulted in it moving 8 channel ranks up the Sky EPG on 21/02/2012 (though this was obviously not enough of a prominence gain to come anywhere near regaining its page 1 slot). As can be seen in Figure 1 below, the significance and persistence of the negative viewing impact of Sky 2's loss of page 1 prominence on 01/02/2011 is clearly evident in the monthly Share time-series, with a very pronounced downward step-change in February 2011 on the Sky platform that persists over time and is totally absent on the Virgin Media platform. The impact of the small gain in EPG prominence in February 2012 is much less apparent, though (as noted above: see 'Inconclusive: Example 2' in Section 4.7) it does appear to result in a narrowing of the gap between Sky 2's Share of viewing on the Sky and Virgin Media platforms in the months after the reshuffle. On balance, this is therefore a very compelling example of the long run persistence of the negative viewing impact of a major loss of EPG prominence, particularly if this involves the loss of a page 1 slot.

The 2nd example relates to Pick TV (formerly Sky 3), which was subject to a 44 channel rank loss of EPG prominence on the Virgin Media EPG on 22/09/2010, followed by a 41 channel rank loss of EPG prominence on the Sky EPG on 01/02/2011, with the latter move also crucially involving the loss of its page 1 Sky EPG slot. As can be seen in Figure 2 below, both the Sky and Virgin Media reshuffles result in significant downward step changes in Pick TV's monthly Share time-series, with the impact on Sky (where Pick TV loses its page 1 slot) being particularly pronounced.⁶¹ The impact on the Sky platform also appears to persist much more tenaciously over time than the impact on Virgin Media. That being said, it is well over a year after the reshuffle before there is any real sign of recovery in Sky 2's performance on the Virgin Media platform, and so this may well be the result of unrelated structural factors rather than the impact of the loss of EPG prominence suddenly waning.⁶² Indeed, if the latter were the case, then it would be more logical to expect a recovery (manifesting itself as an upward performance time trend) in the months immediately after the reshuffle, as viewers adjusted to the new EPG slot. All factors considered this is therefore another robust example of the long run viewing impacts resulting from changes in EPG prominence.

The 3rd example relates to Sky Living which moved into a prominent page 1 slot on the Sky EPG following a small gain of 5 channel ranks on 01/02/2012. As can be seen in Figure 3 below, this coincided with a very pronounced upward step-change in its monthly Share time-series on Sky that is not replicated on the Virgin Media platform. Following this significant performance boost, however, there was an underlying decline in Sky Living's performance on Sky during the latter half of 2011, followed by an even more pronounced decline in 2012. Crucially, though, Sky Living's performance on Virgin Media has also been in decline during the post reshuffle period, suggesting that this is likely to be more of a scheduling based phenomenon than a fundamental waning of the impact of the gain in EPG prominence on Sky. This is also evident from the substantive and persistent narrowing of the gap between Sky Living's monthly Share time-series on the Sky and Virgin Media platforms in the post reshuffle period. A strong case for the long term benefits of a gain in EPG prominence, particularly if this relates to a slot on the 1st page.

The 4th example relates to MTV, which moved from the top of the Music section into a prominent slot in the top third of the Entertainment section of the Sky EPG, gaining 150

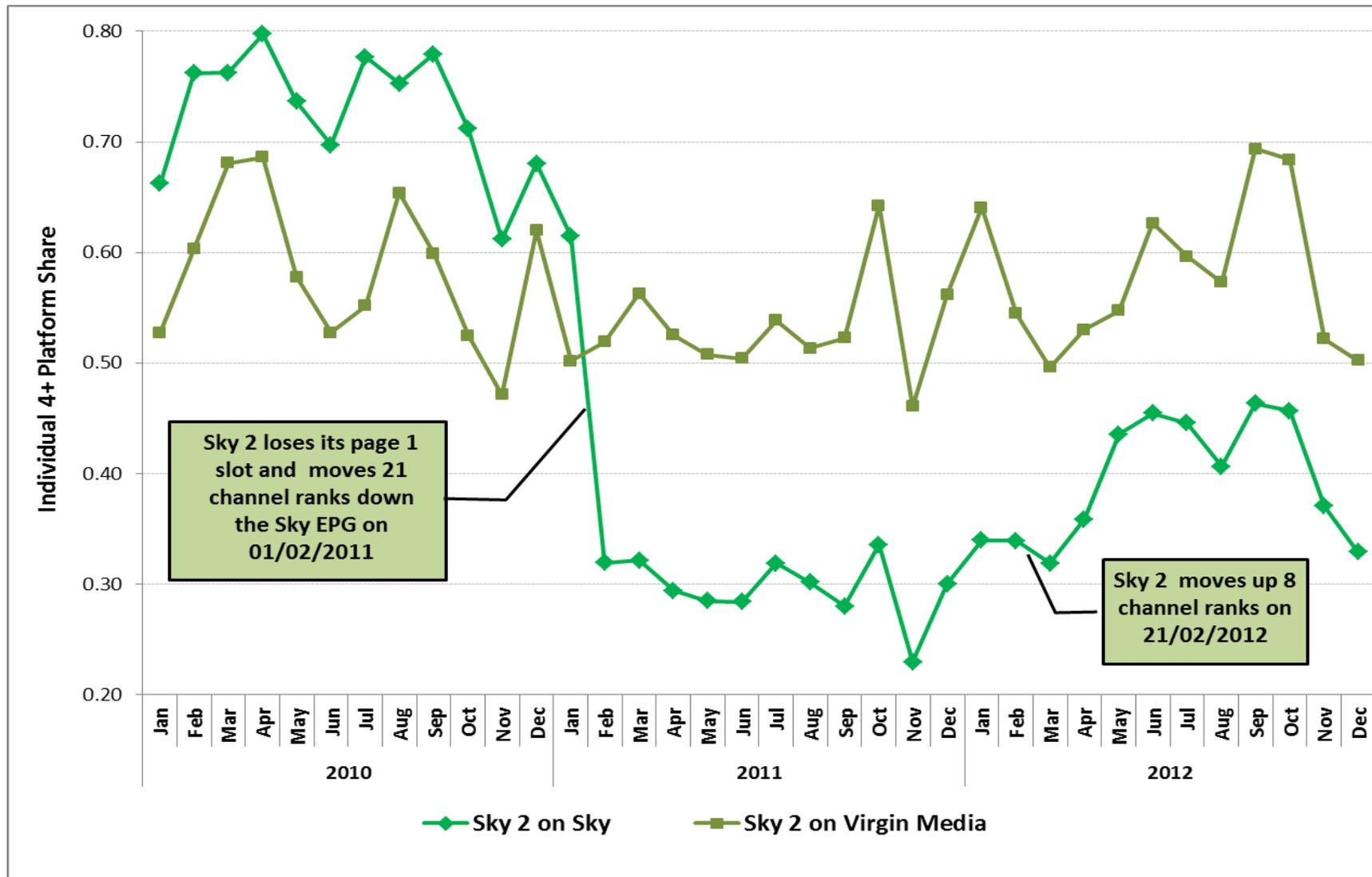
⁶¹ Though it must be kept in mind that the impact on Sky would have been compounded by Pick TV also moving next to Pick TV+1, which would have resulted in some additional cannibalization of Pick TV's post reshuffle audience.

⁶² It is also noteworthy that this late recovery on the Virgin Media platform still leaves Pick TV's average Share of viewing below its pre-reshuffle level, and its monthly Share time-series is also significantly more volatile in the late post reshuffle period.

channel ranks in the process. As can be seen in Figure 4 below, the resulting boost to MTV's performance on the Sky platform (totally absent from its performance on Virgin Media) was not only very pronounced but has also stubbornly persisted over time, with no sign that it is abating. A very clear-cut example of the long run benefits of a major gain in EPG prominence.

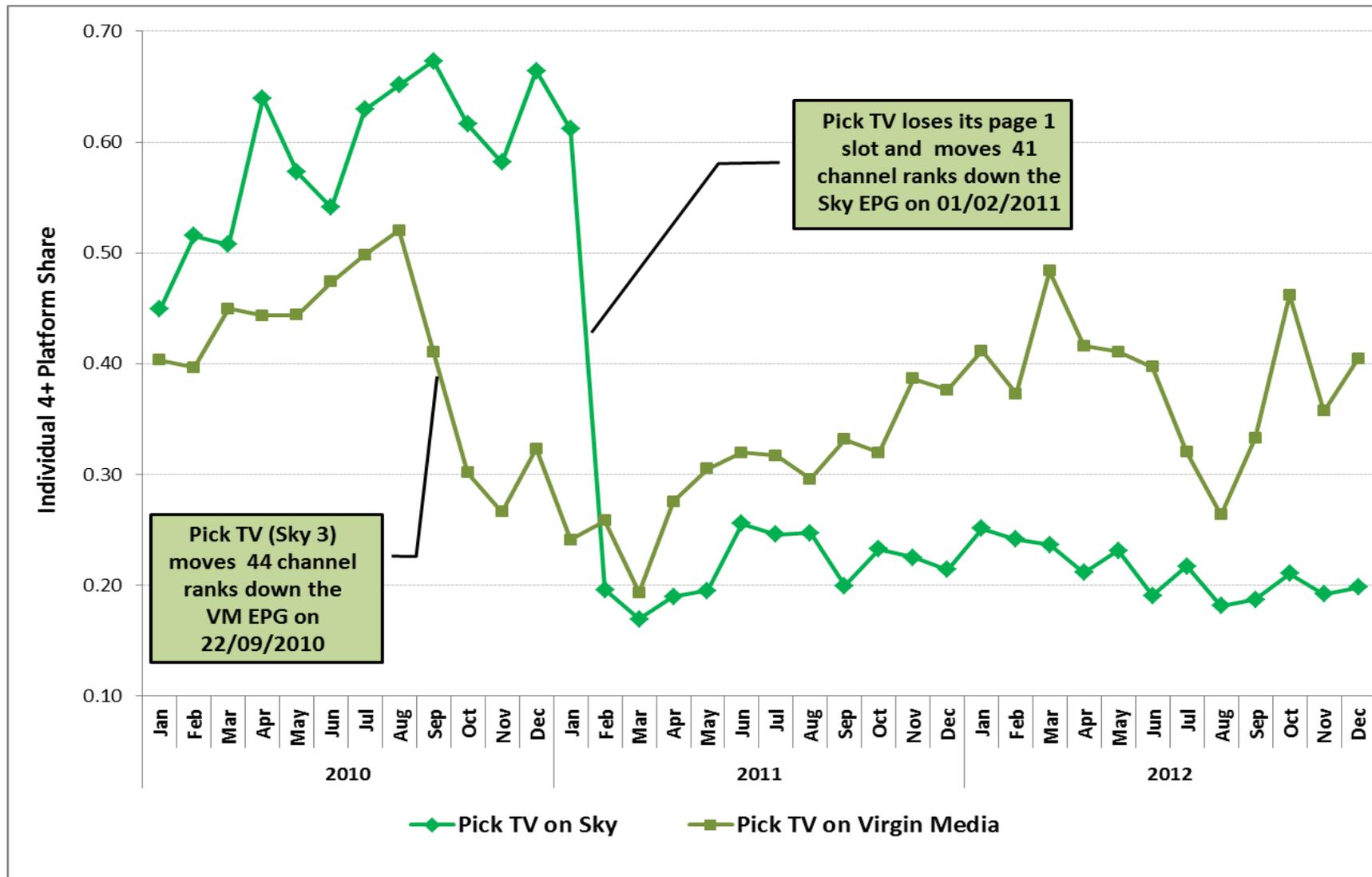
The 5th (and final) example relates to Dave ja vu, which moved 41 channel ranks down the Virgin Media EPG on 05/10/2011. As can be seen in Figure 5 below, the resulting negative impact on Dave ja vu's performance on the Virgin Media platform was not only dramatic but has also clearly persisted over time, making this another compelling example for the long run negative impact of a major loss in EPG prominence.

Figure 1: Sky 2 Long Run Monthly Performance Trend (Jan-2010 to Dec-2012)



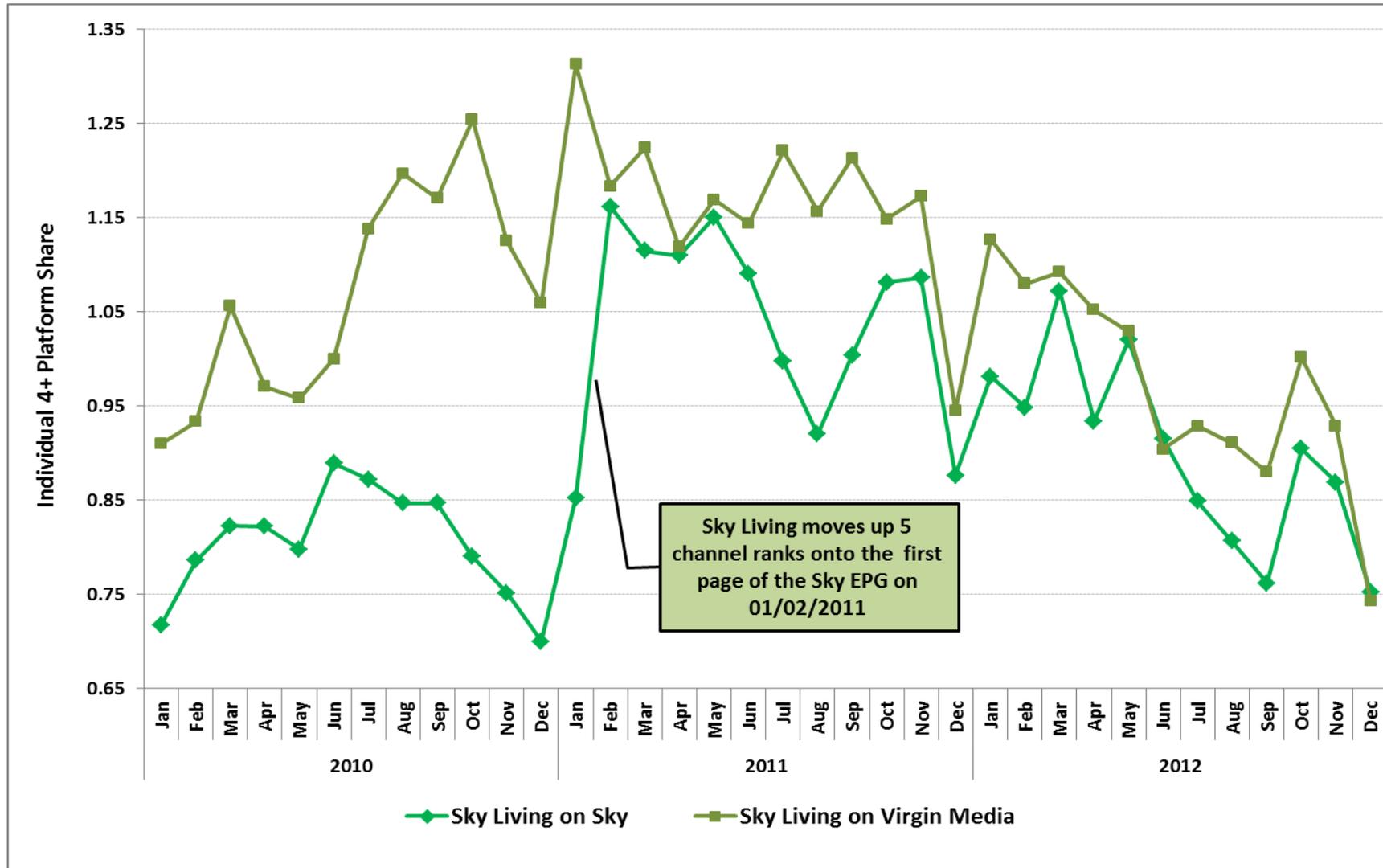
Source: FEHMI / BARB

Figure 2: Pick TV (Sky 3) Long Run Monthly Performance Trend (Jan-2010 to Dec-2012)



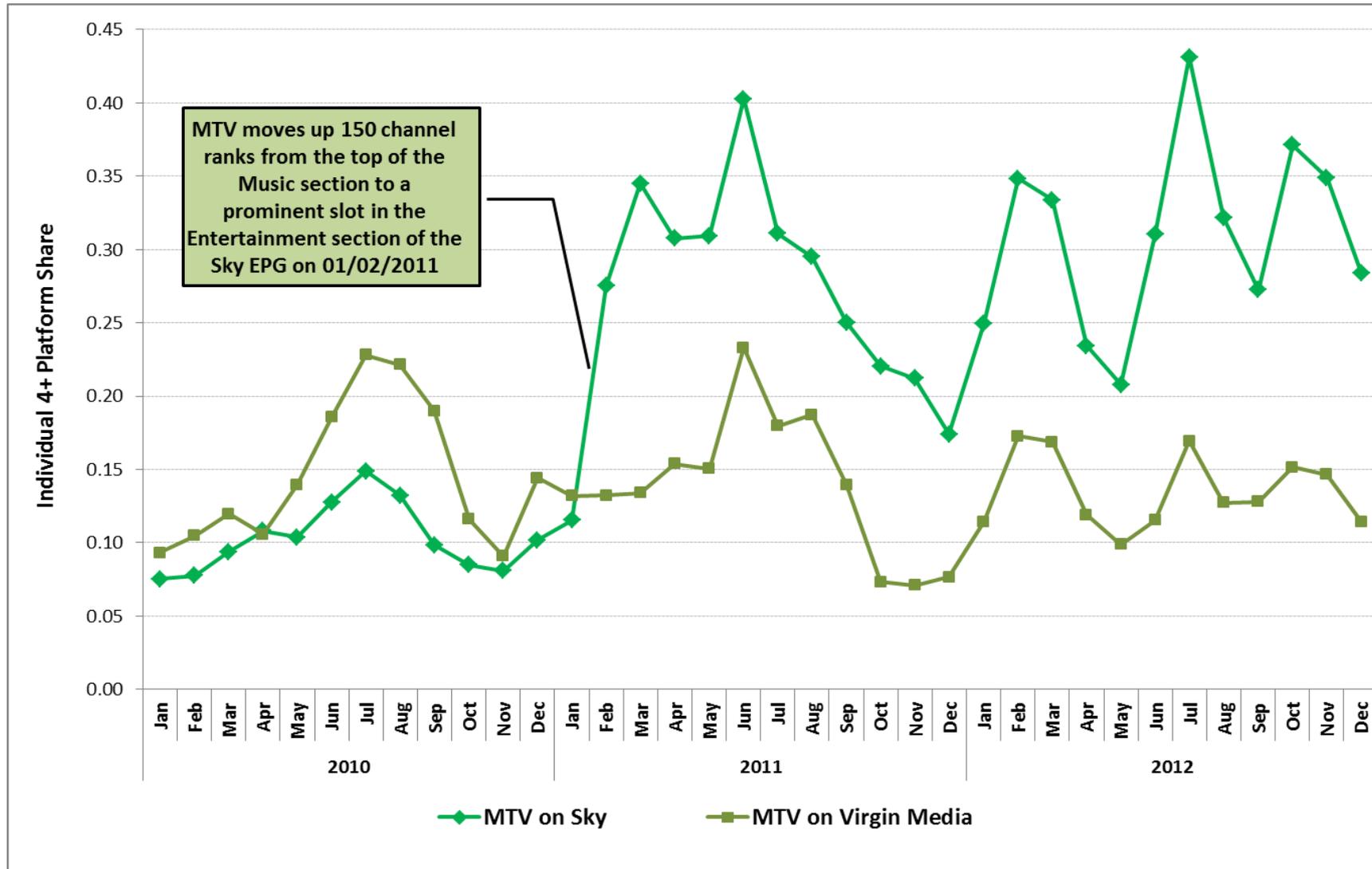
Source: FEHMI / BARB

Figure 3: Sky Living Long Run Monthly Performance Trend (Jan-2010 to Dec-2012)



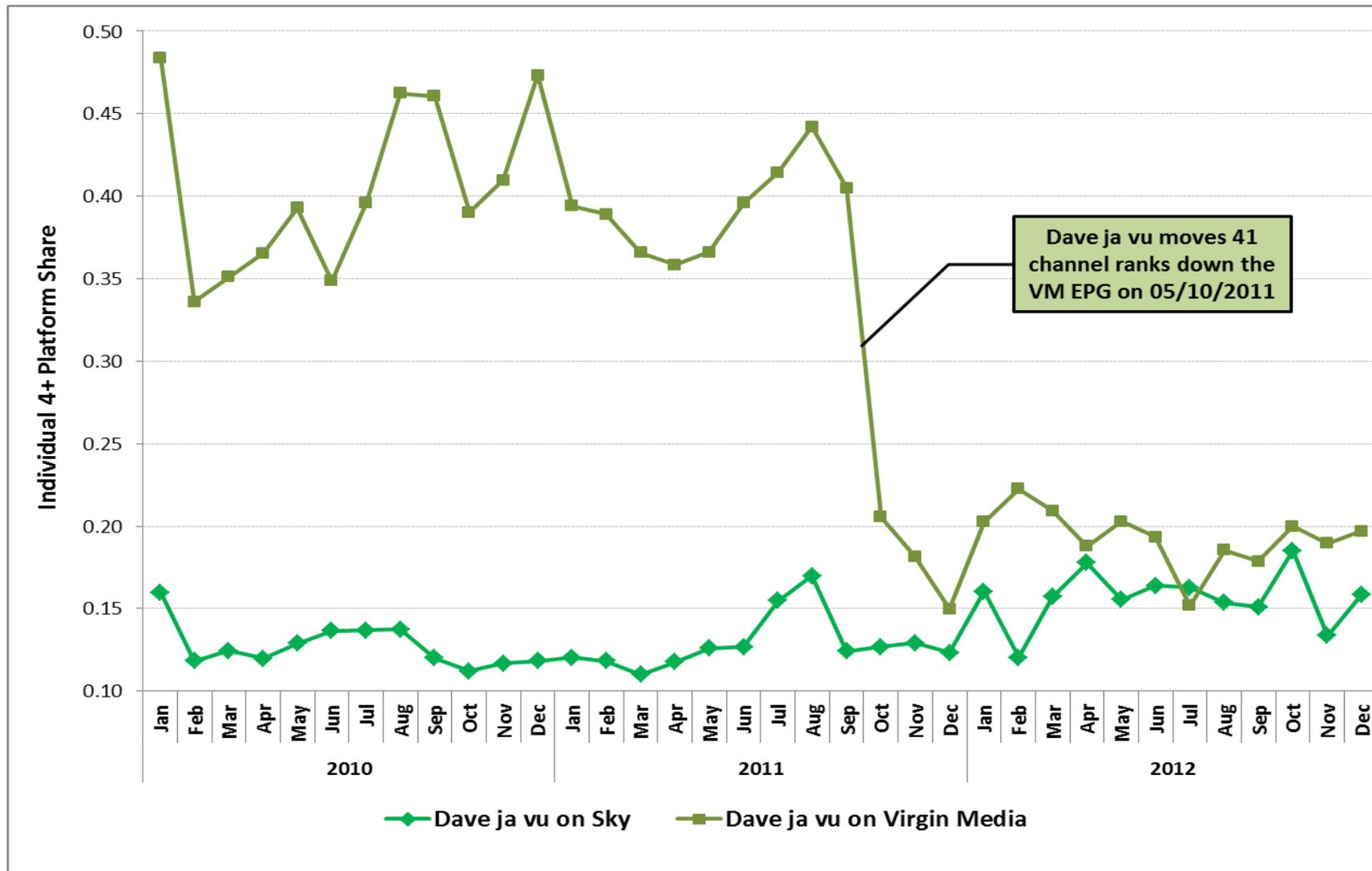
Source: FEHMI / BARB

Figure 4: MTV Long Run Monthly Performance Trend (Jan-2010 to Dec-2012)



Source: FEHMI / BARB

Figure 5: Dave ja vu Long Run Monthly Performance Trend (Jan-2010 to Dec-2012)



Source: FEHMI / BARB

4.11. Conclusions

Of the 29 examples we looked at, 25 (86%) support an argument that EPG positioning affects audience performance, 3 examples are inconclusive and 1 supports an argument that EPG positioning does not affect audience performance. Of the 25 examples (86% of total analysed) that support an argument that EPG positioning affects audience performance, 18 (62% of total analysed) were Highly Significant and 6 (21% of total analysed) were significant with only 1 weakly significant example. We were thus able to isolate and quantify viewing impacts for 24 (83%) of the 29 examples that we analysed. On balance, the evidence therefore strongly supports the view that EPG positioning is likely to have a significant impact on a channel's performance.

Looking at how our 29 examples relate to the different platforms, 21 came from Sky, 5 from Virgin Media and 3 from Freeview. We were able to isolate and quantify viewing impacts for 18 of the 21 examples from the Sky platform. Crucially, this also included two cases of channels losing page 1 EPG prominence (with Pick TV's and Sky 2's Share of viewing declining by 44% and 52% respectively as a result) and one case of a channel gaining page 1 EPG prominence (with a 35% boost to Sky Living Share of viewing after only a small gain of 5 channel ranks). Of the 5 examples from the Virgin Media platform all related to EPG prominence losses and all resulted in quantifiable audience impacts, with the maximum negative impact from a major loss of EPG prominence on the Virgin Media platform being a 44% loss of Share. We were also able to isolate and quantify a viewing impact for one of our 3 Freeview examples, with Yesterday's relatively minor loss of 7 channel ranks resulting in a 15.5% loss of Share.⁶³

Focusing on the EPG prominence losses, as these will be the starting point of our Channel 3 (ITV) and Channel 5 impact analysis in Section 5 below, we have negative impact ranges on Sky and Virgin Media (which are structurally very similar) of between 24% and 52%, and a negative impact of 15.5% on Freeview. This would suggest that the impact range of a significant loss of EPG prominence should be set at a performance loss of between 25% and 50% on Sky and Virgin Media, and a narrower range fluctuating around 15% (with a loss of between 10% and 20% being the most plausible) on Freeview. This puts the impact range of the current analysis for Freeview on the same level as that suggested in the previous report, but does suggest a somewhat higher impact range for Sky and Virgin Media.⁶⁴ On the other hand, it is also the case that a negative impact range of 20% to 40% for Sky and Virgin Media, while rather conservative, would not be inconsistent with the current evidence, and there is a case to be made for taking a more conservative approach in the interest of maintaining a consistent impact range across both current and previous studies.

Considering all the evidence, and erring on the side of caution, we would therefore conclude that if a major digital entertainment channel suffered a significant loss of EPG prominence, this would be associated with a 10% to 20% drop in audience Share on the Freeview platform and a 20% to 40% fall in audience Share on the Sky and Virgin Media platforms.

⁶³ Also see Table 1 in Section 4.3 above for an additional summary overview of the results from our EPG change impact analysis. Further summary details can also be found in Section 6.3 (Confidential Appendix C) below.

⁶⁴ See Previous Report (http://stakeholders.ofcom.org.uk/binaries/consultations/review_c3_c5_licences/statement/attentionalreport.pdf), Section 4.10, pp. 39 – 40.

5. Estimating the Impact of a Major Loss of EPG Prominence for Channel 3 (ITV) and Channel 5

In this section we outline our methodology for generating a range of audience impact forecasts for Channel 3 (ITV) and Channel 5 resulting from a significant loss of EPG prominence. Our methodology combines the empirical evidence from our analysis of actual EPG reshuffles with an algorithm designed to take account of the extent to which the uniqueness of the content and overall brand strength of ITV and Channel 5 are likely to mitigate the viewing impact of a significant move down the EPG. This results in a number of scenario options that vary in the extent to which they are tied to the available empirical evidence, and therefore also as to how speculative (and easy to predict) they are. For Channel 5, the range of predicted outcomes generated by the central (and hence more easily predictable) scenarios gives a minimum performance loss of 5.9% and a maximum loss of 24.3%. For ITV, on the other hand, the corresponding minimum readily predictable performance loss is close to negligible at 0.2%, with the maximum still remaining relatively small at 2.3%. That being said, a more speculative though not necessarily implausible scenario (given the strong empirical evidence for the very significant viewing impacts that can be associated with reshuffles involving page one EPG slots) puts the likely loss for ITV at between 7.9% and 15.8%. The corresponding loss under the same scenario for Channel 5 is between 13.1% and 26.3%.

5.1. Preliminary Assumptions and Clarifications

In this section we outline our key assumptions and also clarify a number of issues relating to recent market developments that have a bearing on how we estimate the Channel 3 (ITV) and Channel 5 EPG change viewing impacts.

We have adopted the same forecasting methodology as that used in the previous report,⁶⁵ but with all inputs based on the BARB viewing data for 2012 (rather than 2009) and with key variables, like the Impact Share Bands, recalibrated to reflect current market conditions. All BARB viewing figures are for Individuals 4+ watching on the Freeview, Cable and Satellite platforms. This platform level viewing is based on people watching specific television sets (rather than just being allocated according to the platform of the primary television set in a given household) and so correctly allocates viewing on secondary sets, which may be on a different platform to a household's main television set.

Viewing on the Freeview platform includes DTT based 'over-the-top' services like BT Vision, YouView and Top-Up TV. However, as all these services follow the default LCNs (logical channel numbers) of the DTT platform, they effectively have the same channel rankings and so can be readily classed together as representing the same underlying EPG structure for the purpose of the current analysis.⁶⁶ Viewing on the Cable platform is for all intents and purposes viewing on Virgin Media,⁶⁷ though on the Satellite platform we must distinguish between viewing on Sky and viewing on Freesat.

⁶⁵ See Previous Report (http://stakeholders.ofcom.org.uk/binaries/consultations/review_c3_c5_licences/statement/attentionalreport.pdf), Section 5.1, pp. 41 – 50). For completeness we will also be recounting all the relevant details in Section 5.2 below.

⁶⁶ See Section 3 above for a more detailed discussion.

⁶⁷ Although two other cable TV service (with its own unique EPGs and channel rankings) available in the UK (Smallworld Cable and WightFiber), they are too small and regionalised to be effectively captured by the BARB panel in any meaningful way. See Section 3.2 above for further details.

As Freesat carries a significantly smaller number of channels than Sky,⁶⁸ and also has a free-to-air channel mix more akin to Freeview, it is possible to make the case that the viewing impact of a significant loss of EPG prominence is likely to be smaller on Freesat than the 20-40% range used for Sky and Virgin, and that Freesat should therefore be analysed as a separate platform with an EPG change impact range more like (though not necessarily the same as) that used for Freeview. On the other hand, we have not been able to analyse any actual EPG reshuffle examples on the Freesat platform to determine/validate what the appropriate impact range should be, and when this is coupled with the fact that Freesat only accounted for 2.5% of Total TV viewing in 2012,⁶⁹ it becomes clear that the considerable added complexity of treating Freesat as a separate platform in our model cannot be justified as any resulting viewing impact would be negligible within the overall context of the analysis.

We have therefore retained the three-way, Freeview, Cable and Satellite platform split used in the previous report, and in 2012 the combined viewing on these platforms accounted for 99.3% of Total TV viewing. Analogue Terrestrial (AT) only accounted 0.6% of Total TV viewing in 2012,⁷⁰ and with the digital switchover now completed this has dropped to zero going forward. This is in sharp contrast to the situation in the previous report, which was based on 2009 data and where AT viewing therefore still accounted for a considerable 16.5% of Total television viewing. As such, there were 5 separate forecasts in the previous report, one for each of the 3 multichannel platforms, another for the 3 multichannel platforms combined and then another for all platforms (including AT) combined. The latter, however, has now effectively become redundant, and to reflect the fact that AT viewing is now extinct and only accounted for a very small fraction of Total TV viewing in 2012, we have not included an all platforms (i.e. including AT) forecast in the current analysis, with a combination of Freeview, Cable and Satellite (i.e. All Multichannel) viewing representing the best forward looking forecast using the 2012 BARB Data.

We also need to consider that unlike in the previous analysis, both ITV and Channel 5 (or ITV1 and Five as they were previously known) now have timeshifted and HD variants, so the question becomes what combination of these to use in the impact analysis. As the aim of the analysis is to estimate the viewing impact of losing the prominent page 1 EPG slots held by ITV and Channel 5 as part of the benefit of their PSB licences, and as their HD and SD channel variants are clearly separated on all EPGs with only the SD variants holding the prominent page 1 EPG slots, it seems logical to only use the viewing to their SD channels in the EPG impact analysis. The same of course goes for their timeshifted channel variants. There is also no issue with the HD/SD channel swap on the Sky EPG, as this does not apply to any of the terrestrial channels due to regional variant issues.⁷¹

We also need to consider whether we should include HD channel viewing when working out the programme title Share bands for ITV2 and E4, the impact reference benchmark channels which, as in the previous analysis, remain the appropriate choice. For these channels the HD/SD channel swap on Sky means that HD subscribers always get the HD channel in the most prominent slot while SD subscribers always get the SD variant, making them, in essence, the same channel. As ITV2 only went out in HD on Sky in 2012,⁷² there are no

⁶⁸ See Section 3.2 above for further details.

⁶⁹ Even more pertinent, within the context of our impact forecasts, is that Freesat viewing only accounted for 2.2% and 2.0% respectively of the relevant ITV and Channel 5 audiences in 2012.

⁷⁰ There remains a very small residual category described as 'Other' by BARB which accounted for an essentially negligible 0.1% of Total TV viewing in 2012.

⁷¹ As far as actually working out the SD channel viewing is concerned, there is no issue with ITV as it is normally BARB reported without the HD viewing being included in the channel total by default. For Channel 5, however, HD viewing is normally included in the channel total by default, but fortunately it is also one of the channels where the HD viewing is reported separately, allowing the SD viewing to be readily separated out from the total.

⁷² It did not launch on Virgin Media until 14 March 2013.

further issues to consider. E4 HD, however, went out on both Sky and Virgin Media, and on Virgin there is no HD/SD channel swap. On the other hand, E4 and E4HD are positioned next to each other on the Virgin EPG at no. 144 and 145 respectively, so that anyone with an HD box can readily choose the HD variant without the added effort of having to scroll significantly further down the EPG, again making it very much akin to them being the same channel. On balance it therefore seems appropriate to include HD channel viewing for ITV2 and E4 in the programme title Share band calculations, though (as was the case in the previous analysis) we treat E4+1 and ITV2+1 as separate channels and so their viewing is not included as part of the programme Share band calculations.

5.2. Impact Estimation Methodology

The evidence from our study of actual EPG change examples suggests that on the Freeview platform the overall impact of a significant loss of prominence for a major non-terrestrial entertainment channel is likely to result in a 10% to 20% reduction in its pre-reshuffle Share of viewing. On the Cable and Satellite platforms, the evidence suggests that this is likely to result in a 20% to 40% decline, a probable reflection of the larger number of channels available on these platforms. A significant loss of prominence for an entertainment channel is broadly defined as a move from a prominent position near the top of the Entertainment section (generally within the top third) to a position near the bottom (generally within the bottom third). On the basis of these results, we can therefore stipulate a low, medium and high EPG change viewing impact for each of the three platforms under consideration, as shown in Table 2 below.

Table 2: Viewing Impact Ranges Resulting from a Significant Loss of EPG Prominence

Viewing Impact of a Significant Loss of EPG Prominence	Platforms		
	Freeview	Cable	Satellite
Low	Down 10%	Down 20%	
Medium	Down 15%	Down 30%	
High	Down 20%	Down 40%	

Source: FEHMI / BARB

This gives us a starting point for generating a range of impact estimates resulting from a significant loss of EPG prominence for ITV and Channel 5.⁷³ There is, however, a significant gap in our knowledge, as we have been unable to study actual examples of EPG reshuffles involving channels with the brand strength and Share of viewing of ITV and Channel 5. We simply have no empirical evidence to tell us what is likely to happen to the Share of viewing of programmes like Coronation Street on ITV and Neighbours on Channel 5, if either of these channels were to lose their prominent (page 1) EPG slots. What we do know, on the other hand, is that the impact bands outlined above are likely to reflect the full impact on a channel like E4, while the highest rating of the digital channels, ITV2, is likely to give an

⁷³ As explained in Section 5.1 above, our analysis is based on the viewing to the SD variants of these channels (and not the viewing to the HD and SD variants combined). This is reflected in all of our Figures and Tables where they are referred to as ITV SD and Channel 5 SD, but for simplicity we simply refer to them as ITV and Channel 5 in the main text and take it as read that we are referring to their SD variants.

indication of where (given the limitations of the empirical evidence) the upper limits of an EPG reshuffle induced viewing impact are likely to fall, beyond which we are on more speculative ground.⁷⁴

We therefore grouped all the programme titles that went out on E4 and ITV2 in 2012 according to which Share bands their average Individuals Share fell in, on each of the three platforms under consideration. The Share bands we used were at one Share point intervals, starting with titles that averaged under 1 Share point, 1 to 2 Share points, 2 to 3 Share points, etc., and ending with those titles that averaged 10 Share points or more.⁷⁵ Once the programme titles had been allocated to their respective Share bands, we calculated what proportion of 2012 channel viewing (on each of the three platforms) the programme titles in each of the Share bands accounted for. The results can be seen in Table 3 below.

Table 3: Proportion of Channel Viewing going to Programme Titles with an Average Individuals 4+ Share in the Specified Share Band Ranges in 2012

Programme Title Share Bands	Proportion of Channel Viewing (2012)					
	Freeview		Cable		Satellite	
	ITV2	E4	ITV2	E4	ITV2	E4
under 1	0.28%	8.47%	8.12%	19.41%	10.00%	36.56%
1 to 2	12.08%	48.16%	38.34%	30.94%	39.76%	47.64%
2 to 3	21.82%	42.57%	15.93%	46.53%	24.30%	14.34%
3 to 4	26.05%	0.79%	29.44%	1.36%	18.23%	1.46%
4 to 5	10.58%	0.00%	2.09%	0.57%	1.54%	0.00%
5 to 6	17.93%	0.00%	0.00%	1.19%	0.23%	0.00%
6 to 7	11.03%	0.00%	5.78%	0.00%	5.93%	0.00%
7 to 8	0.22%	0.00%	0.30%	0.00%	0.00%	0.00%
8 to 9	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%
9 to 10	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
10+	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Source: FEHMI / BARB

Greater than 0.1%

⁷⁴ The other factor dictating our choice of E4 and ITV2 as appropriate benchmark channels is that they both go out on all the major broadcasting platforms (i.e. Freeview, Cable and Satellite), with E4 being a good example of a mid to major digital channel, while ITV2 represents the top end of the digital channel spectrum.

⁷⁵ The advantage of using average Share of viewing rather than average Audience is that the former measure is not inherently biased towards peak-time programmes. The number of people watching television in peak-time is very high, and so even a relatively mediocre Share in peak-time is likely to result in a higher average Audience than a daytime programme with a much higher Share. In the context of an EPG change impact, however, we are ultimately interested in whether or not people are likely to specifically seek out a programme title even when the channel has moved down the EPG and is therefore more difficult to find. Share of viewing is a better measure of this, as it tells us what proportion of those people watching television chose to watch a given title.

Table 3 shows that on E4 the vast bulk of the viewing, on all three platforms, was to programme titles averaging less than 4 Share points, and it is therefore logical for us to assume that our first EPG change Impact Share Band should apply to programme titles that average less than 4 Share points. On ITV2, however, there was still a significant proportion of viewing on the Freeview platform going to titles averaging between 4 and 8 Share points, dropping to 5 to 7 Share points on the Cable and Satellite platforms. This therefore provides us with the basis for creating a second Impact Share Band, for programme titles averaging between 4 and 8 Share points on the Freeview platform and between 4 and 7 Share points on the Cable and Satellite platforms.⁷⁶ By default we therefore also have a third Impact Share Band, for programme titles averaging over 7 Share points on the Cable and Satellite platforms, and over 8 Share points on the Freeview platform.

A good intuitive explanation of the logic behind the creation of these Impact Share Bands is that the first will define the viewing, on any given channel, that, according to the empirical evidence, is most likely to be subject to an EPG change induced viewing impact, the second will define the viewing that is still likely to be subject to an EPG change induced viewing impact, but for which the empirical evidence is a little more speculative, while the third Impact Share Band defines the viewing that falls beyond the scope of the available empirical evidence, and for which we are therefore on much more speculative ground when it comes to assessing any potential EPG change induced viewing impacts.

Table 4 and Table 5 below give the proportion of ITV's and Channel 5's 2012 viewing going to programme titles in the three Impact Share Band categories outlined above,⁷⁷ and, being the foundations upon which these categories are based, ITV2 and E4 have also been included as useful reference benchmarks. As is to be expected, the vast bulk of ITV viewing, on all three platforms (96% on Freeview, 92.3% on Cable and 89.4% on Satellite), falls into Impact Share Band 3. Only 20.5% of Channel 5's viewing, however, comes from titles with an average Share of viewing high enough to make it into Impact Share Band 3 on the Freeview platform, and this falls to 11.5% and 8.2% on the Cable and Satellite platforms respectively.

⁷⁶ There is a case to be made for Cable having a slightly different Impact Share Band range to that used for Satellite, but we opted to keep them the same to reflect the fact that these platforms are closely matched and share the same EPG change impact ranges. For further details and a discussion of how the Impact Share Bands (based on the 2012 data) in the current report differ from those in the previous report (based on the 2009 data), see Section 6.1 (Appendix A).

⁷⁷ It should be noted that regional programmes have not been included among the titles used for ITV. This is because these titles have inherently low Shares due to the limited number of people that can watch them compared with a network programme. Looking at the regional slots, however, we find that these generally do well across the network as a whole, suggesting that they have a loyal following at the individual regional level. As a group they are therefore likely to average significantly more than the Share point limit for the third Impact Share Band, but as they cannot be readily amalgamated, it is best to exclude them from the analysis altogether.

Table 4: Proportion of Channel Viewing going to Programme Titles with an Average Individuals 4+ Share in the Three Impact Share Band Categories in 2012

Programme Title Share Bands	Proportion of Channel Viewing (2012)														
	Share Band	Freeview				Share Band	Cable				Share Band	Satellite			
		ITV SD	Channel 5 SD	ITV2	E4		ITV SD	Channel 5 SD	ITV2	E4		ITV SD	Channel 5 SD	ITV2	E4
Impact Share Band 1 (All Platforms 0 to 4)	0 to 4	0.47%	14.11%	60.24%	100%	0 to 4	1.97%	42.54%	91.82%	98.24%	0 to 4	2.30%	69.31%	92.29%	100%
Impact Share Band 2 (Freeview 4 to 8; CabSat 4 to 7)	4 to 8	3.55%	65.43%	39.76%	0.00%	4 to 7	5.75%	45.93%	7.87%	1.76%	4 to 7	8.29%	22.48%	7.71%	0.00%
Impact Share Band 3 (Freeview 8+; CabSat 7+)	8+	95.98%	20.45%	0.00%	0.00%	7+	92.28%	11.53%	0.31%	0.00%	7+	89.41%	8.21%	0.00%	0.00%

Source: FEHMI / BARB

Table 5: Proportion of Channel Viewing going to Programme Titles with an Average Individuals 4+ Share in the Three Impact Share Band Categories in 2012 (Higher Resolution Table)

Programme Title Share Bands	Proportion of Channel Viewing (2012)											
	Freeview				Cable				Satellite			
	ITV SD	Channel 5 SD	ITV2	E4	ITV SD	Channel 5 SD	ITV2	E4	ITV SD	Channel 5 SD	ITV2	E4
under 1	0.00%	0.00%	0.28%	8.47%	0.01%	0.86%	8.12%	19.41%	0.06%	1.23%	10.00%	36.56%
1 to 2	0.01%	0.95%	12.08%	48.16%	0.27%	3.61%	38.34%	30.94%	0.16%	7.01%	39.76%	47.64%
2 to 3	0.25%	2.50%	21.82%	42.57%	0.46%	15.98%	15.93%	46.53%	0.56%	27.70%	24.30%	14.34%
3 to 4	0.21%	10.65%	26.05%	0.79%	1.23%	22.09%	29.44%	1.36%	1.51%	33.36%	18.23%	1.46%
4 to 5	0.42%	16.58%	10.58%	0.00%	1.71%	22.36%	2.09%	0.57%	1.95%	6.65%	1.54%	0.00%
5 to 6	0.49%	11.29%	17.93%	0.00%	2.33%	15.37%	0.00%	1.19%	2.30%	8.24%	0.23%	0.00%
6 to 7	0.97%	7.33%	11.03%	0.00%	1.71%	8.20%	5.78%	0.00%	4.04%	7.60%	5.93%	0.00%
7 to 8	1.67%	30.24%	0.22%	0.00%	4.22%	3.13%	0.30%	0.00%	4.08%	6.47%	0.00%	0.00%
8 to 9	1.98%	9.81%	0.00%	0.00%	2.62%	7.00%	0.01%	0.00%	3.91%	0.33%	0.00%	0.00%
9 to 10	2.07%	4.43%	0.00%	0.00%	4.00%	0.84%	0.00%	0.00%	8.75%	0.25%	0.00%	0.00%
10+	91.93%	6.22%	0.00%	0.00%	81.44%	0.56%	0.00%	0.00%	72.68%	1.15%	0.00%	0.00%
Impact Share Band 1 (All Platforms 0 to 4)	0.47%	14.11%	60.24%	100%	1.97%	42.54%	91.82%	98.24%	2.30%	69.31%	92.29%	100%
Impact Share Band 2 (Freeview 4 to 8; CabSat 4 to 7)	3.55%	65.43%	39.76%	0.00%	5.75%	45.93%	7.87%	1.76%	8.29%	22.48%	7.71%	0.00%
Impact Share Band 3 (Freeview 8+; CabSat 7+)	95.98%	20.45%	0.00%	0.00%	92.28%	11.53%	0.31%	0.00%	89.41%	8.21%	0.00%	0.00%

Source: FEHMI / BARB

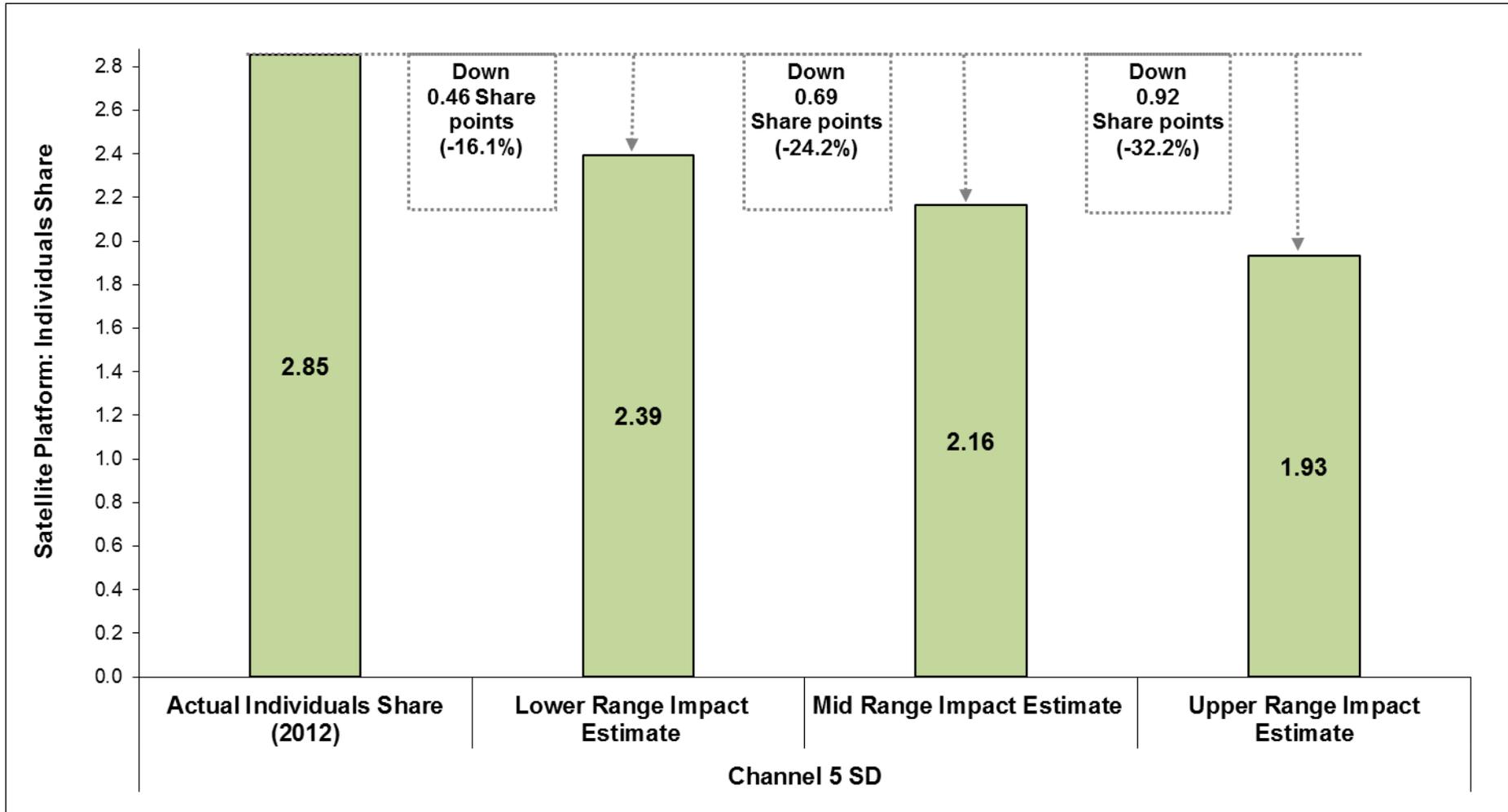
The channel viewing falling into each of the three programme title based Impact Share Bands can now be used as the basis for applying the Low/Medium/High EPG change impact ranges that were derived from our earlier analysis of actual EPG reshuffle examples. However, before we proceed, it is important to consider some additional assumptions about how these impact ranges are likely to apply to each of the different Impact Share Band categories.

For example, in view of the limited empirical evidence, should all the viewing in Impact Share Band 3 be considered immune to an EPG change impact, or should it only be subject to half the normal impact, or something else? Conversely, should the viewing in Impact Share Band 1 always be subject to the full impact, or is there a case to be made for assuming that the terrestrial channels are likely to be immune to any EPG change impact? It is best to illustrate this with an example of how one of these potential options can be used to generate a viewing impact estimate.

Let's assume that all viewing in Impact Share Band 1 is subject to the Full impact, all viewing in Impact Share Band 2 to only Half the impact, and all viewing in Impact Share Band 3 to Zero impact. If we now take Channel 5 on the Satellite platform, the low impact assumption (i.e. down 20% for Full EPG impact) would mean that 69.3.% of Channel 5's viewing (i.e. that in Impact Share Band 1: viewing going to titles averaging less than 4 Share points) would drop by 20%, and 22.5% of its viewing (i.e. that in Impact Share Band 2: viewing going to titles averaging between 4 and 7 Share points) would drop by 10%, with the remaining 8.2.% of Channel 5's viewing (i.e. that in Impact Share Band 3: viewing going to titles averaging more than 7 Share points) being unaffected.

Overall, this would result in Channel 5's viewing dropping by 16.1%. As its 2012 Individuals Share on the Satellite platform was 2.85, this would translate into a loss of 0.46 Share points, with Channel 5's Share on the Satellite platform dropping to 2.39. We can do the same calculation under the Medium (down 30% for Full EPG impact) and High (down 40% for Full EPG impact) EPG change impact assumptions, to generate two further impact estimates for Channel 5 on the Satellite platform, as illustrated in Figure 6 below.

Figure 6: Low/Mid/Upper Range of EPG Change Impact Estimates for Channel 5 SD on the Satellite Platform, Under the Assumption that Viewing in Share Band 1 is Subject to Full Impact, Viewing in Share Band 2 to Half Impact, and Viewing in Share Band 3 to Zero Impact



Source: FEHMI / BARB

Combining all the plausible permutations,⁷⁸ provides us with a range of 21 impact scenarios, 7 for each of the three EPG change impact ranges (i.e. Low, Mid and High). A summary of the underlying impact assumptions for each of these 21 scenarios is given in Table 6 below.

Table 6: Summary of Impact Scenario Assumptions

Share Bands	Low Impact Scenarios (Freeview 10%; CabSat 20%)							Mid Impact Scenarios (Freeview 15%; CabSat 30%)							High Impact Scenarios (Freeview 20%; CabSat 40%)						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Impact Share Band 1 <i>(All Platforms 0-4)</i>	Zero	Half	Full	Full	Full	Full	Full	Zero	Half	Full	Full	Full	Full	Full	Zero	Half	Full	Full	Full	Full	Full
Impact Share Band 2 <i>(Freeview 4-8; CabSat 4-7)</i>	Zero	Zero	Zero	Half	Full	Full	Full	Zero	Zero	Zero	Half	Full	Full	Full	Zero	Zero	Zero	Half	Full	Full	Full
Impact Share Band 3 <i>(Freeview 8+; CabSat 7+)</i>	Zero	Zero	Zero	Zero	Zero	Half	Full	Zero	Zero	Zero	Zero	Zero	Half	Full	Zero	Zero	Zero	Zero	Zero	Half	Full

Source: FEHMI / BARB

To put this into context, in the preceding example, we generated three impact estimates for Channel 5 on the Satellite platform by applying the assumptions for Scenarios 4, 11 and 18. By extending this approach to cover all the scenario options, we were able to generate a range of 21 forecasts for both ITV and Channel 5 on each of the three platforms under consideration (i.e. Freeview, Cable and Satellite). This resulted in a total of 126 forecasts, at 21 scenario options for two channels on three platforms. We then combined these to generate a further 21 forecasts per channel for the Freeview, Cable and Satellite platforms combined (i.e. All Multichannel). Full details of these results are given below.

⁷⁸ For example, if we assume that viewing in Impact Share Band 2 is immune to EPG change impacts, it would not be logical to assume that viewing in Impact Share Band 3 is subject to the full EPG viewing impact within the same scenario.

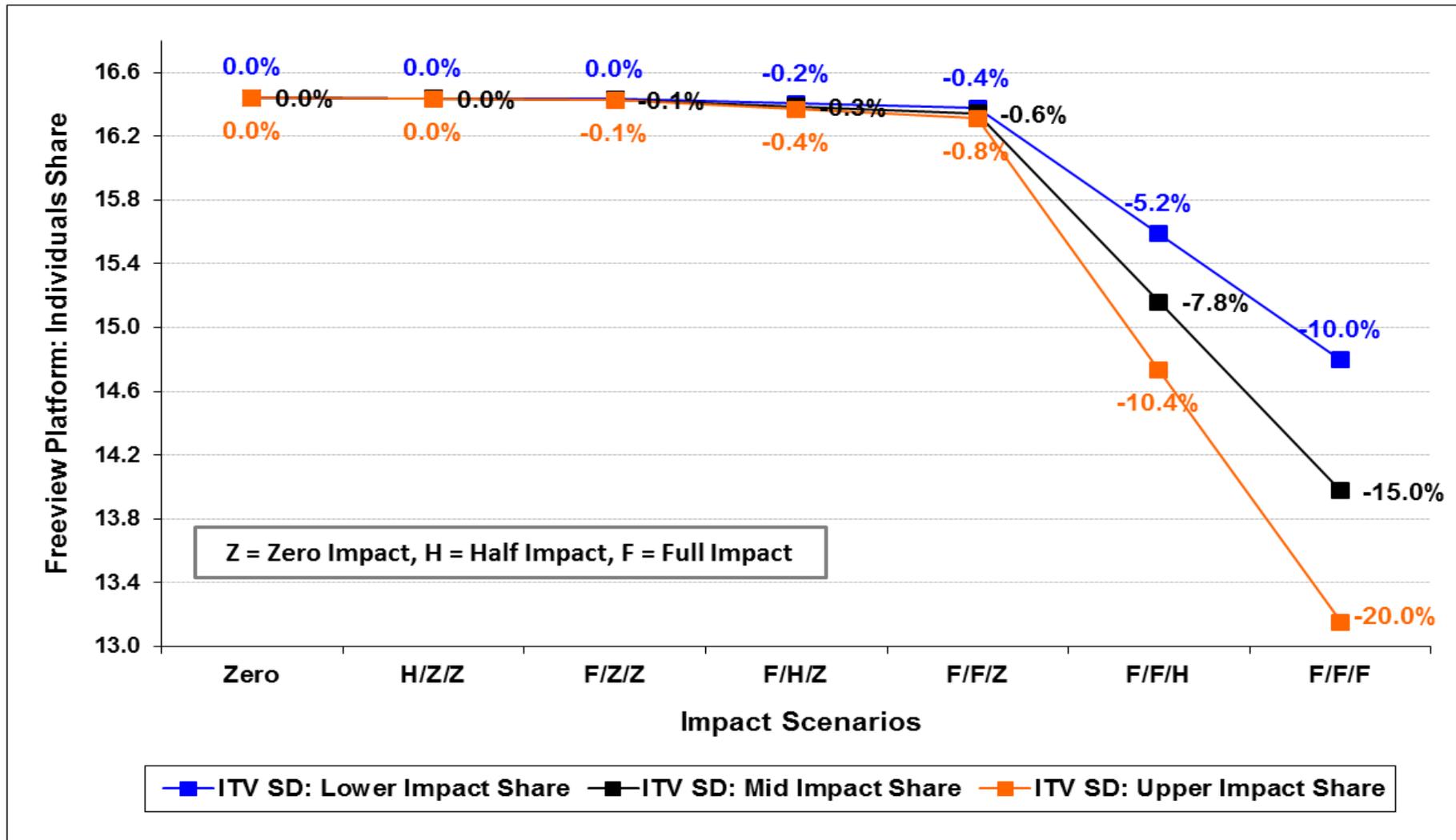
5.3. Freeview Platform Impact Estimates

Table 7: Freeview Platform Impact Estimates

Freeview Platform	ITV SD (2012)									Channel 5 SD (2012)								
	EPG Change Impact Ranges									EPG Change Impact Ranges								
	Low (10%)			Medium (15%)			High (20%)			Low (10%)			Medium (15%)			High (20%)		
Scenarios (Impact on Viewing to Programme Titles in Share Bands: 0-4/4-8/8+)	Share	Change	Change (%)	Share	Change	Change (%)	Share	Change	Change (%)	Share	Change	Change (%)	Share	Change	Change (%)	Share	Change	Change (%)
1 Zero/Zero/Zero	16.44	0.00	0.00%	16.44	0.00	0.00%	16.44	0.00	0.00%	5.25	0.00	0.0%	5.25	0.00	0.00%	5.25	0.00	0.00%
2 Half/Zero/Zero	16.44	0.00	-0.02%	16.44	-0.01	-0.04%	16.43	-0.01	-0.05%	5.21	-0.04	-0.7%	5.19	-0.06	-1.06%	5.18	-0.07	-1.41%
3 Full/Zero/Zero	16.43	-0.01	-0.05%	16.43	-0.01	-0.07%	16.43	-0.02	-0.09%	5.18	-0.07	-1.4%	5.14	-0.11	-2.12%	5.10	-0.15	-2.82%
4 Full/Half/Zero	16.40	-0.04	-0.22%	16.39	-0.06	-0.34%	16.37	-0.07	-0.45%	5.00	-0.25	-4.7%	4.88	-0.37	-7.02%	4.76	-0.49	-9.37%
5 Full/Full/Zero	16.38	-0.07	-0.40%	16.34	-0.10	-0.60%	16.31	-0.13	-0.80%	4.83	-0.42	-8.0%	4.62	-0.63	-11.9%	4.42	-0.84	-15.9%
6 Full/Full/Half	15.59	-0.86	-5.20%	15.16	-1.28	-7.80%	14.73	-1.71	-10.4%	4.78	-0.47	-9.0%	4.54	-0.71	-13.5%	4.31	-0.94	-18.0%
7 Full/Full/Full	14.80	-1.64	-10.0%	13.98	-2.47	-15.0%	13.15	-3.29	-20.0%	4.73	-0.53	-10.0%	4.46	-0.79	-15.0%	4.20	-1.05	-20.0%

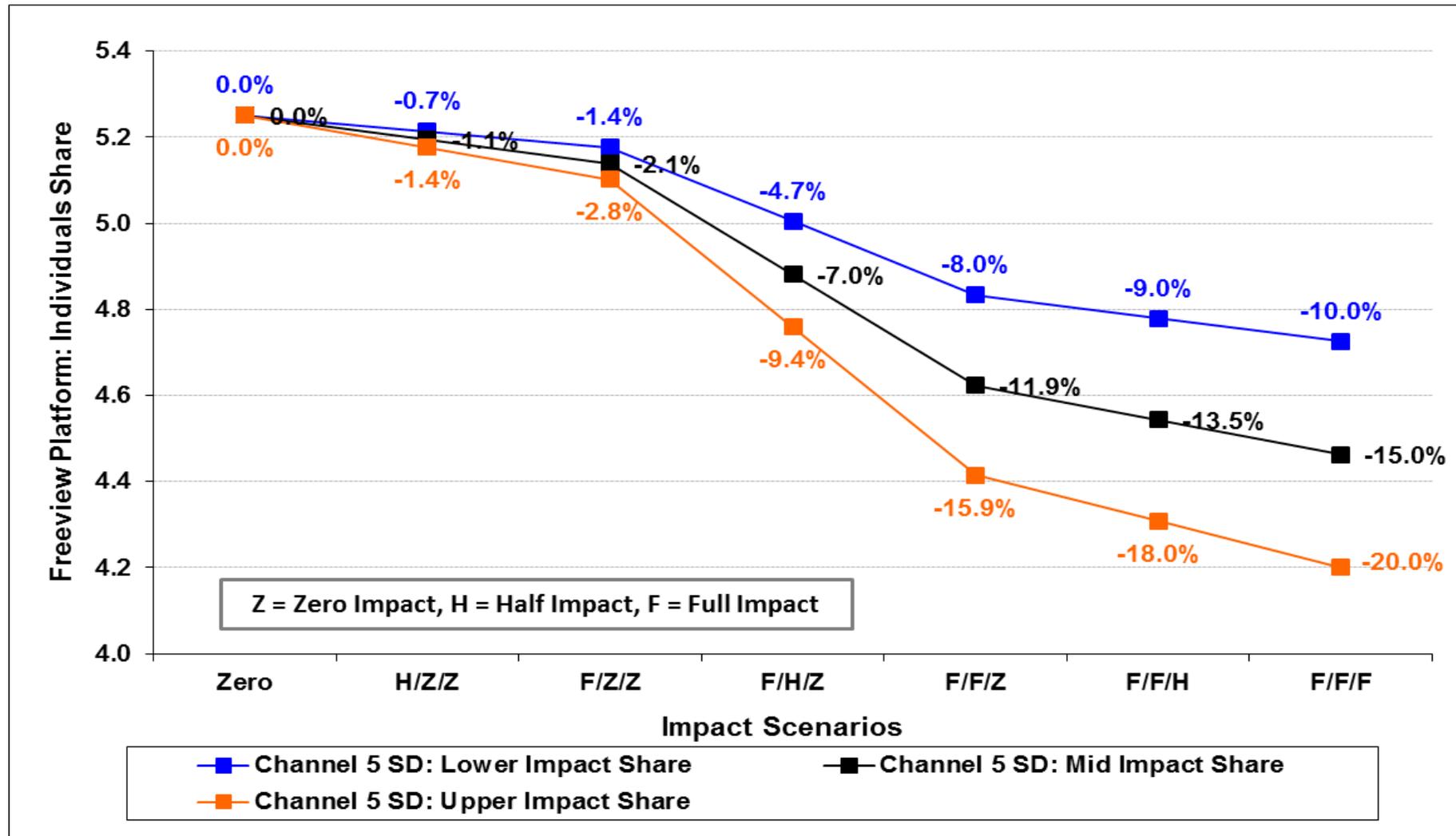
Source: FEHMI / BARB

Figure 7: Freeview Platform Impacts Estimates, ITV SD



Source: FEHMI / BARB

Figure 8: Freeview Platform Impacts Estimates, Channel 5 SD



Source: FEHMI / BARB

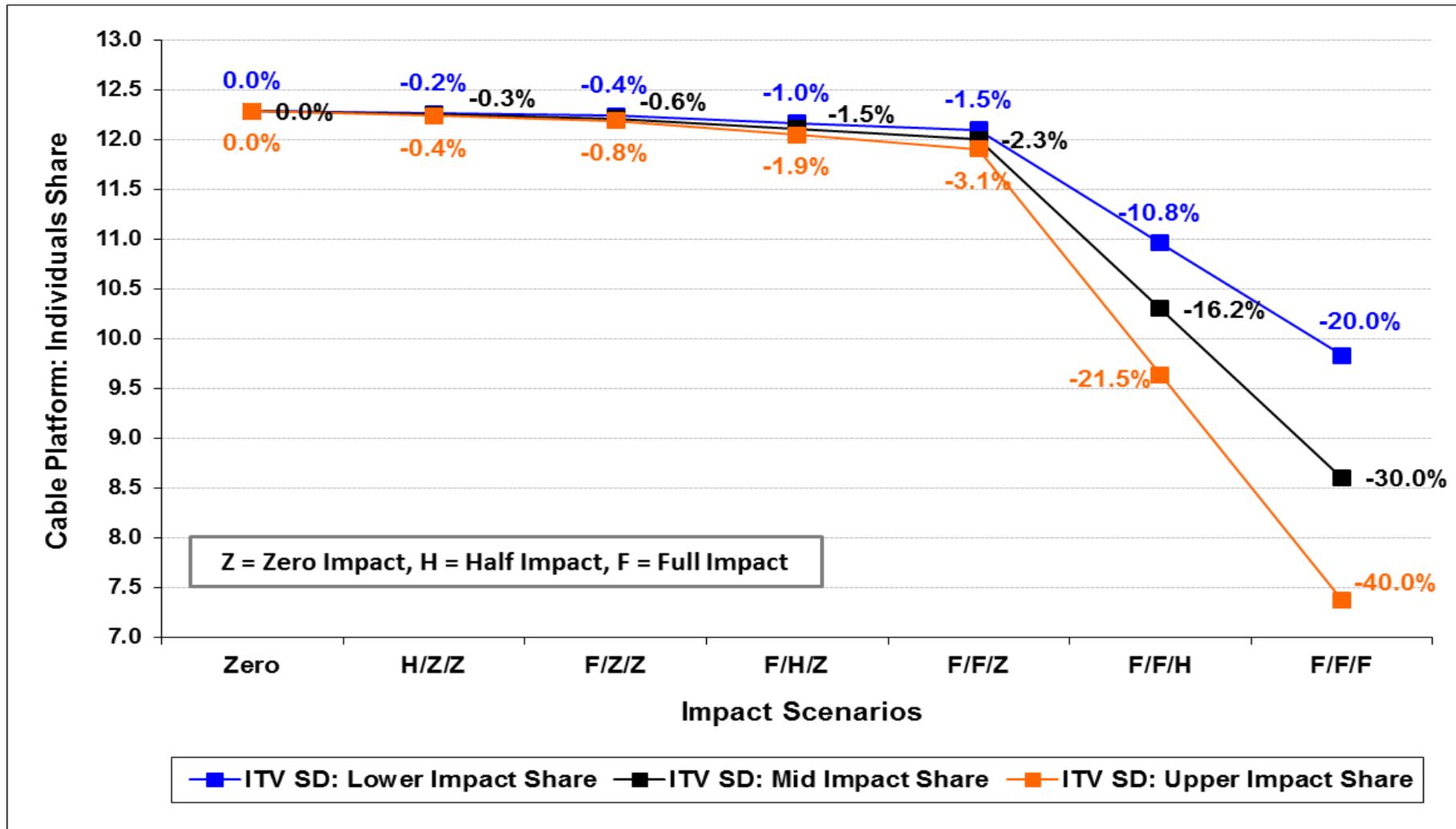
5.4. Cable Platform Impact Estimates

Table 8: Cable Platform Impact Estimates

Cable Platform	ITV SD (2012)									Channel 5 SD (2012)								
	EPG Change Impact Ranges									EPG Change Impact Ranges								
Scenarios (Impact on Viewing to Programme Titles in Share Bands: 0-4/4-7/7+)	Low (20%)			Medium (30%)			High (40%)			Low (20%)			Medium (30%)			High (40%)		
	Share	Change	Change (%)	Share	Change	Change (%)	Share	Change	Change (%)	Share	Change	Change (%)	Share	Change	Change (%)	Share	Change	Change (%)
1 Zero/Zero/Zero	12.29	0.00	0.00%	12.29	0.00	0.00%	12.29	0.00	0.00%	3.52	0.00	0.0%	3.52	0.00	0.00%	3.52	0.00	0.00%
2 Half/Zero/Zero	12.26	-0.02	-0.20%	12.25	-0.04	-0.30%	12.24	-0.05	-0.39%	3.37	-0.15	-4.3%	3.30	-0.22	-6.38%	3.22	-0.30	-8.5%
3 Full/Zero/Zero	12.24	-0.05	-0.39%	12.21	-0.07	-0.59%	12.19	-0.10	-0.79%	3.22	-0.30	-8.5%	3.07	-0.45	-12.8%	2.92	-0.60	-17.0%
4 Full/Half/Zero	12.17	-0.12	-0.97%	12.11	-0.18	-1.45%	12.05	-0.24	-1.94%	3.06	-0.46	-13.1%	2.83	-0.69	-19.7%	2.60	-0.92	-26.2%
5 Full/Full/Zero	12.10	-0.19	-1.54%	12.00	-0.28	-2.32%	11.91	-0.38	-3.09%	2.90	-0.62	-17.7%	2.59	-0.94	-26.5%	2.28	-1.25	-35.4%
6 Full/Full/Half	10.96	-1.32	-10.8%	10.30	-1.99	-16.2%	9.64	-2.65	-21.5%	2.86	-0.66	-18.8%	2.53	-1.00	-28.3%	2.20	-1.33	-37.7%
7 Full/Full/Full	9.83	-2.46	-20.0%	8.60	-3.69	-30.0%	7.37	-4.91	-40.0%	2.82	-0.70	-20.0%	2.47	-1.06	-30.0%	2.11	-1.41	-40.0%

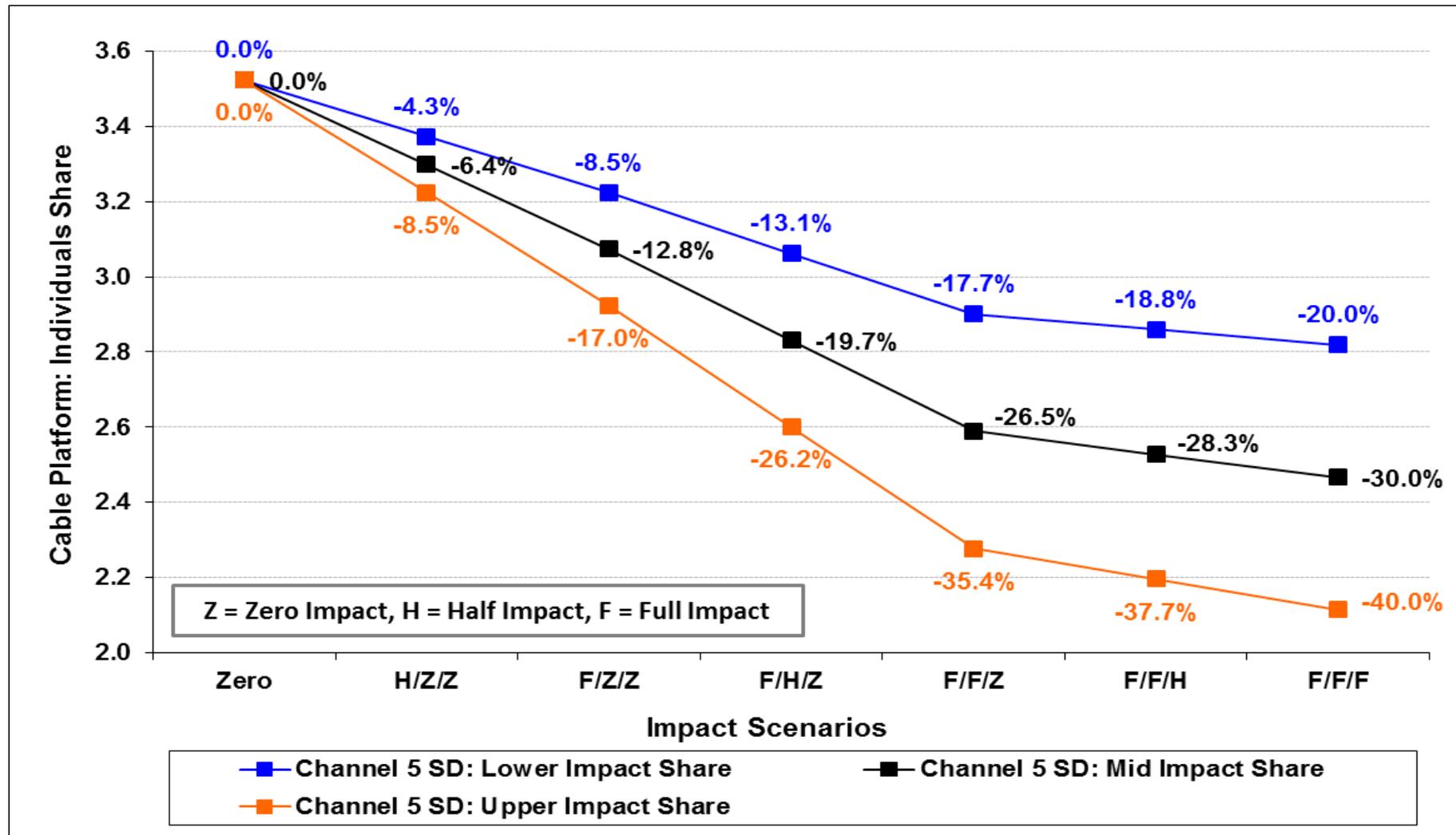
Source: FEHMI / BARB

Figure 9: Cable Platform Impacts Estimates, ITV SD



Source: FEHMI / BARB

Figure 10: Cable Platform Impacts Estimates, Channel 5 SD



Source: FEHMI / BARB

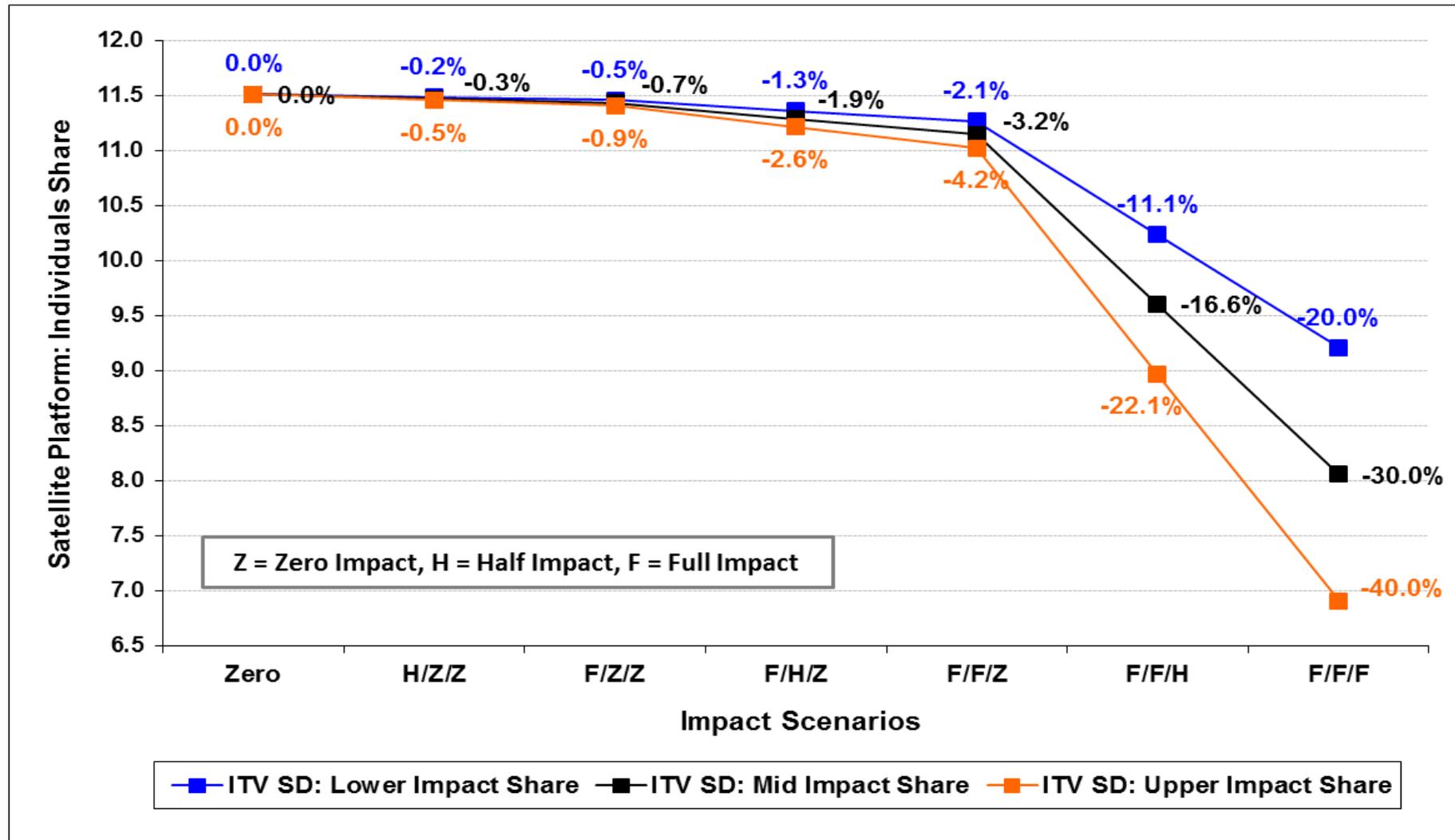
5.5. Satellite Platform Impact Estimates

Table 9: Satellite Platform Impact Estimates

Satellite Platform	ITV SD (2012)									Channel 5 SD (2012)								
	EPG Change Impact Ranges									EPG Change Impact Ranges								
Scenarios (Impact on Viewing to Programme Titles in Share Bands: 0-4/4-7/7+)	Low (20%)			Medium (30%)			High (40%)			Low (20%)			Medium (30%)			High (40%)		
	Share	Change	Change (%)	Share	Change	Change (%)	Share	Change	Change (%)	Share	Change	Change (%)	Share	Change	Change (%)	Share	Change	Change (%)
1 Zero/Zero/Zero	11.51	0.00	0.00%	11.51	0.00	0.00%	11.51	0.00	0.00%	2.85	0.00	0.0%	2.85	0.00	0.00%	2.85	0.00	0.00%
2 Half/Zero/Zero	11.48	-0.03	-0.23%	11.47	-0.04	-0.34%	11.46	-0.05	-0.46%	2.66	-0.20	-6.9%	2.56	-0.30	-10.4%	2.46	-0.40	-13.9%
3 Full/Zero/Zero	11.46	-0.05	-0.46%	11.43	-0.08	-0.69%	11.40	-0.11	-0.92%	2.46	-0.40	-13.9%	2.26	-0.59	-20.8%	2.06	-0.79	-27.7%
4 Full/Half/Zero	11.36	-0.15	-1.29%	11.29	-0.22	-1.93%	11.21	-0.30	-2.58%	2.39	-0.46	-16.1%	2.16	-0.69	-24.2%	1.93	-0.92	-32.2%
5 Full/Full/Zero	11.27	-0.24	-2.12%	11.14	-0.37	-3.18%	11.02	-0.49	-4.24%	2.33	-0.52	-18.4%	2.07	-0.79	-27.5%	1.81	-1.05	-36.7%
6 Full/Full/Half	10.24	-1.27	-11.1%	9.60	-1.91	-16.6%	8.96	-2.55	-22.1%	2.31	-0.55	-19.2%	2.03	-0.82	-28.8%	1.76	-1.10	-38.4%
7 Full/Full/Full	9.21	-2.30	-20.0%	8.06	-3.45	-30.0%	6.91	-4.60	-40.0%	2.28	-0.57	-20.0%	2.00	-0.86	-30.0%	1.71	-1.14	-40.0%

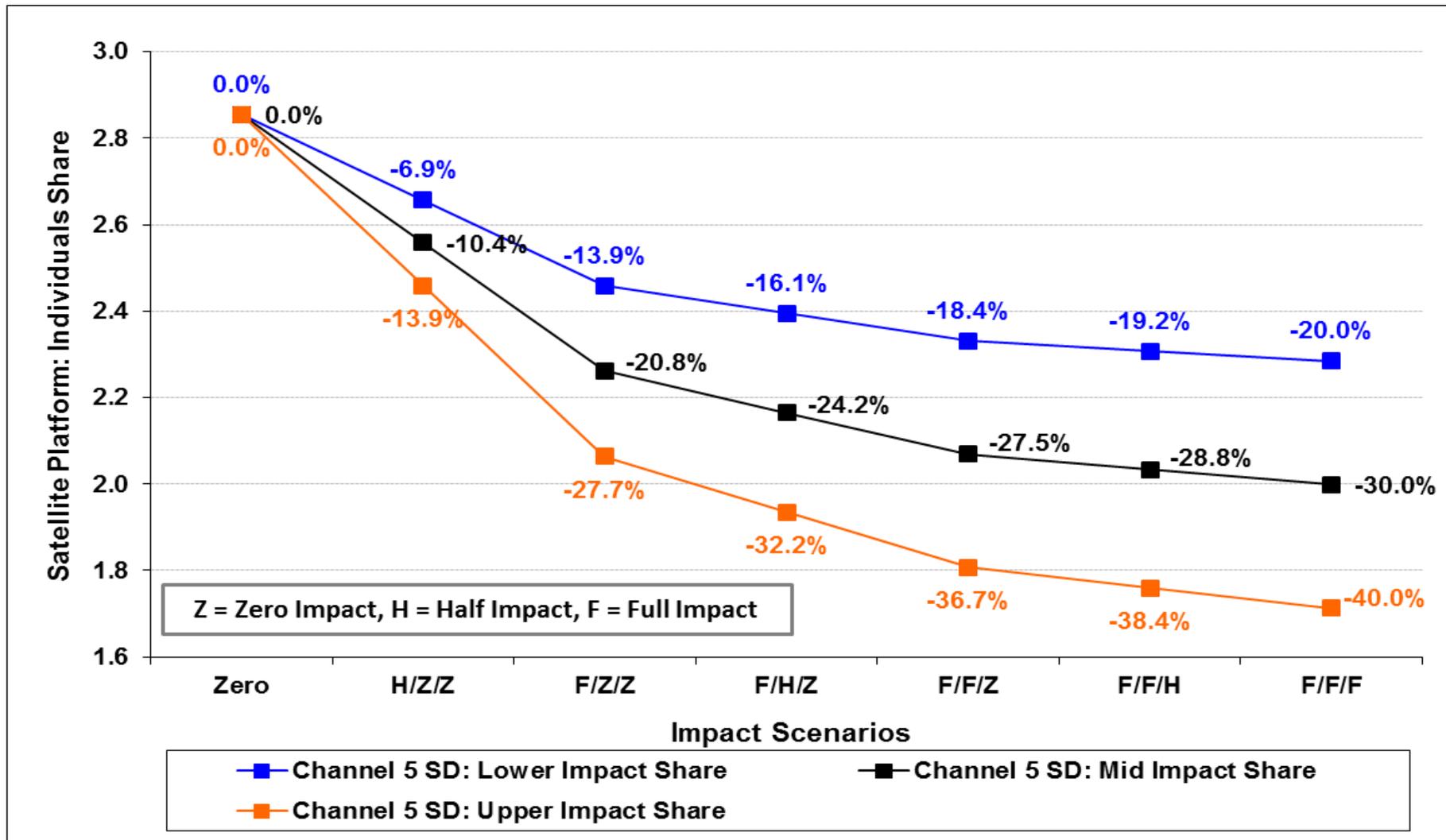
Source: FEHMI / BARB

Figure 11: Satellite Platform Impacts Estimates, ITV SD



Source: FEHMI / BARB

Figure 12: Satellite Platform Impacts Estimates, Channel 5 SD



Source: FEHMI / BARB

5.6. All Multichannel Platforms (Freeview, Cable & Satellite Combined) Impact Estimates

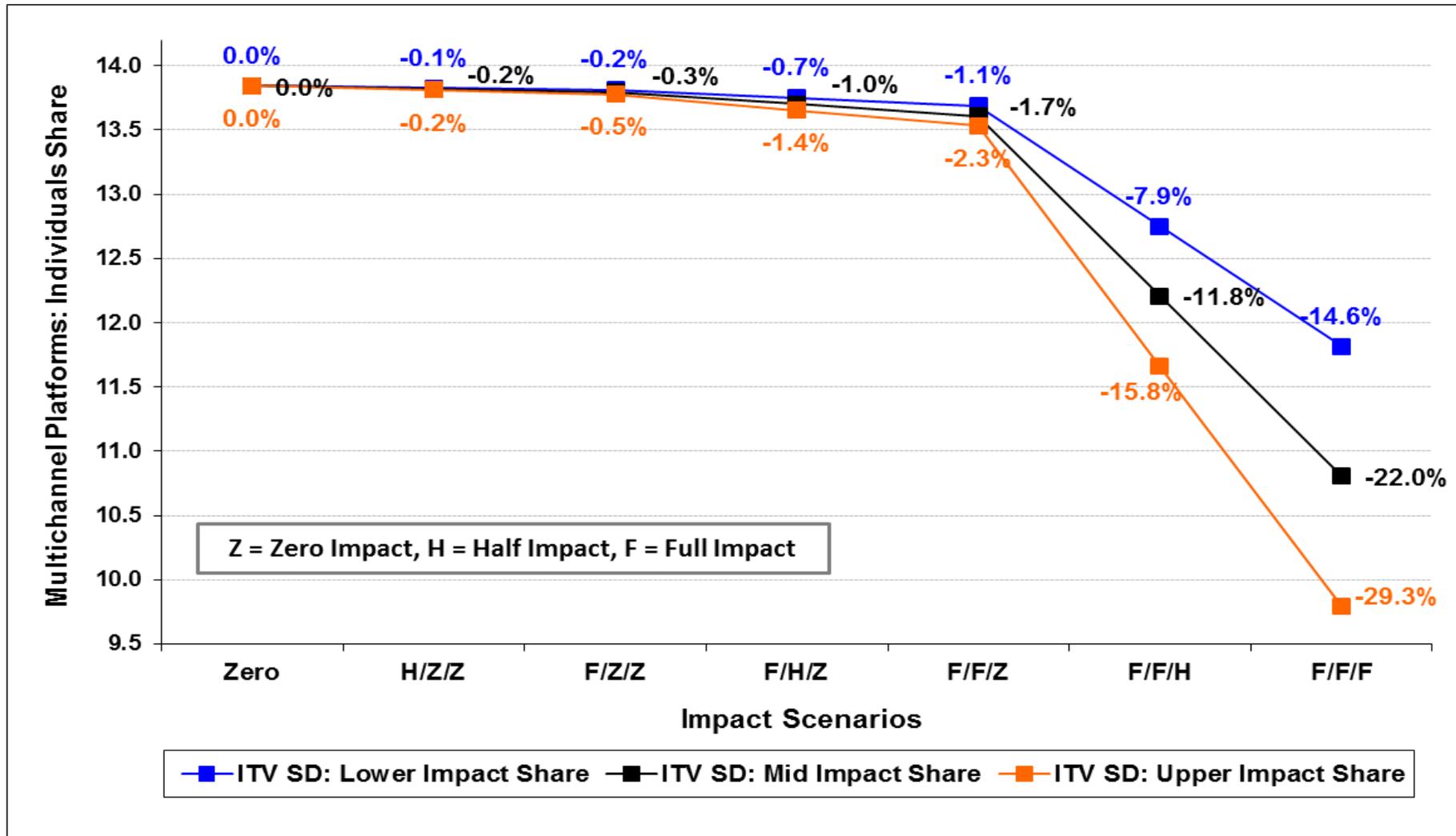
Table 10: All Multichannel Platforms (Freeview, Cable & Satellite Combined) Impact Estimates

Freeview, Cable & Satellite Combined*	ITV SD (2012)									Channel 5 SD (2012)								
	EPG Change Impact Ranges									EPG Change Impact Ranges								
	Low			Medium			High			Low			Medium			High		
Scenarios	Share	Change	Change (%)	Share	Change	Change (%)	Share	Change	Change (%)	Share	Change	Change (%)	Share	Change	Change (%)	Share	Change	Change (%)
1 Zero/Zero/Zero	13.84	0.00	0.00%	13.84	0.00	0.00%	13.84	0.00	0.00%	4.03	0.00	0.00%	4.03	0.00	0.00%	4.03	0.00	0.00%
2 Half/Zero/Zero	13.83	-0.02	-0.12%	13.82	-0.02	-0.17%	13.81	-0.03	-0.23%	3.91	-0.12	-2.9%	3.85	-0.18	-4.42%	3.79	-0.24	-5.9%
3 Full/Zero/Zero	13.81	-0.03	-0.23%	13.79	-0.05	-0.35%	13.78	-0.06	-0.46%	3.79	-0.24	-5.9%	3.67	-0.36	-8.8%	3.55	-0.47	-11.8%
4 Full/Half/Zero	13.75	-0.09	-0.68%	13.70	-0.14	-1.02%	13.65	-0.19	-1.36%	3.66	-0.36	-9.0%	3.48	-0.55	-13.5%	3.30	-0.73	-18.0%
5 Full/Full/Zero	13.69	-0.16	-1.13%	13.61	-0.23	-1.69%	13.53	-0.31	-2.26%	3.54	-0.49	-12.2%	3.29	-0.73	-18.2%	3.05	-0.98	-24.3%
6 Full/Full/Half	12.75	-1.09	-7.9%	12.21	-1.64	-11.8%	11.66	-2.18	-15.8%	3.50	-0.53	-13.1%	3.23	-0.79	-19.7%	2.97	-1.06	-26.3%
7 Full/Full/Full	11.82	-2.03	-14.6%	10.80	-3.04	-22.0%	9.79	-4.05	-29.3%	3.46	-0.57	-14.1%	3.18	-0.85	-21.2%	2.89	-1.14	-28.2%

Source: FEHMI / BARB

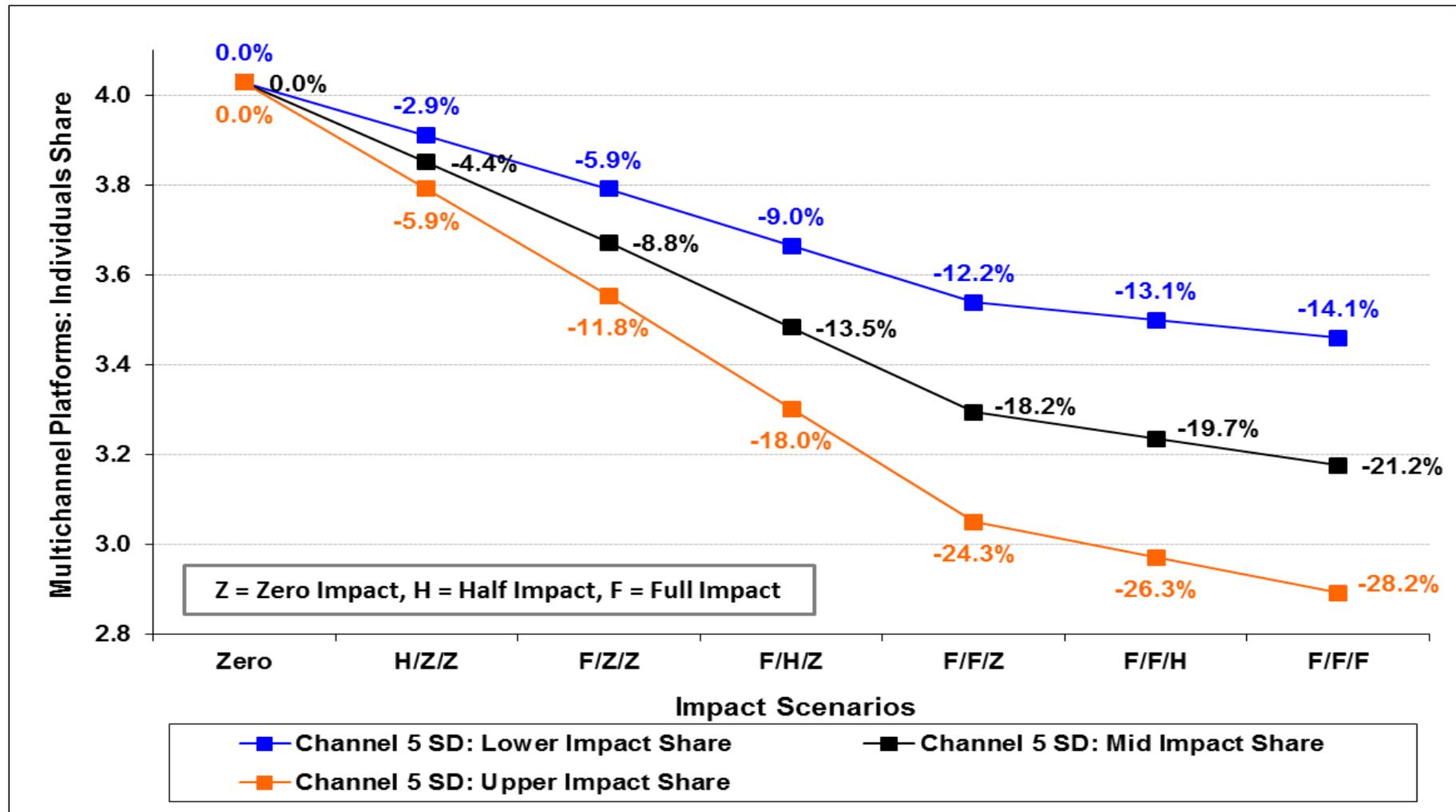
* In 2012 the viewing on these platforms (keeping in mind that Satellite includes Freesat and Freeview includes DTT based 'over-the-top' services like BT Vision, YouView and Top-Up TV) accounted for 98.8% of ITV SD viewing, 99.2% of Channel 5 SD viewing and 99.3% of Total TV viewing. Analogue Terrestrial only accounted for 1.1% of ITV SD viewing, 0.8% of Channel 5 SD viewing and 0.6% of Total TV viewing in 2012, and with the digital switchover now completed this has dropped to zero going forward. There remains a very small residual category described as 'Other' by BARB which accounted for an essentially negligible 0.1% of Total TV viewing in 2012. Overall, a combination of Freeview, Cable and Satellite therefore represents the best forward looking forecast using the 2012 BARB Data.

Figure 13: All Multichannel Platforms (Freeview, Cable & Satellite Combined) Impact Estimates, ITV SD



Source: FEHMI / BARB

Figure 14: All Multichannel Platforms (Freeview, Cable & Satellite Combined) Impact Estimates, Channel 5 SD



Source: FEHMI / BARB

5.7. Conclusions

The underlying trends in the forecast ranges of the two channels under consideration (ITV and Channel 5) are very similar across all the 4 platform options covered (i.e. Freeview, Cable, Satellite and All Multichannel). We have therefore provided a detailed discussion of the forecast ranges for the All Multichannel option, as this combines the EPG change impact ranges of all the other affected platforms (i.e. Freeview, Cable and Satellite).⁷⁹ The forecast ranges we will be discussing therefore relate to the tables and figures in Section 5.6 above, where Table 10 provides a useful overview of the results. To really understand the implications of these results, however, it is best to focus on Figure 13 (for ITV) and Figure 14 (for Channel 5), and we will be referring to these two figures throughout the course of the following discussion. The 7 scenario options (Zero, H/Z/Z, F/Z/Z, F/H/Z, F/F/Z, F/F/H and F/F/F) are on the horizontal axis, with Share of viewing on the vertical axis. For each of the 3 EPG change impact ranges (Low, Mid and Upper)⁸⁰ there is a Share point forecast for each of the 7 scenarios, giving a range of 21 forecasts per channel. The percentage figures next to each Share point forecast represent the percentage drop in performance relative to the status quo (i.e. the percentage difference between the forecast and actual 2012 Share of the channel in question), thus giving the relative performance impact of the loss of EPG prominence for the scenario in question.

Moving from left to right, the 'Zero' EPG change impact scenario represents the most extreme assumption against the thesis that EPG position is likely to have a significant impact on channel performance, whereby both ITV and Channel 5 are assumed to be totally immune to any adverse performance impacts resulting from a major loss of EPG prominence. Such a strong assumption would, however, seem to be at variance with the empirical evidence, as it means that even the viewing going to titles in the first (i.e. lowest) Impact Share Band would not be subject to any EPG change impacts.

The next scenario, 'H/Z/Z', makes some concessions towards the importance of EPG positioning in that viewing falling into Impact Share Band 1 is assumed to be subject to at least half the total impact suggested by the empirical evidence. As a significant proportion of Channel 5's viewing falls into the first Impact Share Band, this results in a predicted decline of between 2.9% and 5.9% in its Share of viewing. Very little of ITV's viewing falls into the first Impact Share Band, and so it remains almost entirely immune to any EPG change induced viewing impacts (with a predicted decline of between 0.1% and 0.2%), even under these somewhat more realistic assumptions.

The subsequent, 'F/Z/Z', scenario is much more in line with the empirical evidence in that it assumes that all the viewing in Impact Share Band 1 is subject to the full (empirically derived) EPG change viewing impact, but it assumes that viewing in the higher (second and third) Impact Share Bands is unaffected. This results in a predicted decline of between 5.9% and 11.8% in Channel 5's Share of viewing, though ITV continues to remain almost entirely unaffected with a predicted decline of between 0.2% and 0.5%.

The fourth, 'F/H/Z', scenario also corresponds closely to the empirical evidence, with the viewing in Impact Share Band 1 being subject to the full impact, but that in Impact Share

⁷⁹ As noted previously, in 2012 the viewing on these platforms (keeping in mind that Satellite includes Freesat and Freeview includes DTT based 'over-the-top' services like BT Vision, YouView and Top-Up TV) accounted for 98.8% of ITV SD viewing, 99.2% of Channel 5 SD viewing and 99.3% of Total TV viewing. Analogue Terrestrial only accounted for 1.1% of ITV SD viewing, 0.8% of Channel 5 SD viewing and 0.6% of Total TV viewing in 2012, and with the digital switchover now completed this has dropped to zero going forward. There remains a very small residual category described as 'Other' by BARB which accounted for an essentially negligible 0.1% of Total TV viewing in 2012. Overall, a combination of Freeview, Cable and Satellite therefore represents the best forward looking forecast using the 2012 BARB Data.

⁸⁰ These are also sometimes referred to as Low, Medium and High.

Band 2, for which the empirical evidence is a little less robust, subject to only half of the full viewing impact. This results in a predicted decline of between 9.0% and 18.0% in Channel 5's Share of viewing, though the predicted negative impact on ITV still remains very low, with a small decline of somewhere between 0.7% and 1.4% in its Share of viewing.

The next scenario, 'F/F/Z', can also be considered to be one of the more empirically grounded options, though it begins to stretch the empirical evidence a little by assuming that the viewing in Impact Share Band 2 is now also subject to the full EPG change viewing impact. This results in a predicted decline of between 12.2% and 24.3% in Channel 5's Share of viewing, though the predicted negative impact on ITV continues to remain low, with a forecast decline of somewhere between 1.1% and 2.3% in its Share of viewing.

The sixth, 'F/F/H', scenario moves beyond the empirical evidence from the Impact Share Band analysis, in that it assumes that there will now also be a viewing impact (albeit only half the possible total) for Impact Share Band 3. This is not to say that this is necessarily an unrealistic or implausible assumption, but simply that it is no longer grounded in the available empirical evidence from the Impact Share Band analysis, and must therefore be considered to be considerably more speculative. This is also the first scenario to produce a more significant viewing impact for ITV, with the vast majority of its viewing falling into Impact Share Band 3.⁸¹ The final result is a predicted decline of between 7.9% and 15.8% in ITV's Share of viewing. With less than 20% of its viewing falling into the top Impact Share Band category, however, there is no corresponding large jump in the negative impact on Channel 5, with a predicted decline of between 13.1% and 26.3% in its Share of viewing.

The final, 'F/F/F', scenario makes the most extreme assumptions in support of an EPG change induced viewing impact, in that all viewing is assumed to be subject to the full impact. This therefore makes no allowance for the quality of the content or brand strength of the channels under consideration. The result is a predicted decline in performance of between 14.1% and 28.2% for Channel 5, and a predicted decline in performance of between 14.6% and 29.3% for ITV.⁸²

Each of the seven scenario options for ITV and Channel 5 is a potential outcome, and none can be entirely ruled out. However, what we can say is that some scenarios are more grounded in the available empirical evidence than others. In view of this evidence, Scenarios 'Zero' and (to a lesser extent) 'H/Z/Z' do not seem credible, as they rely on the assumption that viewing of programmes with a performance level for which a loss of EPG prominence has been shown to have a significant viewing impact would not be affected at all, or only partially affected. Scenarios 'F/Z/Z', 'F/H/Z' and 'F/F/Z' are more grounded in the empirical evidence base and would therefore appear to be the most credible of the available options. This also makes these three central scenarios the most easily predictable of our seven scenario options, in the sense that they can be readily tied to the empirical evidence without the need for resorting to more speculative assumptions. With Scenarios 'F/F/H' and 'F/F/F'

⁸¹ It should also be kept in mind that the Impact Share Band thresholds have been set low to comply with the empirical evidence, and the top Impact Share Band (i.e. Impact Share Band 3) is therefore likely to include many titles that would, by ITV's standards, be considered mediocre or even poor performers. Such programmes are unlikely to be high on the list of titles that viewers are prepared to seek out, and so a case can be made for arguing that such shows could potentially be subject to at least some of the likely negative viewing impacts resulting from a loss of EPG prominence (particularly if this involves the loss of a page 1 slot). The strong empirical evidence for the very significant viewing impacts that can be associated with reshuffles involving page 1 EPG slots (even after only relatively small channel rank changes) would also support this view. For the empirical evidence relating to page 1 EPG reshuffles see: 'Highly Significant: Example 7', '9' and '10' in Section 4.4, as well as the relevant discussions in Section 4.9 and 4.10 Section above.

⁸² Channel 5's predicted percentage loss is lower than ITV's under this scenario because Channel 5's viewing is more heavily skewed towards Freeview where the negative viewing impact for a major loss of EPG prominence (at a range of 10% to 20%) is lower than that on Cable and Satellite (at a range of 20% to 40%).

we are again on much more speculative ground, and while certainly not implausible (notably in the case of 'F/F/H'), there is a lack of directly observable benchmarks with which to support these outcomes.

The middle options, represented by Scenarios 'F/Z/Z', 'F/H/Z' and 'F/F/Z', therefore constitute the most credible (and easily predictable) outcomes given the available empirical evidence for the likely viewing impact of a loss of EPG prominence. For Channel 5, the range of predicted outcomes generated by these central scenarios gives a minimum performance loss of 5.9% and a maximum loss of 24.3%. For ITV, on the other hand, the corresponding minimum predicted performance loss is close to negligible at 0.2%, with the maximum predicted loss still remaining relatively small at 2.3%. With this in mind, Scenario 'F/F/H' is also noteworthy, as it is the first scenario for which the impact on ITV ceases to be small, with a predicted performance loss of between 7.9% and 15.8% (the corresponding 'F/F/H' loss for Channel 5 is between 13.1% and 26.3%), and though necessarily more speculative, it cannot be ruled out as a possible outcome. The strong empirical evidence for the very significant viewing impacts that can be associated with reshuffles involving page one EPG slots, even after only relatively small channel rank changes, would also support this view.



6. Appendices

The details of the analysis of the recent (2010 -2012) empirical evidence for the viewing impact of EPG prominence constitute a major proprietary resource for FEH Media Insight, and while a review of the results and a summary of the analysis have been included in Section 4, the underlying details remain confidential and proprietary to FEH Media Insight and should not be published without prior consent. Consequently Sections 6.2 through 6.9 of the Appendix are marked as confidential and not for publication.

6.1. Appendix A: Comparison of the Current Channel 3 (ITV) and Channel 5 (2012 Data Based) Forecasts with the Corresponding (2009 Data Based) Forecasts from the Previous Report

I. Impact Share Bands (2012 versus 2009)

The programme title Share band analysis for our benchmark channels (E4 and ITV2) in 2012 suggested that the Impact Share Bands for the current ITV and Channel 5 forecasts needed to be adjusted to reflect the growing competitiveness of the UK television market. On Freeview (see Table 11) this resulted in the following changes compared to the Impact Share Bands used in the previous report:

- *Impact Share Band 1:* 0 to 4 Share points (0 to 5 in previous report)
- *Impact Share Band 2:* 4 to 8 Share points (5 to 10 in previous report)
- *Impact Share Band 3:* 8+ Share points (10+ in previous report)

We also considered whether to lower the threshold for Impact Share Band 3 in the current analysis from a Share of 8+ to 7+, as ITV2 was only just making the 7 to 8 programme title Share band threshold on Freeview. This would, however, have resulted in 30% of Channel 5's 2012 viewing on Freeview moving into Impact Share Band 3, and a review of some of the key titles involved and how they were classed in the previous analysis strongly suggested that a Share of 8+ for Impact Share Band 3 on Freeview would be the most appropriate.

On Cable and Satellite (see Table 12 and Table 13) our analysis of the 2012 data resulted in the following changes compared to the Impact Share Bands used in the previous report:

- *Impact Share Band 1:* 0 to 4 (0 to 5 in previous report)
- *Impact Share Band 2:* 4 to 7 (5 to 8 in previous report)
- *Impact Share Band 3:* 7+ (8+ in previous report)

As in the previous analysis, there was a case to be made in the current analysis for Cable having a slightly different Impact Share Band range to that used for Satellite, but we also opted to keep them the same to reflect the fact that these platforms are closely matched and share the same EPG change impact ranges.

Finally, though there are notable differences (for example 69% of Channel 5's viewing falls into Impact Share Band 1 on Satellite in 2012 compared with only 59% in 2009), it is also true to say that on the whole the distribution of viewing for ITV and Channel 5 across the different Impact Share Bands is broadly similar in 2012 to how it was in 2009, particularly in the case of ITV.

Table 11: Proportion of Channel Viewing on the Freeview Platform going to Programme Titles with an Average Individuals 4+ Share in the Three Impact Share Band Categories (2012 versus 2009)

Programme Title Share Band	Proportion of Channel Viewing									
	Share Band	Freeview (2012)				Share Band	Freeview (2009)			
		ITV SD	Channel 5 SD	ITV2	E4		ITV1	Five	ITV2	E4
under 1	0 to 4	0.00%	0.00%	0.28%	8.47%	0 to 5	0.00%	0.01%	0.24%	2.00%
1 to 2		0.01%	0.95%	12.08%	48.16%		0.00%	2.00%	8.40%	45.16%
2 to 3		0.25%	2.50%	21.82%	42.57%		0.01%	2.66%	22.55%	46.55%
3 to 4		0.21%	10.65%	26.05%	0.79%		0.13%	6.48%	17.74%	3.83%
4 to 5	4 to 8	0.42%	16.58%	10.58%	0.00%	5 to 10	0.16%	9.10%	26.30%	2.39%
5 to 6		0.49%	11.29%	17.93%	0.00%		0.86%	10.46%	8.73%	0.07%
6 to 7		0.97%	7.33%	11.03%	0.00%		0.77%	17.71%	1.59%	0.00%
7 to 8		1.67%	30.24%*	0.22%*	0.00%		0.95%	7.43%	13.65%	0.00%
8 to 9	8+	1.98%	9.81%	0.00%	0.00%	10+	2.43%	12.25%	0.15%	0.00%
9 to 10		2.07%	4.43%	0.00%	0.00%		1.27%	6.27%	0.64%	0.00%
10+		91.93%	6.22%	0.00%	0.00%		93.43%	25.64%	0.00%	0.00%
Impact Share Band 1	0 to 4	0.47%	14.11%	60.24%	100.00%	0 to 5	0.30%	20.25%	75.23%	99.93%
Impact Share Band 2	4 to 8	3.55%	65.43%	39.76%	0.00%	5 to 10	6.27%	54.12%	24.77%	0.07%
Impact Share Band 3	8+	95.98%	20.45%	0.00%	0.00%	10+	93.43%	25.64%	0.00%	0.00%

* We also considered whether to lower the threshold for Impact Share Band 3 in the current (2012 data based) analysis from a Share of 8+ to 7+, as ITV2 was only just making the 7 to 8 programme title Share band threshold on Freeview. This would, however, have resulted in 30% of Channel 5's 2012 viewing on Freeview moving into Impact Share Band 3, and a review of some of the key titles involved and how they were classed in the previous (2009 data based) analysis strongly suggested that a Share of 8+ for Impact Share Band 3 on Freeview would be the most appropriate.

Source: FEHMI / BARB

Table 12: Proportion of Channel Viewing on the Cable Platform going to Programme Titles with an Average Individuals 4+ Share in the Three Impact Share Band Categories (2012 versus 2009)

Programme Title Share Band	Proportion of Channel Viewing									
	Share Band	Cable (2012)				Share Band	Cable (2009)			
		ITV SD	Channel 5 SD	ITV2	E4		ITV1	Five	ITV2	E4
under 1	0 to 4	0.01%	0.86%	8.12%	19.41%	0 to 5	0.00%	0.45%	4.56%	29.75%
1 to 2		0.27%	3.61%	38.34%	30.94%		0.19%	7.42%	21.61%	45.29%
2 to 3		0.46%	15.98%	15.93%	46.53%		0.36%	9.84%	22.30%	18.21%
3 to 4		1.23%	22.09%	29.44%	1.36%		0.72%	17.30%	12.56%	5.45%
4 to 5	4 to 7	1.71%	22.36%	2.09%	0.57%*	5 to 8	1.28%	16.20%	16.23%	0.00%
5 to 6		2.33%	15.37%	0.00%	1.19%*		1.34%	10.97%	19.81%	1.30%*
6 to 7	7+	1.71%	8.20%	5.78%	0.00%	8+	1.42%	17.63%	1.40%	0.00%
7 to 8		4.22%	3.13%	0.30%*	0.00%		1.43%	5.71%	1.53%	0.00%
8 to 9		2.62%	7.00%	0.01%	0.00%		3.68%	11.50%	0.00%	0.00%
9 to 10		4.00%	0.84%	0.00%	0.00%		4.90%	0.46%	0.00%	0.00%
10+		81.44%	0.56%	0.00%	0.00%		84.69%	2.51%	0.00%	0.00%
Impact Share Band 1	0 to 4	1.97%	42.54%	91.82%	98.24%	0 to 5	2.55%	51.22%	77.25%	98.70%
Impact Share Band 2	4 to 7	5.75%	45.93%	7.87%	1.76%	5 to 8	4.19%	34.31%	22.74%	1.30%
Impact Share Band 3	7+	92.28%	11.53%	0.31%	0.00%	8+	93.26%	14.47%	0.00%	0.00%

* As in the previous (2009 data based) analysis, there is also a case to be made in the current (2012 data based) analysis for Cable having a slightly different Impact Share Band range to that used for Satellite, but we have again opted to keep them the same to reflect the fact that these platforms are closely matched and also share the same EPG change impact ranges.

Source: FEHMI / BARB

Table 13: Proportion of Channel Viewing on the Satellite Platform going to Programme Titles with an Average Individuals 4+ Share in the Three Impact Share Band Categories (2012 versus 2009)

Programme Title Share Band	Proportion of Channel Viewing									
	Share Band	Satellite (2012)				Share Band	Satellite (2009)			
		ITV SD	Channel 5 SD	ITV2	E4		ITV1	Five	ITV2	E4
under 1	0 to 4	0.06%	1.23%	10.00%	36.56%	0 to 5	0.00%	1.90%	11.68%	16.70%
1 to 2		0.16%	7.01%	39.76%	47.64%		0.20%	8.79%	25.62%	60.97%
2 to 3		0.56%	27.70%	24.30%	14.34%		0.82%	14.36%	27.10%	16.77%
3 to 4		1.51%	33.36%	18.23%	1.46%		0.92%	22.60%	16.84%	3.93%
4 to 5	4 to 7	1.95%	6.65%	1.54%	0.00%	5 to 8	0.89%	11.16%	14.73%	1.63%
5 to 6		2.30%	8.24%	0.23%	0.00%		0.92%	9.02%	1.77%	0.00%
6 to 7	7+	4.04%	7.60%	5.93%	0.00%	8+	1.74%	11.57%	0.52%	0.00%
7 to 8		4.08%	6.47%	0.00%	0.00%		3.47%	4.01%	1.74%	0.00%
8 to 9		3.91%	0.33%	0.00%	0.00%		6.17%	1.44%	0.00%	0.00%
9 to 10		8.75%	0.25%	0.00%	0.00%		7.19%	2.20%	0.00%	0.00%
10+		72.68%	1.15%	0.00%	0.00%		77.68%	12.95%	0.00%	0.00%
Impact Share Band 1	0 to 4	2.30%	69.31%	92.29%	100.00%	0 to 5	2.84%	58.82%	95.97%	100.00%
Impact Share Band 2	4 to 7	8.29%	22.48%	7.71%	0.00%	5 to 8	6.13%	24.60%	4.03%	0.00%
Impact Share Band 3	7+	89.41%	8.21%	0.00%	0.00%	8+	91.03%	16.58%	0.00%	0.00%

Source: FEHMI / BARB

II. Channel 3 and Chanel 5 Impact Estimates (2012 versus 2009)

Despite the growing competitiveness of the UK television market, reflected in the significant reduction in ITV's and Channel 5's Share of viewing on all platforms between 2009 and 2012,⁸³ what stands out most about the current 2012 based forecasts is how generally similar the percentage viewing impacts for the combined platform levels forecasts are when compared with the equivalent multichannel platform forecasts based on the 2009 data in the previous report.⁸⁴ This is despite the fact that there are some more notable differences at the individual platform level, and it is important to understand the dynamics of the interactions that have led to this result. This is best done by focusing on one scenario, and then comparing the different platform and combined multichannel platform level impact estimates between 2009 and 2012, and the most interesting scenario is generally the one that represents the upper limit of the impact estimates while still being firmly grounded in the available empirical evidence. This is therefore the Upper/High impact range of the F/F/Z scenario, which is the basis of all the impact forecasts discussed below (also see Figure 15 and Figure 16).

The 2009 data based forecasts from the previous report suggested that for all multichannel platforms combined ITV would stand to lose around 2.4% of its Share of viewing while Channel 5 would lose around 23.9%. The corresponding figures from the current analysis using the 2012 data are losses of 2.3% and 24.3% respectively, but despite this very close match in the aggregated impact estimates there are some more notable differences at the individual platform level.

On Freeview the 2009 data based forecasts from the previous report suggested that ITV would stand to lose around 1.3% of its Share of viewing while Channel 5 would lose around 14.9%. The corresponding figures from the current analysis using the 2012 data are losses of 0.8% and 15.9% respectively, with ITV being notably less exposed in 2012 due to only 4.02% of its viewing falling into Impact Share Bands 1 and 2 in 2012 compared with 6.57% in 2009, though Channel 5 is notably more exposed with 79.55% of its viewing falling Impact Share Bands 1 and 2 in 2012 compared with 74.36% in 2009.

On Cable the 2009 data based forecasts from the previous report suggested that ITV would stand to lose around 2.7% of its Share of viewing while Channel 5 would lose around 34.2%. The corresponding figures from the current analysis using the 2012 data are losses of 3.1% and 35.4% respectively, with both ITV and Channel 5 being more exposed in 2012 than 2009, with viewing proportions in Impact Share Bands 1 and 2 of 7.72% and 88.47% in 2012 versus 6.74% and 85.53% in 2009 respectively.

On Satellite the 2009 data based forecasts from the previous report suggested that ITV would stand to lose around 3.6% of its Share of viewing while Channel 5 would lose around 33.4%. The corresponding figures from the current analysis using the 2012 data are losses of 4.2% and 36.7% respectively, with both ITV and Channel 5 being notably more exposed in 2012 than 2009, with viewing proportions in Impact Share Bands 1 and 2 of 10.59% and 91.79% in 2012 versus 8.97% and 83.42% in 2009 respectively.

So what is driving the convergence of these forecasts at the combined multichannel platform level? The key is the contribution being made by the Freeview platform. In 2009 Freeview platform viewing accounted for 38.2% of total multichannel platform viewing (i.e. Freeview, Cable and Satellite combined) with Cable and Satellite contributing 61.8%, but by 2012

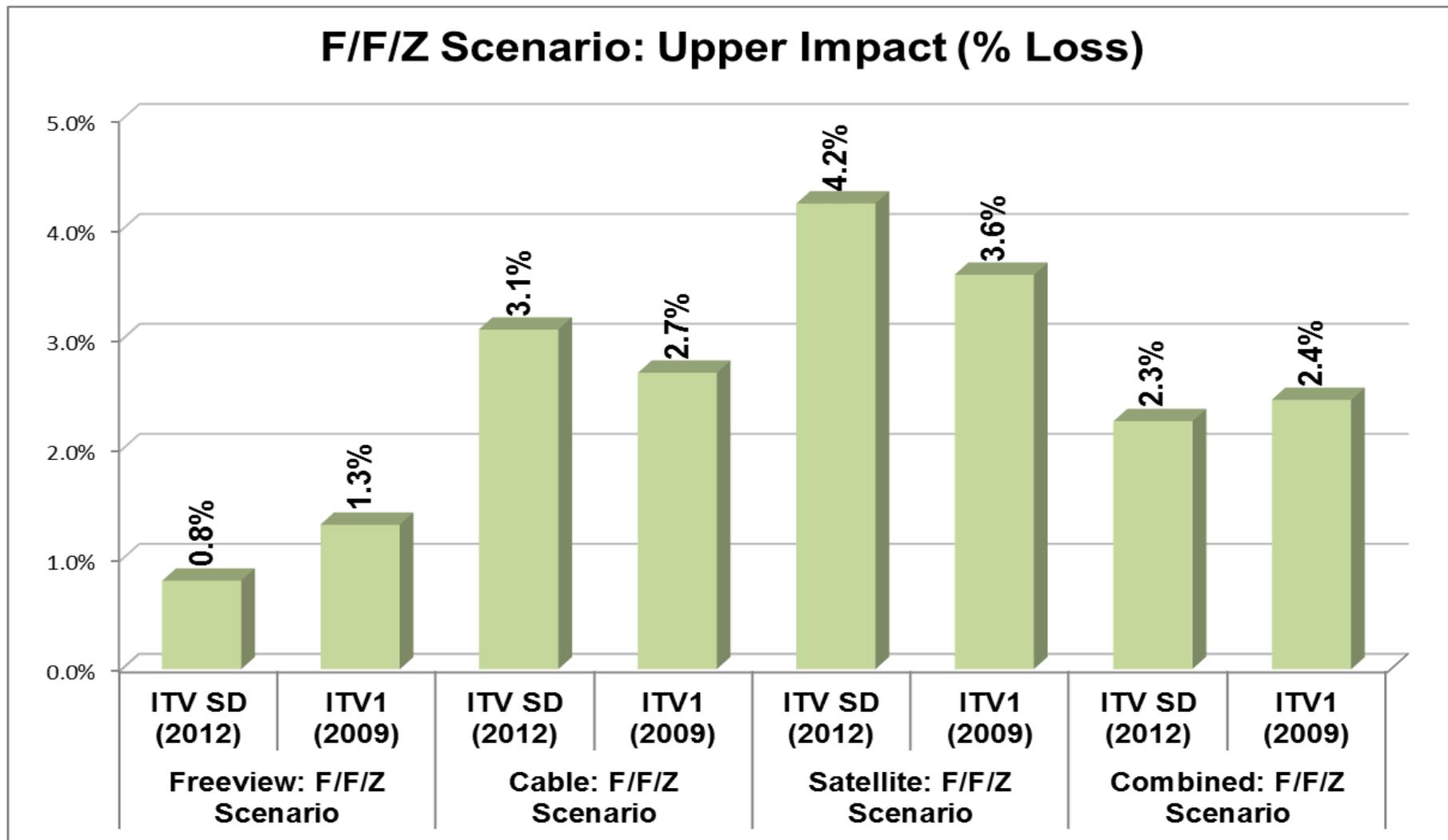
⁸³ This has been driven by both external competition (such as Sky investing in more original content and the BBC benefitting from major broadcasting events like the 2012 London Olympics), and internal fragmentation (with both ITV and Channel 5 launching timeshifted and HD variants of their main terrestrial PSB channels). The latter will have partially cannibalized the audiences of their main SD variants, which are the focus of the current analysis.

⁸⁴ See Previous Report (http://stakeholders.ofcom.org.uk/binaries/consultations/review_c3_c5_licences/statement/attentionalreport.pdf), Section 5.2, pp. 51 – 65) for the 2009 data based forecasts.

Freeview's contribution had increased to 45.1%, with Cable and Satellite only contributing to 54.9%. While the number of viewers on each of the 3 multichannel platforms has actually gone up since 2009, the increase on Freeview has been greater than that on the other multichannel platforms. When this is coupled with the fact that the upper limit of a significant loss of EPG prominence is only 20% on Freeview compared with 40% on Cable and Satellite, it becomes clear why, despite being more exposed on all platforms, the estimated viewing impact on Channel 5 under the High impact range of the F/F/Z scenario is only marginally higher in 2012 (at a loss of 24.3%) than in 2009 (at a loss of 23.9%). For ITV, on the other hand, the higher viewing contribution being made by Freeview is reflected in the fact that more exposure on both Cable and Satellite coupled with less exposure on Freeview, actually results in a marginally reduced negative viewing impact estimate of 2.3% in 2012 versus 2.4% in 2009 under the High impact range of the F/F/Z scenario.

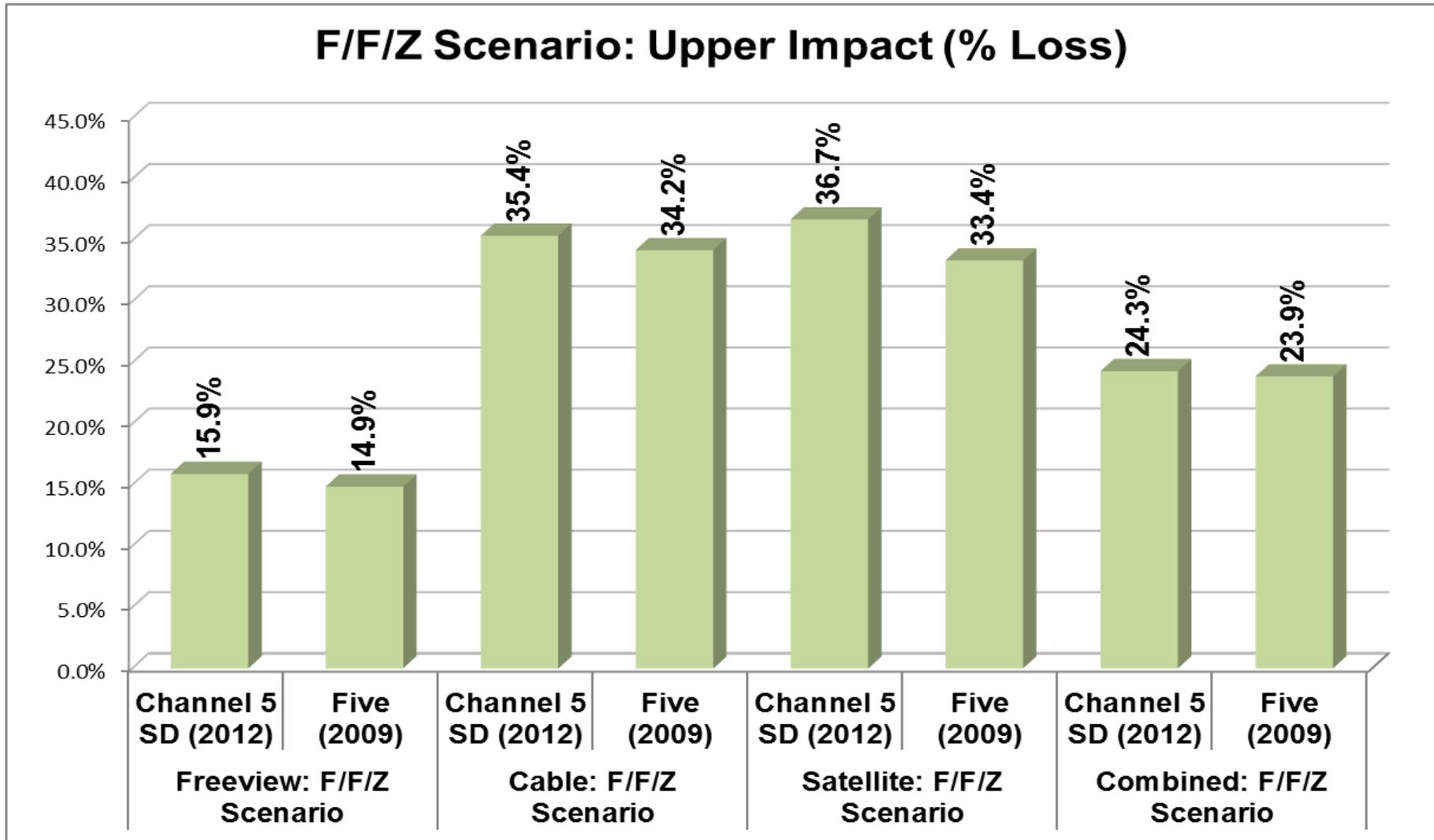
Finally, it is also true to say that, while not always as closely matched as they are under the F/F/Z scenario, the 2012 and 2009 multichannel platform EPG change impact forecasts are generally speaking very similar across all the scenarios under consideration.

Figure 15: Channel 3 (ITV) Upper Impact % Loss of Share Estimates for F/F/Z Scenario by Platform (2012 versus 2009)



Source: FEHMI / BARB

Figure 16: Channel 5 Upper Impact % Loss of Share Estimates for F/F/Z Scenario by Platform (2012 versus 2009)



Source: FEHMI / BARB

6.2. Appendix B: Summary Tables of Recent (2010-2012) EPG Reshuffle Examples Selected for Analysis [confidential and not for publication]



6.3. Appendix C: Summary Tables and Charts of EPG Change Viewing Impact Estimates [confidential and not for publication]



6.4. Appendix D: Analytical Charts for Correlation between Channel Rank Change and Audience Impact [confidential and not for publication]



6.5. Appendix E: Analytical Output Tables and Charts for EPG Change Examples where the Evidence in Support of a Viewing Impact is Highly Significant [confidential and not for publication]



6.6. Appendix F: Analytical Output Tables and Charts for EPG Change Examples where the Evidence in Support of a Viewing Impact is Significant [confidential and not for publication]

[✂]

6.7. Appendix G: Analytical Output Tables and Charts for EPG Change Examples where the Evidence in Support of a Viewing Impact is Weakly Significant [confidential and not for publication]



6.8. Appendix H: Analytical Output Tables and Charts for EPG Change Examples where the Evidence in Support of a Viewing Impact is Inconclusive [confidential and not for publication]

[✂]

6.9. Appendix I: Analytical Output Tables and Charts for EPG Change Examples where the Evidence Does Not Support a Viewing Impact [confidential and not for publication]

