REPORT

REPORT ON THE IMPACT OF CANVAS ON PAY-VOD SERVICES

London, December 2009

Contents

1 Glossary of terms

Canvas-enabled – a set-top box or idTV that has Canvas technology built in, therefore providing the consumer with an option to consume IPVoD (provided they have a suitable broadband connection)

DTT – Digital Terrestrial Television

DTO – Download to Own, where a film is paid for and downloaded such that it can be stored and played back any number of times for an unlimited period

DTR – Download to Rent, where a film is paid for and downloaded (or streamed) such that it can be played back for a limited period (typically under seven days)

Freesat – free to air satellite television. Provided in the UK by FREESAT and Freesat from Sky

FREESAT – when written in all capital letters, FREESAT refers to the BBC's FREESAT platform, which launched in May 2008. It offers a satellite alternative to the digital terrestrial Freeview service.

Home video – any video based content consumed in the home; this could be accessed via PPV, VOD, or DVD rentals or purchases

idTV – Integrated Digital Television Set

IPVoD – Internet Protocol Video on Demand; video on demand delivered via a broadband connection

VOD streaming – a VOD set-top box or idTV that is connected to an adequately high speed broadband connection such that it can stream VOD over the internet

Online via post – rental of home videos where title choices are made online, and DVDs are delivered via post

OTC – over the counter; used to refer to film rentals from physical video stores

PPV – Pay Per View services

STB – Set top box

VOD-enabled – a Set Top Box or iDTV through which users can consume IPVOD; this would include Canvas enabled sets, Sky's Darwin set, and the next generation of Freeview sets with DBook6 standards

2 Executive summary

2.1 Introduction

The BBC Trust commissioned Value Partners to estimate the impact of Canvas on the demand and supply of VOD services in the UK. The focus of the analysis was on long-form television and film content looking specifically at the pay market for such content.

2.2 The impact of Canvas on the pay-VOD market

Canvas is expected to drive a significant increase in the number of DTT households able to access on-demand services.

- By 2015, in the base case, 3.2m DTT households are expected to have access to VOD services (2.5m via Canvas VOD-enabled boxes and 0.7m via other DTT VOD-enabled boxes).
- This compares with the counterfactual case of 1.8m VOD-enabled DTT households (all of which would be non-Canvas) – i.e. a net increase of 1.4m.

As the pay VOD market is immature and there are limited benchmarks, Value Partners has taken a conservative approach to its forecasting. Based on this approach, the introduction of Canvas would result in DTT VOD revenues of £50.9m by 2015. When set against an assumed counterfactual spend of £24.7m, this represents a net increase of £26.2m[1].

In the high case scenario, the uplift could be significantly higher at £72.6m. In the low case the difference would be £4.8m.

Our analysis assumes that some existing constraints on content available for delivery by VOD remain. If higher quality pay VOD content becomes more widely available as a result of the collapsing of rights windows or changes resulting from Ofcom's pay TV review, this is likely to lead to an increase in average expenditure by VOD users and hence increase the impact of Canvas on overall DTT and VOD revenues.

2.3 The impact of Canvas on related markets

Advertising markets and the DVD retail market are not expected to see significant impacts from the availability of VOD services on Canvas. The DVD rental market is likely to see a limited impact.

2.3.1 Advertising markets

Advertising spend on VOD content is likely to come from the same budgets as linear TV. However, as viewers are expected still to watch programming from the same set of broadcasters, the impact of VOD advertising will be largely substitutional.

2.3.2 DVD markets

VOD services are a closer substitute for DVD rental than for DVD retail (VOD generally offers the opportunity to view a film or programme only for a limited period of time). The DVD retail market is therefore not expected to be affected significantly by the launch of Canvas.

[1] Includes forecast expenditure by households where Canvas is used on secondary rather than primary sets

The impact on the DVD rental market is likely to be greater (this part of the DVD market is already in decline). By 2015, in the base case, the growth of pay-VOD services on Canvas sets, could lead to an 11% reduction in non-digital rental markets (i.e. over the counter and online via post rental).

3 Context – overview of the VOD market

3.1 The VOD market is at an early stage of development

The development of the UK VOD market (for long form content) has been enabled by the growing availability of high speed broadband services, the digitisation of cable networks and the limited roll-out of IPTV services:

- 45% of households now have access to broadband services of 2Mb/s (or higher)[2]
- the number of VOD-enabled cable households has risen from 0.4m in 2005 to 3.5m in 2008 (out of a total of 3.6m cable households).
- Only 450k households have some form of VOD-enabled IPTV services[3]

However, despite the availability of cable and IPTV VOD services, the vast majority of households (84%) are still not able to access on-demand services via their TV set.

Looking forward, the availability and usage of on-demand services (via PC and / or TV) is expected to increase significantly – for three main reasons:

- the continued roll out of high speed broadband services
- the introduction of IP-enabled devices (Canvas or other) which will allow on-demand services to be accessed by terrestrial and satellite TV households
- improved consumer propositions (e.g. more content made available and easier navigation), coupled with growing consumer acceptance of on-demand services.

3.2 Services are available from numerous providers with a range of business models

There are a number of different variants of non-linear delivery. In this report we are considering VOD services (for long form content) offered by three types of operator: pay TV platforms, broadcasters and content aggregators (see *Section 7 – Appendix* for description of services).

a) Pay TV operators

- On cable, Virgin Media offers 500 movies on a PPV basis, plus catch-up and archive TV services from all major broadcasters. The TV services are generally offered on a free to view basis (as part of subscribers' pay TV packages). As the breadth of content on these services has grown, consumer usage has increased – for example, on cable:
  - in Q2 09, 55% of Virgin's digital customers (1.9m households) were using its VOD service on a monthly basis
  - average monthly VOD views per user were 32, up from 24 a year previously
  - total VoD views reached 186m in Q2, up from 165m in Q1 2009[4].
- On IPTV, BT Vision and Tiscali offer similar, if less extensive, services.

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[2] 64% of households have broadband connections (source VP analysis); 71% of residential broadband connections have headline speeds of 2M/bs or higher (source Ofcom: UK Broadband speeds 2009)
[3] Source Screen Digest
[4] Source - Ofcom Digital Progress Report, Digital TV, Q2 09

- On satellite and DTT, providers are limited to push-VOD services: *Sky Anytime on TV* downloads about 40 hours of content each week to households with a Sky+ or Sky HD box[5]; Top-Up TV offers a similar service to its subscribers on DTT. Sky also has the Sky Player service, which, in addition to linear channels, offers on-demand movies and TV programmes (to subscribers and non-subscribers) over the internet to PCs.

b) Broadcasters

- All the major broadcasters offer on-demand services – available online and on TV (via cable or IPTV). Services include catch-up TV and archive content. These services have proved very popular with online consumers - by late 2008, 23% of internet households were accessing these services online[6]. The services have proved even more popular on TV – with Virgin accounting for over 25% of iPlayer viewing[7].

c) Aggregators

Aggregators generally offer movies and / or TV content via the Internet / PC.

- Services, such as Lovefilm and Apple iTunes, offer content on a paid–for basis, either download to rent or download to own. The range of content which these services can provide is currently constrained by the rights windowing policies of the studios, which tend to hold back premium movies to these services *(see Section 3.5 below)*. Lovefilm also offers some movies free-to-view, supported by advertising.
- Several new services have been launched or are about to be launched – these include Babelgum, Blinkbox, Hulu, Microsoft and Arqiva's SeeSaw. These services offer movies and TV content, with a greater emphasis on the latter. For TV content, the business model tends to be free to view / advertising funded. However, Blinkbox charges for certain programmes, and, in the US, Hulu is considering the introduction of pay models[8].

3.3 Consumer spend on VOD transactions is currently about £130m p.a.

VOD business models are still at an early stage of development and it is difficult to predict how these will evolve over time. Currently, VOD-related revenues can be considered under three headings:

- Consumer transactional spend on VOD services
- TV subscriptions which include access to VOD services
- Advertising revenues

a) Transactional spend on TV-VOD

Currently, transactional revenues for VOD are estimated to be in the region of **£130m**[9] - comprising expenditure on:

- VOD services from Virgin, BT Vision and Tiscali
- NVOD / PPV services from Sky[10]
- Online DTR and DTO services from providers such as Lovefilm and Apple iTunes.

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[5] Source: Sky website
[6] Source: Ofcom Communications Report 2009
[7] Source: http://www.guardian.co.uk/media/pda/2009/nov/13/bbc-digital-media-canvas-iptv-future-media; (In September 2009, 55% of iPlayer views were via PCs, 26% were via Virgin Media, 7% were from Mac users, 6% were via mobile devices and 6% via PlayStation 3
[8] In September 2009, Rupert Murdoch announced that the partners in Hulu were considering the introduction of subscription services and pay-per-view,
[9] Source: Screen Digest, Value Partners analysis
[10] Although not true VOD, NVOD revenues are included in the estimate of market size. Over time, it is likely that NVOD will be replaced by IP-enabled VOD services, but as the timing of this transition is uncertain, no differentiation between the two revenue streams has been made.

Services from pay TV providers account for most of these revenues, with the majority of expenditure being on movies and adult content.[11]

b) Subscription revenues

VOD services are often offered for free as part of a TV subscription package (e.g. Sky Anytime, certain Virgin packages). Content offered is generally TV programming (catch-up / archive) and is likely to encourage the uptake of premium TV subscription services. However, as VOD is part of a bundle of TV services, it is not possible to quantify the potential uplift to subscription revenues directly attributable to VOD.

c) VOD advertising revenues

Advertising around VOD services is typically associated with catch up TV (e.g. ITV and Four on Demand) and, to a lesser extent, non-premium movies (e.g. LoveFilm). Available inventory is typically less than the inventory on TV (i.e. max nine minutes per hour) but CPTs have tended to be higher[12].

However, for this report, the value of the on-demand advertising market has not been quantified – for two reasons:

- advertising around long form on-demand content is at a very early stage of development (for example, on cable, many on-demand TV shows carry no advertising). It is therefore, very difficult to estimate.
- advertising on on-demand platforms can be seen as a direct substitute for advertising around linear TV content - as such, it can best be seen as a sub-set of a larger market.

3.4 New IP-enabled devices will bring VOD to a broader range of platforms

There are a number of devices enabling some form of IP-delivery

- games consoles, such as Microsoft's Xbox and Sony's PS3, offer a growing number of on-demand services, with the latter reported as accounting for 6% of iPlayer viewing[13].
- for Freeview households with broadband, Fetch TV (launched July 2009) offers a "smart box" with PVR functionality and a wide range of on-demand services, including iPlayer
- the first IP-enabled TV sets for FREESAT have also been launched (e.g. Panasonic Vieracast); iPlayer trials for these devices are expected by the end of 2009[14].

Sky has also indicated the likelihood of its launching IP-enabled services for its pay satellite platform by the summer of 2010. Its HD boxes include an ethernet port which could enable IP-delivered VOD.

3.5 The growth of VOD is likely to encourage earlier release dates for on-demand movies

The availability and growing popularity of VOD services is driving change in the windowing policies of rights owners. Increasingly, VOD and PPV windows are being brought forward – to coincide with release dates for DVDs (street date).

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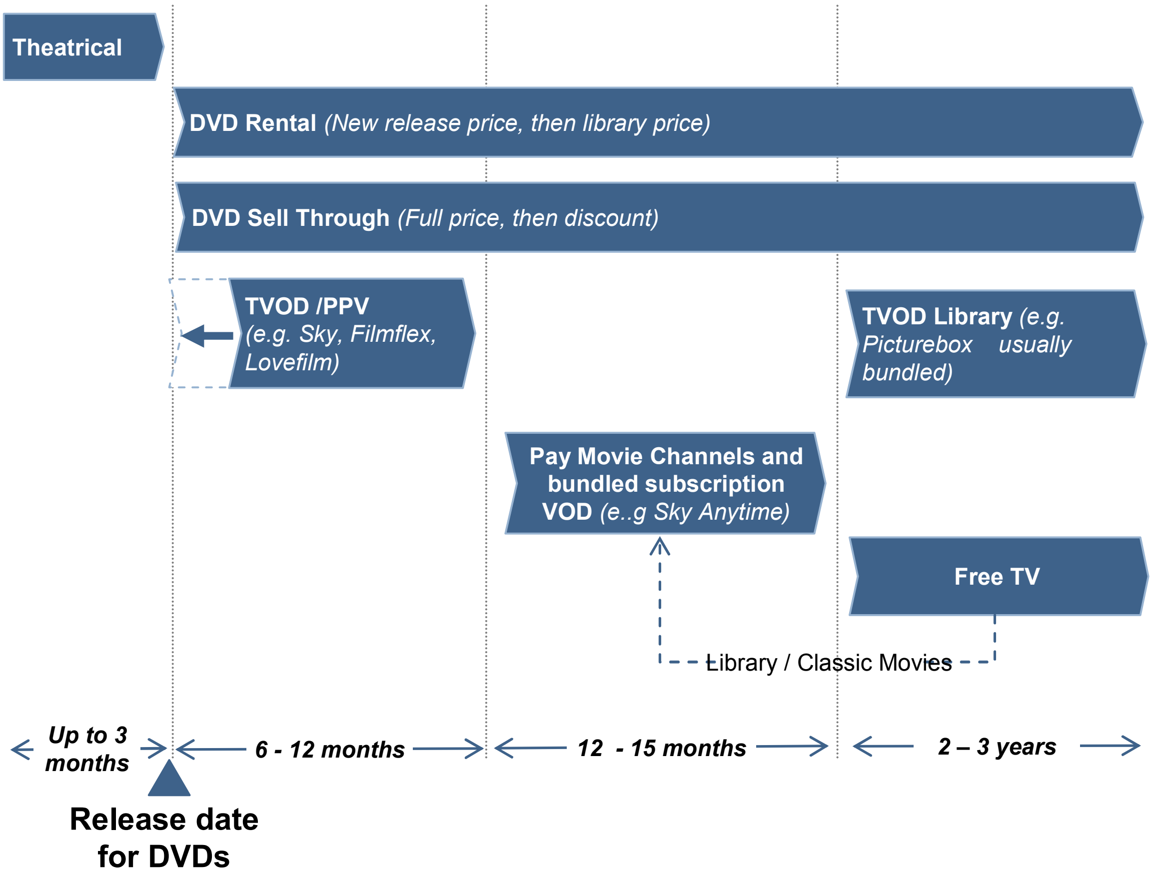
[11] Source: Screen Digest
[12] Reports from the US suggest that VOD CPTs may be falling – even undercutting broadcast rates; source http://www.guardian.co.uk/media/pda/2009/nov/16/hulu-online-advertisement-video-tv-broadcasting
[13] Source - http://www.bbc.co.uk/blogs/bbcinternet/2009/10/where_next_for_the_bbc_iplayer.html
[14] http://www.bbc.co.uk/blogs/bbcinternet/2009/11/bbc_iplayer_standard_products.html

For blockbuster films, the theatrical window typically lasts for three months before movies are released on DVD for rental and sell-through (the 'Street Date'). Historically, there has been a DVD window of a few months, prior to films being released on PPV or VOD. The pay TV window has typically been 6 – 12 months after the street date, and the FTA window 12 – 15 months after release on pay TV.

However, studios are beginning to collapse the TV VOD / PPV window and the DVD window into one, as shown in Exhibit 1 below.

Exhibit 1: Expected changes to film rights windows



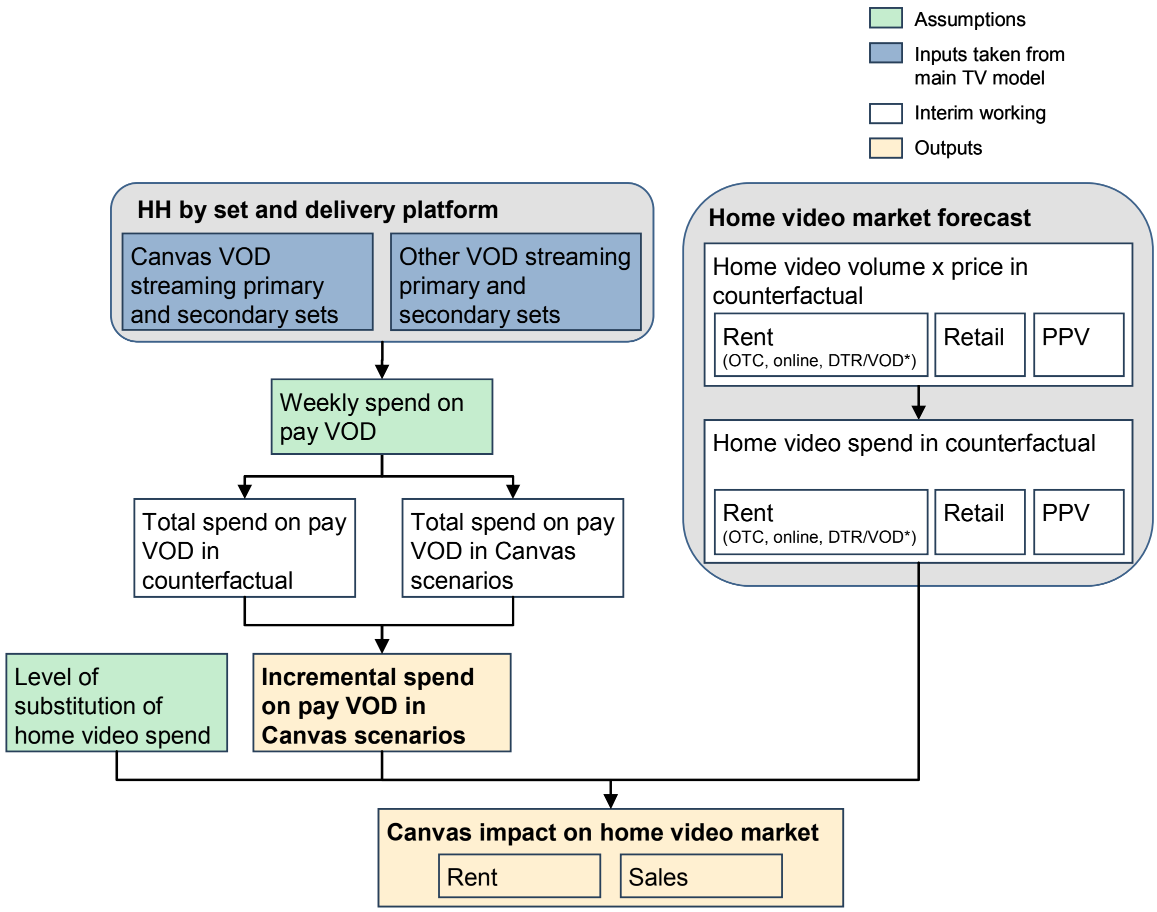
This is likely to shift value from the DVD rental market to the PPV / VOD market: people who might otherwise have rented a new–release video from a shop or through services such as Lovefilm, and who would not have previously been able to access this via PPV or VOD, would increasingly be able to access this more conveniently using PPV / VOD.

4 Methodology and model structure

4.1 Approach and structure

The VOD market impact model was built to analyse the impact of Canvas on the VOD and related markets from 2009 to 2015, under various Canvas scenarios (low case, base and high case).

Exhibit 2: VOD model schematic



* Over the Counter, Online (delivered via post), Download to Rent and Video on Demand
Source: Value Partners analysis

The Canvas VOD model combines forecasts for the home video market with outputs from the Canvas TV model - specifically take-up of VOD enabled-Canvas sets and other VOD-enabled sets. *(Note: the VOD forecasts are for pull-VOD, not push-VOD.)*

The forecasts for uptake on Canvas and non-Canvas IP-enabled DTT sets are used in conjunction with assumptions about weekly spend on pay VOD services per set (based on benchmarks from existing pay-per-view services) to arrive at incremental spend on pay VOD via DTT. Forecasts have been generated for each of the Canvas scenarios – and the counterfactual (no Canvas).

The model then assesses the extent to which this spend on DTT VOD services is incremental to forecast spend on home video services (DVD rental etc) or is substitutional. Estimates are then derived for the potential impact on spending on online via post and over the counter rental services.

For clarity, the focus of the model is on the demand side opportunity. In effect, forecasts have been developed for the uptake of VOD services similar to those available today. The model has not sought to predict how the supply side of the market might develop (e.g. what new content might be available, how services might be promoted or priced). A small number of potential supply-side developments are discussed qualitatively later in this appendix.

Whilst the focus of the model is on the pay VOD market, it should be noted that value may also be created by FTA ad-funded VOD. However, this part of the market has not been quantified as the main affect on advertising is likely to be substitutional (see *Section 6.1* for further discussion).

5 The impact of Canvas on the pay-VOD market

5.1 Canvas could increase the number of TV-VOD households by 1.4m

In the base case, by 2015, 3.2m DTT households are expected to have VOD-enabled primary sets) – of which 2.5m would be Canvas sets and 0.7m would be non-Canvas.

This compares to a total figure in the counterfactual (no Canvas) where 1.8m DTT households would have VOD-enabled sets (all non-Canvas) – i.e. a net increase of 1.4m.

By comparison:

- in the low case, by 2015, only 2.0m DTT households would have VOD-enabled sets (i.e. an increase of 0.2m over the counterfactual)
- in the high case, by 2015, 6.0m DTT households would have VOD-enabled sets (an increase of 4.2m over the counterfactual).

Exhibit 3: Total VOD-enabled DTT primary sets (Canvas and non-Canvas)

Base	2009	2010	2011	2012	2013	2014	2015
Counterfactual		0.0	0.1	0.4	0.7	1.2	1.8
Canvas Low case	0.0	0.0	0.2	0.4	0.7	1.3	2.0
Canvas Base case	0.0	0.1	0.3	0.9	1.5	2.3	3.2
Canvas High case	0.0	0.5	1.2	2.3	3.4	4.8	6.0

Exhibit 4: Canvas DTT primary sets

Base	2009	2010	2011	2012	2013	2014	2015
Counterfactual	-	-	-	-	-	-	-
Canvas Low case	0.0	0.0	0.1	0.2	0.3	0.5	0.7
Canvas Base case	0.0	0.1	0.3	0.7	1.2	1.8	2.5
Canvas High case	0.0	0.5	1.1	2.2	3.3	4.5	5.6

Exhibit 5: Non-Canvas VOD-enabled DTT primary sets

Base	2009	2010	2011	2012	2013	2014	2015
Counterfactual		0.0	0.1	0.4	0.7	1.2	1.8
Canvas Low case	0.0	0.0	0.1	0.2	0.4	0.8	1.2
Canvas Base case	0.0	0.0	0.0	0.2	0.3	0.5	0.7
Canvas High case	0.0	0.0	0.0	0.1	0.2	0.3	0.4

The number of VOD-enabled secondary sets also varies by scenario. In the base case, there are 2.0m VOD-enabled secondary sets by 2015, of which 1.5m are Canvas sets; this compares to the counterfactual, where there are 1.4m VOD-enabled secondary sets by 2015, none of which are Canvas. In the low case, by 2015, there are 1.3m VOD-enabled secondary sets, of which 0.4m are Canvas sets; in the high case, there are 3.1m VOD-enabled secondary sets, of which 2.8m are Canvas sets.

5.2 Canvas could increase spend on DTT Pay VOD services by £26m p.a. [15]

Pay VOD services are expected to be available on DTT (via Canvas or non-Canvas boxes) from 2011.

By 2015, Canvas households' expenditure on pay VOD services is assumed to average £0.30 per week per VOD-enabled primary set. These figures have been benchmarked against 2008 expenditure on transactional movie rentals from Virgin (43p per week), BT Vision (38p per week) and Tiscali (31p per week)[16].

For Canvas, a relatively low weekly spend has been assumed to reflect the possibility that these households may be less likely to pay for on-demand services. At the same time, the benchmarks themselves are likely to be conservative as they reflect a still relatively immature VOD market, where on-demand TV content is generally offered for free (as part of pay TV subscriptions). If pay-VOD services for TV content were to gain any degree of market acceptance, then the market for pay VOD could be significantly higher (whether via subscriptions or PPV).

Exhibit 6: Assumed spend per set per week, £

Set	2009	2010	2011	2012	2013	2014	2015
Canvas primary set	0.00	0.00	0.09	0.18	0.30	0.30	0.30
Non- Canvas primary VOD set	0.00	0.00	0.08	0.15	0.25	0.25	0.25

Source: Value Partners analysis

As Exhibit 6 shows, the model assumes that, by 2015, consumer spend from Canvas households will grow to an average of 30p per week. For non-Canvas boxes, a lower spend per household is assumed. This is because Canvas boxes are likely to offer content from a wider range of suppliers.

Additionally, it is assumed that the level of spend for secondary sets is 10% of the spend via primary sets. This is broadly in line with the proportion of viewing which is through secondary sets.

Value Partners forecasts for DTT VOD services (Canvas and non-Canvas) are set against a counterfactual roll-out of non-Canvas IP-enabled boxes. Although non-Canvas devices are expected to support some form of VOD service, it is unclear what the range or scope of these services might be. In practice, their offerings could be significantly less attractive than those available via Canvas devices – in which case, the estimates of the potential uplift in revenues resulting from Canvas would be conservative.

Exhibit 7: Total annual spend on VOD via DTT (primary and secondary sets), £m per annum[17]

Set	2009	2010	2011	2012	2013	2014	2015
Counterfactual	0.0	0.0	0.6	3.4	9.6	16.7	24.7
Canvas low case	0.0	0.0	0.7	3.2	10.8	19.7	29.5
Canvas base case	0.0	0.0	1.5	8.2	23.5	36.9	50.9
Canvas high case	0.0	0.0	5.5	22.0	55.4	77.5	97.3

[15] Canvas is not expected to have a significant affect on VOD revenues generated by Sky and Virgin, as the change in number of households on these platforms arising from the launch of Canvas is likely to be marginal – see TV Model report
[16] Source: Screen Digest
[17] £5m revenues being generated by BT Vision and Tiscali's current IPTV services (as reported by Screen Digest) are not included in these figures

By 2015, total expenditure on pay VOD services by DTT households is forecast to be £50.9m p.a. – of which, £40.9m would be spent by Canvas households and £10.0m would be spent by non-Canvas VOD households (based on the forecasts of average household expenditure and the numbers of VOD DTT households, outlined above). This compares with a forecast in the counterfactual of £24.7m – i.e. expenditure in the base case is £26.2m higher.

In the low case and high case scenarios, the forecasts for spend on DTT VOD services range between £25.9m p.a. (Canvas low case) and £97.3m p.a. (Canvas high case) – respectively £4.8 and £72.6m more than in the counterfactual.

5.2.1 Ofcom pay TV review

One of the potential recommendations of Ofcom's pay TV review is that the selling of PPV and premium movie channel rights (by the film studios) should be decoupled. Currently, Sky is able to buy both sets of rights, even though it does not make the movies available on a PPV basis (the movies are only shown on Sky's premium movie channels). Under Ofcom's potential recommendation, these rights might become more widely available, which could increase the usage of pay TV VOD services.

6 The impact of Canvas on related markets

6.1 Canvas could affect advertising, DVD retail and DVD rental markets

6.1.1 Impact on advertising markets

In VOD-enabled Canvas households, 25% of viewing is expected to be time-shifted – with two thirds of this viewing being on-demand (the other third being via DVR). This is likely to affect TV advertising spend, as advertising can be expected to follow TV consumption patterns (notwithstanding the current undeveloped status of advertising around on-demand content). However, in broad terms, viewers are expected to continue watching similar content to that which they are viewing today, i.e. from the same set of broadcasters, albeit at times other than the original time of broadcast. As a result, any change in advertising patterns is expected to be broadly substitutional, i.e. advertising will still be shared amongst a similar set of broadcasters as today[18]. The potential impact on advertising markets which might result from the launch of Canvas has therefore not been quantified.

6.1.2 Impact on DVD retail

Over the last three years, the DVD retail market has been relatively flat at about £2.3bn p.a.[19] – volumes have grown slightly whilst prices have fallen (with TV box sets performing particularly well).

The incremental spend on pay VOD via DTT is expected to cannibalise revenues from the DVD market. However, the impact on DVD retail (as opposed to DVD rental) is likely to be relatively small:

- Content propositions delivered via set-top boxes are expected to be DTR rather than DTO (this might change over time)
- Download / streaming (DTR) would be a closer substitute to DVD rental than DVD sales, as it does not provide the physical satisfaction of owning DVDs and associated materials such as bonus behind-the-scenes footage.

6.2 The greatest market impact will be on DVD rentals

6.2.1 DVD rentals are already seeing a switch towards digital services

The DVD rental market comprises three elements:

- over the counter rental (OTC), e.g. Blockbuster
- online via post services, e.g. Lovefilm
- digital / PPV services, e.g. Virgin movies on demand

In 2008, the market was worth £340m p.a.[20] - split almost equally between OTC, online via post and digital (download to rent and PPV). Since 2004, the market has fallen from £520m p.a. (CAGR of -10%). This decline has been due to increased piracy associated with digital distribution (both DVD and online) and the growth of multi-channel TV (with its increased channel choice acting as a substitute for DVD rental). These negative aspects have been partially offset by growth in PPV and VOD (Sky and Virgin).

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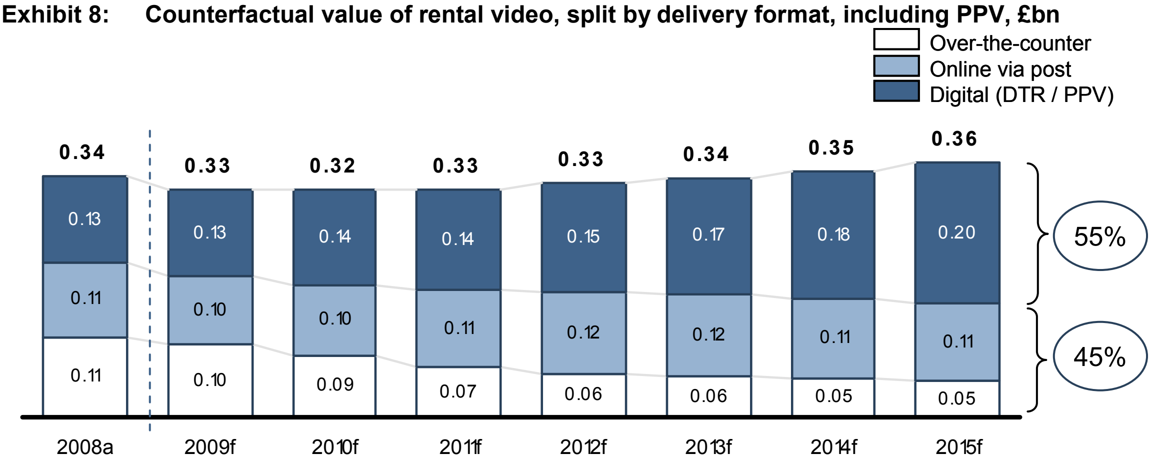
[18] Exceptions to this would include content providers, such as HBO, who can generate advertising revenues from on-demand programming which they can offer direct to viewers whilst not having their own linear TV channel in the UK. Similarly, aggregators such as Hulu or Seesaw might expect to capture some TV advertising spend, which currently goes solely to TV channels.
[19] Source: UK Film Council, Value Partners analysis
[20] Source: UK Film Council, Value Partners analysis

Exhibit 8: Counterfactual value of rental video, split by delivery format, including PPV, £bn



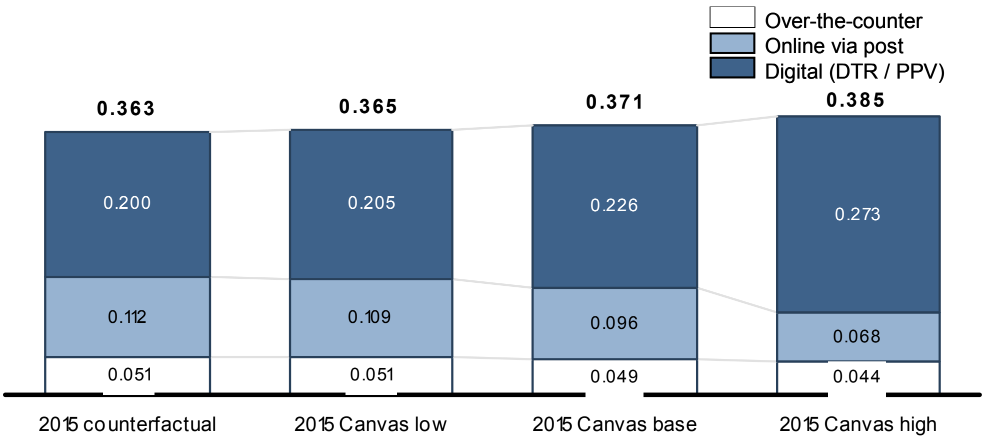
Source: Value Partners analysis

Looking forward, the total DVD rental market is expected to remain relatively flat (both in terms of value and volumes). However, by 2015, (in the absence of Canvas), digital services (download to rent and PPV) are expected to have increased their share from 36% to 55%. (The split between online via post and OTC services is uncertain; OTC is assumed to continue losing share[21].)

[21] Online via post grew its share of the non-digital market from 24% in 2006 to 50% in 2008

6.2.2 *Canvas is expected to reduce demand for non-digital rental services*

Exhibit 9: Impact of Canvas scenarios on home video rental revenues, £bn



% change vs. counterfactual	2015 counterfactual	2015 Canvas low	2015 Canvas base	2015 Canvas high
OTC		-1%	-5%	-14%
Online via post		-3%	-14%	-39%
Digital		2%	13%	36%
Total		0.4%	2.2%	6.0%
% digital	55%	56%	61%	71%

Source: Value Partners analysis

The impact of Canvas on the DVD rental market is expected to be relatively small. By 2015, in the Canvas base case, consumption of pay VOD services (on DTT[22]) is forecast to increase by £26m (as described in the previous section).

This £26m growth contributes to:

- growth of the total video rental market of £8m
- a decline of £18m in the non-digital rental markets (online via post and over the counter) - a decline of 11%, comprising:
  - a 5% decline in over the counter
  - a 14% decline in online via post.

[22] The uptake of pay VOD services on other platforms is assumed not to be affected by the launch of Canvas

7 Appendix – VOD services

Exhibit 10: VOD services from pay TV platforms

VOD services	Description
Virgin Media	Movies and TV programmes on-demand: • 500 movies available from Filmflex on a PPV basis – with customers allowed to watch the films for a 24 hour period[23]. • Subscribers can access free catch-up TV content and, depending on their subscription package, and can also access archive content for free or subject to an additional sum. Virgin offers VOD content from a variety of providers, including UK content providers (e.g. BBC, ITV and Channel 4) and non-UK content providers (e.g. HBO, Disney, Viacom, Warner).
Sky	Sky offers three types of on-demand services: • PPV services, primarily for sports events • Sky Anytime on TV, a push VOD service (launched March 2007), which makes available (for no extra charge) about 40 hours of content a week to households with a Sky+ or Sky HD box • Sky Player (launched January 2006), an Internet / PC-based service which (in addition to linear content) offers TV content and movies on-demand. – **Sky subscribers** can access for free recent programmes from channels to which they subscribe; they can also pay extra for archive programming or movies on a download to own (DTO) or download to rent (DTR) basis. – **Non-Sky subscribers** can take a monthly subscription to access catch-up TV on-demand programmes or pay for content on a PPV or DTO basis. in October 2009, Sky Player launched on Microsoft's Xbox Live and announced an agreement with IP Vision to make the service available via Fetch TV devices. Sky has partnered with Sony to create a VOD service, Go!View, for the PSP handheld console (launched July 2008).
BT Vision and Tiscali	• BT Vision and Tiscali[24] IPTV services offer on-demand TV services which include cut down versions of the PSBs' catch-up services and content from US broadcasters, such as HBO; and libraries of movies available on a PPV basis.
Top Up TV	• Top Up TV was established in 2004 and provides pay-TV services over the DTT platform on a subscription basis, including a push VOD service comprising content from about 25 basic tier channels. Top Up TV offers content from providers such as the BBC, Warner, Cartoon Network and TCM.

[23] The service was launched in 2005 by Telewest and NTL, who merged in 2006 and relaunched as Virgin Media in 2007
[24] The Tiscali IPTV service was originally provided by Homechoice, which was bought by Tiscali UK in 2006, and rebranded Tiscali TV in 2007. In May 2009, it was announced that The Carphone Warehouse had agreed to purchase all of Tiscali's UK assets.

Exhibit 11: VOD services broadcasters

VOD services	Description
BBC	• BBC iPlayer offers a free catch-up service for the BBC's radio and television programmes for up to seven days after transmission. For certain series, catch-up is available for individual episodes until a week after the final episode is broadcast, known as "series stacking". • The BBC iPlayer was first made available on the BBC's website in 2007. In April 2008, it launched on Virgin Media – and later that year on Nintendo Wii, Sony PlayStation 3, and some hand-held devices (mobile phones and portable media players). The service is accessible on Apple Macs and computers running Linux; iPlayer content is also available via the Sky Player service.
ITV	• ITV's website (www.itv.com) allows consumers free access to a wide range of ITV content, including 30-day catch-up and some archive material, on a streamed basis. The service is primarily funded by online advertising and was the first predominantly free streamed video service in the UK.
Channel 4	• Channel 4's VOD service, 4oD, launched in late 2006 on cable and broadband. Originally, it was predominantly a pay service, offering a selection of Channel 4 programming on an on-demand basis. Over time, 4oD has become predominantly free. In April 2009, Channel 4 switched to an entirely streamed viewing model, adding Mac and Linux compatibility, and offering through its website catch-up content from the past 30 days, as well as a large selection of archive content.
Five	• Five launched its VOD service, Five Download, in 2006. The service was rebranded in July 2008 as Five Demand, offering free-to-view and pay-per-view content, which can be streamed or downloaded on a download-to-rent (DTR) or download-to-own (DTO) basis.

Exhibit 12: VOD services from aggregators

VOD services	Description
Lovefilm	• The earliest PC-based on-demand services were download to rent (DTR) and download to own (DTO) services launched by retailers such as Lovefilm and Apple iTunes. Lovefilm launched its movie download service in December 2005. Films are available as part of a subscription package or PPV. Films offered for viewing for one to seven days (depending on title). • Amazon, which operates Amazon Video On Demand in the US, has not launched on-demand services in the UK – instead, in 2008, it sold its DVD rental business to Lovefilm, in which it now has a 30% stake.
Apple iTunes	• Apple offers TV content through its iTunes service from a variety of providers, including UK content providers (BBCW, ITV and Channel 4) and major US studios. iTunes follows a pay-per-view model where viewers pay for permanent or rental download of the content. • iTunes makes use of personal computers and the Internet to access its content. At the end of 2007, Apple launched its digital media receiver, Apple TV, which plays content from the iTunes store, from selected websites and from the owner's PC hard drive.
Joost	• Joost launched its UK VOD service in October 2007. The service offered free-to-view advertising-supported content. Its content was archive content (long and short form), from companies such as Viacom, CBS, Universal Music Group and third-party producers and aggregators. However, the UK subsidiary of Joost folded in October 2009.
Babelgum	• Babelgum offers an ad-funded service offering a combination of mainstream TV content and niche programming, such as indie film and documentaries).
Blinkbox	• Blinkbox offers movies and TV programmes which users can stream or download on a DTO or DTR basis. Content partners include Warner Bros, Universal, Paramount, 20th Century Fox, Sony Pictures, FremantleMedia, Aardman, Discovery and All3Media. • In August 2009, a deal was announced with BBC Worldwide. Titles such as Top Gear, Gavin & Stacey, Spooks and Planet Earth, cost £1.89 an episode to download. Other shows can be downloaded free but will carry ads. • The service claims to have 750k unique users a month
YouTube	• YouTube has secured its first long-form on-demand UK TV content, doing a deal with Channel 4 for the same shows that are on 4oD. Nearly 3,000 hours of shows, including Hollyoaks, Skins and Peep Show, will be available free with ad support from early 2010.
Microsoft	• Microsoft has launched a UK service that will stream full-length videos of television shows for free. The advertising-funded MSN Video Player (beta version) includes over 300 hours of shows from suppliers such as BBC Worldwide and All3Media. Programmes are available in both Windows Media Video (WMV) and Flash formats, to cater for both PC and Mac users.
Hulu	• Expected to launch in the UK in 2010, Hulu is an ad funded VOD service[25] from the US, a JV between Fox, NBC Universal and Disney. In the US, it has grown unique users from 14.4m in Q108 to 70m in Q109, with each user viewing an average of 11.5 videos in Q1 08 rising to 15.1 videos in Q1 09.
SeeSaw	• Also expected to launch in 2010, SeeSaw is a new service from Arqiva. This follows Arqiva's acquisition of the assets of Kangaroo, the proposed VOD joint venture between BBC Worldwide, ITV and Channel 4, which was blocked by the Competition Commission earlier this year.

[25] In September 2009, News Corp. chairman-CEO Rupert Murdoch announced that the partners in Hulu were considering the introduction of subscription services and pay-per-view,

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