Revisiting Sky’s incentives to foreclose competition in the UK-pay TV industry

A Report for British Telecommunications plc, Setanta Sport Holdings Ltd, Top Up TV Europe Ltd and Virgin Media Ltd.

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2. Introduction and Summary

We have been asked by British Telecommunications plc, Setanta Sport Holdings Ltd, Top Up TV Europe Ltd and Virgin Media Limited (the “Parties”) to review the submission to Ofcom prepared by CRA and Professor John Van Reenen (also referred to herein as “Sky’s economists”) entitled Sky’s “incentives” to foreclose competition in the UK Pay TV Industry, dated 29 October 2007. This submission was prepared for Sky in response to some of the economic arguments in the Parties’ Submission to Ofcom on the need for a market investigation into the pay TV industry, dated 3rd July 2007 (the “Joint Submission”).

Sky’s economists assert that the Parties’ assessment of competition in the UK pay TV industry and, in particular, their claims regarding the existence of a vicious circle which prevents, restricts or distorts competition and harms consumers, are flawed as a matter of theory. They also claim to have shown that, contrary to the Parties’ statements in their Joint Submission, Sky has no incentive to foreclose downstream competition in the UK pay TV industry and that there is no risk of upstream foreclosure.

We demonstrate below that (a) none of the theoretical arguments and objections of Sky’s economists undermine the vicious circle identified by the Parties as Sky’s economists only consider upstream and downstream foreclosure separately and (b) their analysis of Sky’s incentives relies on (i) a selective interpretation of the economics literature, (ii) unjustified assumptions which effectively amount to ignoring the dynamic benefits of foreclosure, and (iii) a conceptually flawed analysis of the static benefits and costs of downstream foreclosure.

This report is structured as follows. In Section 2 we explain why the criticisms of the vicious circle by Sky’s economists do not withstand scrutiny; they are incorrect both as a matter of theory and fact. In Section 3 we show that the theory advanced by Sky’s economists according to which Sky has the incentive to distribute its channels via other platforms (and pay TV retailers) in order to reach incremental consumers is contradicted by the evidence. We also explain why their theory fails to meet the facts. Finally, in Section 4, we summarise our conclusions. Annex A provides a (non-exhaustive) list of additional errors and inconsistencies in the report prepared on behalf of Sky by CRA and Prof. John Van Reenen.

3. CRA and Prof. Van Reenen’s Response to the Vicious Circle

In their Joint Submission to Ofcom, the Parties expressed their concerns about a number of features of the UK pay TV industry and, in particular, about the existence of mutually reinforcing upstream and downstream bottlenecks that give rise to a vicious circle for competitors and harm consumers.
Sky’s economists criticise what they call the vicious circle “theory” in a few paragraphs at the end of their lengthy paper. CRA and Prof. Van Reenen put forward three objections in connection with the exposition of the vicious circle in the Parties’ Joint Submission. We review each of them in turn. But prior to doing that, we note that the Parties do not consider the vicious circle to be a theoretical construct, as CRA and Prof. Van Reenen represent, but rather a market reality, which explains Sky’s entrenched leadership in the UK pay TV industry.

2.1 First objection – the Parties have not explained the operation of the vicious circle

CRA and Prof. Van Reenen claim that the Parties have not produced a “systematic account” of how exactly the vicious circle would operate (paragraph 120). In their opinion such an account would have to identify: (a) a source of downstream advantage, (b) a mechanism that translates this into a bidding advantage, and (c) a mechanism that translates that bidding advantage into further downstream dominance (paragraph 122).

Even a cursory review of the Parties’ Joint Submission shows that this criticism is unjustified:

a. **The Parties did identify the source of Sky’s downstream advantage** (see, for example, paragraph 3.1(c) of Part 2 of the Joint Submission). Sky has held for years, and still holds today, a leadership position in pay TV content. This constitutes the principal source of its downstream advantage. For example, Ofcom found that Sky held “well over 80%” share of premium sports content and 100% of premium subscription movie rights. By selectively distributing this key content and by imposing unreasonable wholesale prices and terms and conditions, Sky has been able to build by far the largest base of pay TV (and premium) subscribers. In particular, as at July 2007, Sky accounted for approximately 86% of the retail subscribers to premium sports and movie channels in the UK.

b. **The Parties explained the mechanism by which Sky’s downstream advantage translates into a bidding advantage** (see, for example, paragraphs 3.3, 3.4 and 3.6 of Part 3 of the Joint Submission):

i. Sky’s existing base of retail customers confers on Sky an unrivalled competitive advantage when bidding for content. Sky’s willingness to pay for content — especially for key content rights of limited duration — is greater than its competitors’ willingness to pay because, unlike them, Sky can monetise those rights **without delay**.

   ▪ Industry experience shows that it takes considerable **time to build** a subscriber base with critical mass. For example, it has taken Sky nearly 10 years to increase its subscriber base on its platform from 3.5 million subscribers to its current level of more than 8.5 million subscribers. Building a subscriber base of critical mass is a time consuming proposition even

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1 Only paragraphs 120 to 124 of the CRA report deal directly with the vicious circle – a key component of the Parties’ Joint Submission.
2 Sky also controls access to the largest pay TV platform in the UK.
3 Para 5.56, Ofcom, Pay TV Market Investigation Consultation, 18 December 2007
4 In its response to the Parties’ Joint Submission, Sky acknowledges that any additional content it obtains can be marketed immediately to all subscribers to Sky Sports channels (Sky submission, paragraph 4.11). Sky may chose whether to keep the price of the channel unchanged, thus increasing its value, or alternatively to increase its price to reflect the higher quality content. Either way Sky is in position to monetise the additional content from day one.
when one has access to several distribution platforms. In fact, access to distribution is a necessary but not a sufficient condition to develop a sizeable subscriber base.

- The time needed to build a critical mass of subscribers plays a crucial role in the competition for content. Given that exclusive contracts for content are of limited duration and that building a subscriber base takes time, what any pay TV retailer is prepared to bid in a content auction is given by (i) the size of its *current* subscriber base (other things equal, a company's willingness to pay for content will increase with the size of its current subscriber base); and (ii) its prospects and time scale for growth of that customer base. The relationship between what a company is prepared to bid and the size of its subscriber base is of course tighter when the duration of the exclusive contracts is shorter. When contracts are of long duration the link between the amount bid and the size of the subscriber base is less strong, though it still exists.

ii. This is not the only bidding advantage resulting from Sky's downstream leadership, however. Sky enjoys significant economies of scale since it can

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5 This is due to several factors: First, a company can only market its content once it can be shown on its channel. For example Setanta, even though it won the live FAPL rights in May 2006, was only able to start actively marketing them in July 2007, one month before they appeared on Setanta’s channel. Second, there is significant consumer inertia. Consumers need to be informed before they can make choices. Even when they become aware of a new offering, it may take some time before they decide to take up the channel, especially if they are uncertain about its quality. Finally, consumers have a preference for variety. One piece of sports content is unlikely to encourage them to take up a new sports channel, hence other sports content needs to be secured. But, as noted below, content rights are staggered in their availability (see Ofcom paragraphs 5.70-5.72). The time it takes to build a sufficiently attractive content portfolio limits the speed with which it is possible to build a subscriber base of critical mass. Ofcom, Pay TV Market Investigation Consultation, 18 December 2007.

6 Existing TPS regulation provides access to Sky's distribution platform but not to Sky's subscriber base. So even if access were available to Sky's distribution platform on terms which raised no competition concerns, Sky's competitors would still have to build a subscriber base of critical mass to constitute an effective competitive constraint, which would take time and involve significant costs.

7 This result holds true even when the winner of the content rights has the possibility to sell access to these rights to its rivals through wholesale arrangements. This is for several reasons. First, as we explain in page 5 below, if Sky were the winner of the rights, then it would not have the incentive to wholesale them to its competitors on reasonable terms because that would improve these rivals' competitive positions in future content races (by reducing the size of Sky's subscriber base and giving these rivals their own sizeable installed bases of retail subscribers) and also increase the expected competition for content and thus the price of content in the future for Sky. So, the possibility of wholesaling is just that, a theoretical possibility, with no real impact on how the market develops. Second, if instead one of Sky's competitors, say Setanta, were the winner, then wherever practicable it would retail its own services rather than wholesale them to Sky because Sky would not have the incentive to promote that channel (e.g. Setanta's sports channel) to the detriment of its own channels. Again, the possibility of a competitor wholesaling to Sky as the principal means of exploiting the rights on satellite is just that, a theoretical possibility.

8 CRA and Prof. Van Reenen argue in paragraph 104 of their joint paper that short contract length is an important factor in helping rivals to enter the market. That is only correct in part. It is true that downstream competitors would not be able to enter if the existing contracts between Sky and the owners of key content rights had a very long duration, but only because, contrary to the claims of Sky’s economists, Sky refuses to supply that content to competitors under reasonable terms. However, for the reasons explained in the text, contracts of short duration will not be of much help in reality to upstream entrants (i.e. competing bidders for rights) because building a subscriber base of critical mass is time consuming. One possible way of resolving this dilemma would be to allow new entrants to bid for contract of long duration while restricting the incumbent, Sky, to short-term contracts.
spread the high costs associated with the acquisition of key content over a much larger customer base.

iii. Furthermore, industry experience also shows that more than one piece of content is required to create a successful pay TV offering. However, content rights are not only limited in duration, they are also staggered in their availability. This significantly increases the barrier to entry for new players. For example, to be successful, a sports channel or service may have to offer not just live coverage of FAPL matches but also a wide variety of other sport events. Since sports contracts are staggered with several years between the sales of key content rights, current holders of key content possess an advantage relative to new entrants when bidding for additional content.

iv. Finally, Sky's downstream leadership provides Sky with very significant purchasing power when negotiating carriage terms with third party broadcasters of basic channels, given the value to such broadcasters (in terms of subscription and advertising revenue) of Sky's very large subscriber base. In practice, as

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9 This has been acknowledged by Sky's economists who state that “Programme content is enormously differentiated, reflecting heterogeneity in consumers’ preferences towards television content, and a general preference for programme variety” (paragraph. 33). Likewise, Ofcom states: “Content aggregation is significant because consumers have widely differing content preferences. We observe a limited amount of content which is highly valued by large groups of consumers, plus a long tail of content that is attractive to some individual consumers, but not to others. In such circumstances content aggregation is likely to be necessary in order to assemble a credible pay TV proposition”. See Ofcom, Pay TV Market Investigation Consultation, paragraph 1.23, 18 December 2007.

10 Id., figure 2, page 5.

11 In its consultation document, Ofcom agrees with the Parties’ argument in the Joint Submission that staggered exclusive contracts as a key barrier to entry in obtaining access to a portfolio of premium sport or premium movies content. Considering first the position as regards premium sports, Ofcom states “The key barrier to entry and expansion is in obtaining access to a portfolio of premium sports rights. One of the main historical problems potential rival wholesale channel providers have had in challenging Sky’s incumbent position has been that the sale of sports rights has been staggered. This gives Sky two related incumbency advantages. The first is that the value of premium rights is typically greater to a wholesaler that already holds a portfolio of rights than one with few or no rights. The second is that it puts a new entrant in a relatively weak bargaining position against retailers, as whilst Sky Sports is likely to be a ‘must have’ product, it may well be credible for a retailer not to contract with a new entrant who owns a very limited portfolio of rights. This potentially makes it difficult for a new entrant to obtain full value for its rights.” Ofcom, Pay TV Market Investigation Consultation, paragraph 5.47 of Annex 13, 18 December 2007. Ofcom also says, “Many sports contracts have durations of between three and five years, meaning that in any given year, only 20-30% of key content is likely to be available for purchase. This creates a potential barrier to entry for a wholesale channel provider wishing to launch a new premium sports channel, since whilst it might be possible to launch a premium sports service based on just one rights package, such as FAPL, it is more likely for scheduling reasons that a wholesale channel provider will wish to assemble various rights packages.” Ofcom, Pay TV Market Investigation Consultation, paragraph 5.71 18 December 2007. Turning to premium movie channels, analogous issues apply with Ofcom indicating that: “As with the retailing of premium sports packages, obtaining access to a significant portfolio of premium content is the most significant entry barrier. The difficulties faced by a potential new entrant are arguably higher for premium movies than premium sports, as all the premium content is controlled by one wholesaler (Sky).” Ofcom, Pay TV Market Investigation Consultation, paragraph 5.61 of Annex 13, 18 December 2007. And, “We understand that Sky has relationships with the six major Hollywood studios for the subscription pay TV window which go back (at least) several years. The subscription window contracts are not awarded by the studios under a transparent tender process. The contracts do not tend to come up for renewal at the same time, so that they could be contestable only on a staggered basis over the course of the next few years. This creates a potential barrier to entry for a wholesale channel provider wishing to launch a new premium movies channel containing content from more than one or two studios.” Ofcom, Pay TV Market Investigation Consultation, paragraph 5.71 18 December 2007.
explained by the Parties in the Confidential Annexes to their Joint Submission, Sky is a compulsory trading partner for broadcasters of basic pay TV channels.

c. The Parties’ also explained how Sky’s bidding advantages translate into further downstream leadership (see, for example, paragraph 3.4 of Part 3 of the Joint Submission). By reference to concrete examples, the Parties described how Sky has secured for itself the most valuable content. As is well known, pay TV retailers with access to superior content are able to attract additional subscribers and also retain their existing customers. Sky’s competitors will be unable to erode Sky’s downstream leadership without access to Sky’s superior content at economically viable prices. However, Sky has used its upstream leadership to acquire an unrivalled competitive advantage in the competition for subscribers. As is illustrated in the Parties’ Joint Submission, Sky has supplied cable on uneconomic terms; refused to supply its enhanced and interactive services and HD channels to cable; refused to supply its premium channels to other third party TV retailers; and signed contracts with content providers which grant Sky exclusivity not only on satellite but also on other platforms.

In other words, by preserving its content acquisition advantage and selectively distributing its content and by imposing unreasonable prices and terms and conditions, Sky ensures that it maintains its leading position in the competition for subscribers. Sky has the incentive to outbid its competitors in order to preserve its downstream advantages and, given the size of its installed base of subscribers and wide portfolio of key content, it also has the ability to do so. By preserving its retail advantage, Sky can ensure that its leading position in content acquisition (upstream) is perpetuated. Sky’s incentives to foreclose or marginalise downstream competitors by denying them access to its superior content on viable terms thus go beyond the incremental profits made by its retail arm in the short term.

Indeed, there are dynamic reasons why Sky has an incentive to foreclose downstream competition, none of which is addressed by Sky’s economists.

- First, Sky has an incentive to foreclose its downstream competitors in order to protect its future stream of profits. If Sky wholesaled its channels to competing distributors on economically viable terms it would lose, or at least dilute, its downstream advantage and, consequently, its advantage in securing key content in the future.\(^\text{13}\)

- Second, by securing a bidding advantage over its downstream rivals, it reduces the likelihood that those rivals will enter the upstream auction,\(^\text{14}\) which reduces the price that Sky has to pay for content.\(^\text{15}\)

\(^{12}\) See paragraphs 2.3 to 2.5 of Part C of the Joint Submission.

\(^{13}\) See paragraphs 5.125 to 5.127 of Ofcom, Pay TV Market Investigation Consultation, 18 December 2007.

\(^{14}\) This is a well known result in the literature regarding the design of auctions. As Paul Milgrom states, “Buyers are naturally reluctant to begin an expensive, time-consuming evaluation of an asset when they believe they are unlikely to win at a favourable price” going on to reiterate “When the likely winner of the auction is not in much doubt, the prospect of incurring unrecoverable costs can depress entry.” See Paul Milgrom, Putting auction theory to work, Cambridge: Cambridge University Press, 2004, pages 209 and 234, respectively. See also Jeremy Bulow and Paul D. Klemperer, “Auction versus negotiations”, American Economic Review, Vol. 86(1), pages 180-194, 1996.
Third, in a wide variety of auctions firms’ bids are increasing functions of their rivals’ bids. Thus even if Sky could not force exit completely, by reducing the amount that its rivals can bid through a strategy of selective and restrictive distribution of content it would also be able to reduce the amount that it would have to pay for key content in the future.

For these reasons the increase in the stream of future profits resulting from the refusal to supply key content is highly likely to exceed any short-term sacrifice associated with such a strategy.

2.2 Second objection – Sky has no incentive or ability to foreclose competition

Sky’s economists assert that the key weakness in the Parties’ theory is that Sky has no “obvious” incentives to foreclose competitors and its ability to do so is “severely constrained by existing regulation” (paragraph 123).

These assertions are incorrect: the Parties’ Joint Submission provided numerous examples of Sky’s anticompetitive conduct. Those examples show that Sky has not only the incentive but also the ability to marginalise its competitors in the competition for subscribers and in the race for content. They demonstrate that the existing regulation is not constraining Sky’s behaviour to the extent suggested by Sky’s economists.

As to Sky’s incentives to foreclose, CRA and Prof. Van Reenen have (i) ignored the preservation of the vicious circle, which is a material reason why Sky is interested in thwarting its rivals’ ability to compete and (ii) erroneously analysed the trade off between the static costs and benefits of downstream and upstream foreclosure.

As is explained above, Sky has an incentive to foreclose competition upstream (in the acquisition of content) and downstream (in the competition for subscribers) because: (a) by preserving its upstream advantage and then selectively distributing its key content and imposing unreasonable prices/terms, Sky ensures that it maintains its leading position downstream; and (b) by preserving its downstream advantage, Sky can ensure that its leading position upstream is perpetuated. Thus, Sky’s desire to protect its future stream of profits both upstream and downstream generates incentives to foreclose competition.

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15 As Milgrom states, “Increased entry […] benefits the seller by raising the sale price, and it harms other bidders both by raising the prices that they pay when they win and by reducing their chance of winning”. Milgrom, supra note 14, p. 214.
17 The impact of a refusal to deal on Sky’s net short-term profits would be given by (a) the increase in downstream profits stemming from subscribers taken from other competitors (the so-called “business stealing” effect) and (b) the reduction in upstream profits that would follow directly from the refusal to grant third parties access to its content on economic terms. In the absence of any dynamic effects, Sky’s incentives to foreclose competition would be given by the difference between (a) and (b). Sky’s economists argue that (a) minus (b) is negative and, hence, Sky has no incentive to foreclose. However, note that in reality (a) is likely to be large, since the costs of switching from a retailer offering inferior content to another with superior content are likely to be small. Conversely, (b) is likely to be modest because, for the reasons explained above, competitors are unlikely to monetise Sky’s content without significant delay. Finally, one cannot and should not ignore the impact on Sky’s future profits of a decision to deny access given the feedback effects. Hence, contrary to Sky’s economists we expect the difference between (a) and (b) to be positive or, if negative, small and in any event smaller than the impact on Sky’s net discounted value of retaining a leadership position at all levels of the value chain.
18 See also paragraph 78 regarding the TPS access regulatory regime.
19 See supra note 17.
Because CRA and Prof. Van Reenen’s analysis of Sky’s incentives ignores the dynamic benefits of foreclosing competition, it is incomplete and cannot be relied upon. Their rebuttal suffers from a circularity problem, which makes their conclusions untenable. First, they analyse Sky’s incentives for downstream and upstream foreclosure under the assumption that the vicious circle does not work — that is, ignoring the dynamic benefits of a foreclosure strategy. Then, they argue that the vicious circle does not work because their static analysis of Sky’s incentives, which is based on the assumption that the vicious circle does not work, indicates that Sky has no “obvious” incentives to foreclose competitors. In other words, they claim that the vicious circle does not arise because their analysis shows that Sky has no incentive to foreclose when the vicious circle is not in operation.

The unjustified denial of the dynamic effects of foreclosure and the circularity of their arguments are not the only problems of the foreclosure analysis conducted by CRA and Prof. Van Reenen. Their static analysis of Sky’s incentives to foreclose discloses many errors, as is shown in Section 3 below.

2.3 Third objection – the feedback effects in the Parties’ theory are not well specified

Sky’s economists assert that the feedback effects which give rise to the vicious circle are “not well specified”, because the proposed mechanisms “do not actually offer any clear-cut prediction as to the sign of the effect”, the size of their potential effects “is likely to be quite small”, and there is no “real link” between these mechanisms and the vertical structure of the industry (paragraph 124).

Once again, these assertions are unjustified and cannot be relied on. The two feedback effects identified by the Parties as giving rise to the vicious circle are clearly specified in the Joint Submission.

a. Feedback #1. Upstream leadership confers downstream advantages. Sky has both the incentive and ability to leverage its upstream leadership to achieve a competitive advantage downstream. It has the incentive to do so in order to tilt future competition upstream and downstream in its favour.

This is a simple and well-specified dynamic mechanism, which relies on a number of well-known factors in the pay TV industry: (a) “certain ‘premium’ content, such as popular sports and Hollywood movies ... is highly attractive to viewers, has few [if any] substitutes and is difficult to replicate”, (b) “[a] downstream firm which acquires the exclusive rights to premium programming obtains a competitive advantage over its rival firm which suffers a loss”, and (c) “the economic characteristics of distribution systems generate a dynamic aspect to competition ... when this feature is incorporated, a new motive for exclusivity emerges: exclusive content gives its owner an initial advantage that is amplified by dynamic competition”.

20 See sections 4 and 5, CRA Report.
21 See paragraphs 112 and 121, CRA Report.
24 See Helen Weeds, supra note 22, pp. 28-29.
This is not a theoretical construct, as the many examples of Sky’s anticompetitive conduct in the Joint Submission show. Furthermore, there is nothing speculative or ambiguous about the implications of these feedback mechanisms for competition: Sky has used and still uses its pre-eminent position in premium content to maintain a position of leadership in pay TV retailing.

Sky’s economists claim to have shown that Sky has the incentive for “wide distribution of content across multiple platforms” (paragraph 56). However, the analysis of Sky’s incentives to distribute its premium content conducted by CRA and Prof. Van Reenen ignores the dynamic benefits to Sky from withholding content and/or imposing unreasonable prices/terms (see the above explanation of CRA’s circular arguments). It also misrepresents the economic literature on vertical foreclosure and it errs in balancing the short-term benefits and costs of downstream foreclosure (see section 3 below).

Moreover, Sky’s economists present no market evidence to support their theoretical and “highly stylised” analysis. However, the evidence provided in the Parties’ Joint Submission shows that, even when Sky seeks to make its content available across multiple platforms, Sky is not willing to allow other pay TV retailers to compete by wholesaling to them its premium channels on economically viable terms (for example, Sky is seeking itself to retail its pay TV channels on DTT). So, in contrast with the theoretical analysis of CRA and Prof. Van Reenen, the evidence indicates that Sky is seeking to leverage its existing market positions in pay TV onto new and additional platforms rather than allowing downstream rivals to compete with its existing retail offerings.

CRA and Prof. Van Reenen claim that Sky prefers to retail its channels directly to consumers on other platforms rather than wholesaling its channels (thereby eliminating all retail competition), on the basis that other platforms set excessive prices for Sky’s channels and do not invest sufficiently in attracting new subscribers. They assert that competition between platforms is an insufficient constraint on Sky’s retail competitors’ retail profit margins and promotional activities due to the differentiated nature of pay TV platforms. The absence of competition causes the “double-marginalisation” (excessive prices) and “incentives” (lack of promotional investment) problems that would justify Sky’s conduct.

This attempt to provide an efficiency justification is, however, not credible given the facts of the UK pay TV industry. There is no evidence that other platforms have any appreciable market power as regards their retailing of premium channels. A measure of the intensity of competition at the retail level from Sky, and also Sky’s real incentives, is that Virgin Media offers Sky’s premium sports and movie channels for an incremental £25 per month for subscribers to its XL package (£21.28 excluding VAT). This is only £1 more than the incremental £24 per month that Sky charges for these premium channels above its basic package price (£20.43 excluding VAT). The alleged double marginalisation problem raised by Sky’s economists to justify Sky’s conduct is simply not there.

25 For example Ofcom only cites Sky as having market power: “Sky has a very high market share in the supply of these premium pay TV subscription channels, creating a presumption that it has market power. Other factors relevant to a market power assessment, such as the existence of high barriers to entry, support this presumption.” Paragraph 1.25 Op. cit. at footnote 5.
Furthermore, the difference in price between Virgin Media’s and Sky’s offerings is caused by Sky’s behaviour in imposing excessive wholesale prices and not by the absence of retail competition. Sky’s wholesale price to Virgin Media for its premium sports and movie channels is [Confidential] excluding VAT, with the result that based on the wholesale prices it charges to Virgin Media, Sky would make a loss retailing its premium channels of [Confidential] per subscriber (disregarding all other costs, including bad debt, billing etc).

b. **Feedback #2. Downstream leadership confers upstream advantages.** The second feedback effect identified by the Parties has been explained above: Sky’s existing base of retail customers allows Sky to outbid its competitors in the race for key content, because unlike them, Sky can monetise those rights **without delay**, which is of crucial importance given that the right to distribute that content has **limited duration**. In addition, Sky can also spread the costs associated with the acquisition over a much larger customer base.

Sky’s economists consider that “this is not unreasonable” but claim that the “Parties appear to overstate significantly any benefits that Sky might derive from its integration with the DSat platform and its retail arm when bidding for rights” (paragraph 72). They also criticise the proposed feedback mechanism because “a number of the alleged ‘advantages’ enjoyed by Sky in bidding for rights are not to do with vertical integration as such, but rather with Sky’s incumbency and/or size as a broadcaster” (paragraph 73). We consider these two criticisms in turn below.

We first consider the claim that the advantages identified by the Parties, though reasonable, are overstated. In support of this, Sky’s economists argue the following:

- **Claim:** Any advantage stemming from the integration of Sky with the DSat platform “is undermined ... by the reality of the current regulatory regime which Sky is subject to” (paragraphs 75-83).
  - **Response:** As is explained by the Parties in the Joint Submission, Sky has been able to undermine the current regulatory regime rendering it insufficient.\(^2\) In any event, the regulation of access to Sky’s satellite platform does not address Sky’s retail advantage for the reasons given above.

- **Claim:** The sign and the order of magnitude of any effects associated with Sky’s retail advantage are unclear. According to CRA and Prof. Van Reenen, the Parties rely on certain findings on auction theory — namely, the so-called “toehold effect”, according to which small bidding advantages are the determinant for the outcome of an auction — that are not robust to the form of the auction. (See paragraph 86.)
  - **Response:** The Parties’ argument is much broader than Sky’s economists acknowledge. The Parties do not rely on the “toehold effect” identified by auction theory,\(^2\) but rather on the existence of asymmetries between bidders — e.g., customer bases of different sizes and the need...

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\(^2\) See Joint Submission Annex 3, paragraphs 3.19 - 3.26, Annex 4, paragraphs 2.1 – 3.10 and Annex 6 paragraphs 2.7 - 2.15 and 3.2 – 3.11.\(^2\) Note that the robustness of the toehold effect was also questioned by Sky in the context of the UK Monopolies and Mergers Commission’s (MMO) investigation of the proposed acquisition of
to offer a portfolio of attractive content which is difficult to secure. A large installed base of consumers increases the willingness to pay for premium content irrespective of the mechanism used to sell that content. A firm without an existing content portfolio is unlikely to pay much in any given content auction. A well known result in auction theory is that a strong bidder (e.g., a pay TV operator with a large subscriber base and/or a wide content portfolio) tends to win the auction regardless of the type of auction.28

- **Claim:** Sky’s competitors would only be inhibited from bidding for content if they were “materially disadvantaged in reaching Sky’s existing retail subscribers” (paragraph 89). But they are not likely to be disadvantaged because: (a) Sky would not refuse to purchase channels with that content from third-party suppliers had it lost the content race (paragraph 90) and (b) a competitor “has the very real option of retailing itself directly to DSat viewers” (paragraph 91). They argue that option to retail is especially easy for premium channels which are marketed as add-ons and thus do not require customers to switch their pay TV subscription (paragraph 92). More generally, Sky economists state that there are no “specific sources of switching costs that might render Sky’s subscribers especially ‘sticky’” (paragraph 98).

- **Response:** As regards (a), contrary to the claim made by Sky’s economists, Sky would have the incentive to develop a reputation for refusing to purchase the content from third-party suppliers (or only doing so at economically low prices) in order to eliminate them or marginalise them for the future and to send a signal to all others that may be tempted

Manchester United by Sky in 1999. Sky raised then the same objections than its economists are now raising. The MMC concluded that those criticisms were unjustified.

28 This is true for both “private value” and “common value” auctions. Auctions with purely private valuations are auctions in a buyer's estimate of an item’s value is affected by only his perceptions and not the perceptions of others. Common value auctions are auctions in which bidders’ valuations are positively correlated. In the case of premium content, the valuations of competing operators are positively correlated. That is, content auctions have both a private and a common value element for bidders. In private value auctions, high-valuation bidders are more likely to win the auction than their low valuation counterparts irrespective of the auction type (i.e., in sealed bid auctions (in which each bidder submits a bid without seeing other’s bids), ascending auctions (in which the price is raised until only one bidder is left), etc.). In common value auctions, particularly ascending auctions, all bidders tend to bid cautiously to avoid overpaying because their estimated valuation exceeds the true valuation of the object that is sold. However, weaker bidders must be particularly cautious, since they are only likely to win the auction when they offer more than the stronger bidders, i.e., when they have overestimated by a significant amount the value of the object. As a result, even seemingly modest bidding advantages can dramatically influence the outcome of an auction. Bidders have strong incentives to develop such advantages (e.g. by acquiring a minority stake or toehold in the owner of the object, raising rivals’ costs, or by making threatening statements or otherwise developing a reputation for bidding aggressively) as an effective way to win over their rivals. The effect of bidding asymmetries in common value auctions is more likely to emerge in ascending auctions than in sealed bid auctions. However, we understand that movie rights are not formally tendered with Sky having an opportunity to exceed any rival bid, rendering this process analogous to an ascending auction. With regards to the Premier League, Klemperer ((See Paul Klemperer, Bidding Markets, UK Competition Commission, June 2005., page 30) has already commented on the difficulty for the Premier League to pre-commit to a sealed bid auction if Sky subsequently offered more money at the end of the auction. More generally, even if a sealed bid auction approach is adopted, weaker bidders will still have little incentive to participate in the auction if there are costs to bidding and the asymmetries between bidders are large such that there is only a limited prospect of them winning.
to challenge its position in future races for content. This dynamic incentive is ignored by CRA and Prof. Van Reenen.

However, suppose for the sake of the argument, that Sky purchased that content from the third-party supplier, the return on investment for the third-party content supplier would necessarily be lower than it would have been for Sky, had Sky won the content race. This is because while the third-party supplier would depend on Sky to monetise its content, Sky would be able to continue its operations profitably in the absence of an agreement, particularly as it would still have other premium and basic content. So, in order to provide Sky with incentives to purchase the content in question, the third-party supplier would have to share a significant fraction of the subscriber revenues that such content is likely to generate. In conclusion (a) does not undermine the retail advantage identified by the Parties.

Argument (b) does not work either. As is explained above, industry experience indicates that it takes time to build a subscriber base. This is true also for channels that are marketed as add-ons, and is not only the result of switching costs.

- **Claim:** Lastly, CRA and Prof. Van Reenen argue that, theoretically, an incumbent with a large installed base of customers (paragraph 99) and a large portfolio of content (paragraphs 102 and 103) may or might bid less aggressively for valuable content than a new entrant.

  - **Response:** It is enough to look at the recent history of bidding for rights in the UK market to realise that those theories are empirically irrelevant. The reason is simple: they do not fit the facts. First, third parties have not been able to challenge Sky's premium channels by winning valuable content, and Setanta's market entry was sponsored by regulatory intervention. Companies with a larger installed base will be able to bid more aggressively because they will be able to spread the costs across a greater number of subscribers and they will be able to do so without delay. Second, as noted by CRA and Prof. Van Reenen, consumers have a "general preference for programme variety" (paragraph 33). Consequently, the value of a package comprising content A and content B exceeds the sum of the value of content A and the value of content B when offered separately. Not surprisingly, the race for content B will likely be won by the owner of content A.

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29 This is because Sky accounts for well over 70 per cent of all premium sports subscribers and well over 80 per cent of premium movie subscribers.

30 In this regard, the Ofcom Consultation document acknowledges that a new premium sports channel would be in a weak bargaining position if it does not match the range of content offered by Sky: "...it puts a new entrant in a relatively weak bargaining position against retailers, as whilst Sky Sports is likely to be a 'must have' product, it may well be credible for a retailer not to contract with a new entrant who owns a very limited portfolio of rights. This potentially makes it difficult for a new entrant to obtain full value for its rights." [Para 5.47 of Annex 13]

31 See, for example, the time taken by Setanta to grow its subscriber base.

32 See [supra] footnote 5.

33 Sky itself emphasises the limited impact of Setanta and Sky's advantages in offering a range of content, with the Financial Times of 7 February 2008 (Andrew Edgecliffe Johnson and Ben Fenton) reporting that: "The fourth-quarter figures included the first season of BSkyB's new contract to air Premier League games since it was forced to share the rights with Setanta Sports. Mr Darroch said
We now consider the second objection raised against the Parties’ analysis of Sky’s retail advantage. Sky’s economists claim that to the extent that such an advantage exists it “would arise even if Sky’s broadcasting function was not vertically integrated with its retailing function” (paragraph 86). This is incorrect for three reasons.

- First, whilst a vertically disintegrated broadcaster would retain some retail advantage, this would be smaller than the advantage enjoyed by a vertically integrated broadcaster/retailer such as Sky. This is because Sky, as a vertically integrated broadcaster/retailer, has direct access to its satellite subscribers and not only possesses their contact details but also determines the retail packaging and pricing of its channels on the satellite platform. In contrast, a vertically disintegrated broadcaster would not possess the contact details for subscribers to its channels (those would be in the possession of the relevant pay TV retailer) and would not be able to determine the retail pricing and packaging for its channels. In those circumstances, the vertically disintegrated broadcaster may not be able to monetise new rights as quickly as a vertically integrated broadcaster/retailer as it may not be able to bundle new content into existing packages which are accompanied by price increases. In addition, the relevant third party retailer would be better able to migrate its subscribers to new entrant channels if they were to win relevant rights. The time a third party broadcaster would need to build a sizeable subscriber base under vertical separation would therefore be shorter than the time it would have needed under vertical integration – i.e. without access to the contact details of the incumbent’s customers. Consequently, the gap between the incumbent broadcaster’s willingness to pay for content and that of its rivals would narrow and upstream competition would become more balanced under vertical separation.

- Second, the reduction in the size of the retail advantage resulting from vertical separation would in turn increase the incentives of the vertically disintegrated broadcaster to supply its content to other retailers. This is because the dilution of its retail advantage in the contest for content would (a) reduce the likelihood of winning the content auction and (b) increase the cost of content, thus reducing the expected profitability of retaining an upstream advantage. Therefore, the dynamic incentives to deny access to content of a vertically disintegrated broadcaster would be lower than those of a vertically integrated broadcaster/retailer, such as Sky. The implication is that downstream competition would also become much more balanced under vertical separation.

- Third, under vertical separation, any retail advantage initially enjoyed by the incumbent broadcaster would be eroded over time. This is the natural consequence of more balanced competition at both levels of the vertical chain, upstream and downstream. As is explained above, the vertically disintegrated broadcaster would be more likely to lose the next race for content and, hence, less able to preserve its upstream advantage when competing downstream than the vertically integrated broadcaster/retailer. It

*the group had seen no fall-off in its football audience as a result of the regulatory intervention, saying that subscriber numbers for its sports packages had grown.*"
would also be less willing to leverage its upstream advantage onto the downstream market. For both reasons, a vertical separation remedy would allow downstream rivals to build larger subscriber bases and reduce the bidding advantage initially enjoyed by the incumbent.

In sum, it is because of its vertical integration that Sky has the incentive and ability to exclude its downstream competitors. Sky’s bidding advantages provide the means by which Sky can marginalise its competitors: they allow Sky to win key content, which is then selectively distributed so as to extend the downstream advantage.

4. CRA and Prof. Van Reenen’s Analysis of Sky’s Incentives to Foreclose Downstream Competition

Sky’s economists’ have claimed that Sky has no incentive to foreclose downstream competitors by refusing to supply them its premium content channels on economic terms. This claim is, however, refuted by the facts which are detailed in the Joint Submission and, in particular, the Confidential Annexes thereto.

Sky’s economists also claim that while their analysis of Sky’s incentives to foreclose is a “highly stylised exercise, it does confirm that a strategy of downstream foreclosure … is likely to be unprofitable for Sky” (paragraph 46). Our review shows that their analysis is not only highly stylised, it is based on incorrect assumptions and conceptual errors.

First and foremost, CRA and Prof. Van Reenen ignore the dynamic benefits for Sky of a strategy of downstream foreclosure. Their model of competition in the UK pay TV industry is, therefore, static. As we have explained in detail in section 2, this assumption is unjustified. There are no valid reasons to ignore the vicious circle and its implications on dynamic competition.

The importance of dynamic competition in the analysis of vertical foreclosure in the pay TV industry is well understood in the economic literature, as noted by Prof. Helen Weeds in a recent paper. Sky’s economists have ignored the extensive literature on vertical foreclosure and have relied on the Chicago School argument that monopoly power cannot be leveraged from one market to another and that firms with monopoly power lack incentives to engage in unilateral practices that reduce welfare, with CRA stating that “this intuition is powerful and holds in a broad set of circumstances”. The post-Chicago literature used game theory to challenge this intuition. Beginning in the early 1980s, industrial organisation specialists derived possibility theorems showing that certain behaviour, such as refusals to deal and other raising rivals’ costs strategies, could prove anticompetitive. It is therefore well recognised that Chicago school theory

34 See Appendix 1, CRA report.
35 See Helen Weeds, supra note 22, pp. 28-29.
36 See, for example, Bork (1993) who argues that the concept of “foreclosure” used by courts to inform the analysis of vertical integration is economically unsound. See also Page (1985). Robert Bork, The Antitrust Paradox: A Policy at War with Itself, Free Press, pages 231 - 238, 1983
37 CRA report, footnote 11.
is based on an array of assumptions, which Sky’s economists should have, but have not, verified in this case. For example, the Chicago argument fails to hold when the monopoly supplier’s conduct would enable it to reap additional profits from consumers in other markets, or to increase barriers to expansion and entry at the wholesale supply level.

The assumptions supporting the Chicago theory are not met in the UK pay TV industry.

- First, there are economies of scale and scope in retail platforms, so the Chicago argument cannot be applied mechanically to claim that Sky cannot have the incentive to engage in exclusionary tactics. The loss in profits associated with the refusal to supply its superior content on economic terms may be more than offset by the increase in profits at the retail level. As we explain below, the vertical arithmetical exercise conducted by Sky’s economists does not prove otherwise, contrary to what they claim. This is particularly the case where the premium subscribers won by BSkyB also provide it with other revenues relating to other services (e.g. basic channels which are bundled together with premium channels, Sky+, Sky HD, Sky multi-room, broadband and telephony). In this case competition in relation to basic subscribers will be adversely affected by rival retail platforms losing subscribers (due to the loss of economies of scale which rivals’ retail platforms suffer due to the loss of subscribers, and Sky’s higher subscriber base increases its buyer power over wholesalers of basic channels).

- Second, as explained above, Sky's foreclosure of competition downstream confers significant bidding advantages which lead to upstream foreclosure. The Chicago argument does not contemplate this last spillover effect, as Sky’s economists implicitly recognise when they refer to the Microsoft case. Furthermore, the analysis of Sky’s static incentives to foreclose conducted by CRA and Prof. Van Reenen is incomplete and incorrect and therefore cannot be relied upon:

a. **Incomplete.** Their analysis only considers the possibility of total foreclosure. That is, they only consider the scenario “in which Sky refuses to supply certain premium channels entirely to a rival retailer and also refuses to retail these channels directly on the retailers’ platform” (paragraph 58). They should have also considered the alternative scenario where re-selling takes place but at supra-competitive per-subscriber fees. That is, they should have considered the possibility of “partial foreclosure” or “raising rivals’ costs”. CRA and Prof. Van Reenen should not argue that this alternative scenario is inappropriate or irrelevant given their reliance on Harbord and Ottaviani (2001). These authors explain that when premium programming is supplied to downstream competitors for per-subscriber fees, as Sky’s economists argue is the case for Sky, “downstream competition is less effective and equilibrium retail prices are higher”.

It is simply incorrect to assume that Sky only has a binary choice of supplying or not supplying competing retail platforms. Sky can choose to set its retail and wholesale prices such that a competitor (e.g. Virgin Media) makes a very low retail margin or a

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40 Paragraph 118 CRA report
41 Paragraph 51 CRA report.
42 See David Harbord and Marco Ottaviani, supra note 23, p. 3.
loss on selling Sky’s premium channels. Such a strategy may be more profitable to Sky than an outright refusal to supply and has a number of consequences: (i) on the one hand, Sky’s competitor finds it marginally worthwhile to continue to buy Sky’s premium channels, thereby generating high wholesale margins for Sky from the competitor’s smaller subscriber base; and (ii) on the other hand, very low retail margins on premium pay TV bundles prevent Sky’s competitor from competing on price or having sufficient profits for it to be viable to fund investments in its pay TV offering to attract new premium and basic subscribers (e.g. in marketing, product innovation etc).

Note that Sky can raise its rivals’ costs not only by raising its wholesale prices. Quality and quantity degradation is another complementary strategy for Sky, which damages rival retailers’ quality and brand image and enhances Sky’s ability to charge higher retail prices and increases the prospect of new subscribers choosing its platform.

In short, CRA and Prof. Van Reenen have not demonstrated that Sky has no incentive to marginalise its downstream rivals by raising their costs or restricting the quality of their offerings. Their analysis is incomplete and thus cannot be relied on.

b. Incorrect. The “total foreclosure” analysis undertaken by Sky’s economists relies on the assumption that “all prices (including those paid for content) remain at their ‘current’ level” (paragraph 59). This is problematic for, at least, two reasons:

- First, the refusal to supply all of Sky’s key content will allow Sky to increase its equilibrium retail prices and margins: given that the offerings of competitors are less attractive, the competitive constraint imposed by them is reduced. CRA and Prof. Van Reenen ignored this effect. Consequently, their estimate of the profitability of a total foreclosure strategy is biased downwards and cannot be relied on.

- Second, the “vertical arithmetic” exercise conducted by Sky’s economists does not provide any meaningful information on Sky’s incentives to foreclose competition. CRA and Prof. Van Reenen should have calculated the prices Sky would have charged for its key content if it were not vertically integrated. They have not done so and, hence, their “vertical arithmetics” suffers in a similar vein to the cellophane fallacy. Since Sky’s “current” upstream prices for key content are likely to be greater than the prices that a vertically disintegrated company would have charged for that content, Sky’s economists are most likely overestimating the profit sacrifice associated with a strategy of downstream foreclosure. They are, therefore, likely to conclude that there is no incentive to foreclose when in fact foreclosure is profitable. Or, in other words, their results could be well interpreted as saying that Sky

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43 See, for example, Joint Submission Annex 4 sections 3 and 4; and Annex 6 paragraphs 2.26 – 2.29.
45 In fact, the evidence provided by the Parties in their Joint Submission indicates that this is more than a theoretical possibility (see, for example, paragraph 2.4 in Part 5 of the Joint Submission).
does not have an incentive to refuse wholesaling to Virgin Media because, at Sky’s current wholesale prices, the competitive constraint imposed by Virgin Media at the retail level is negligible. Sky’s strategy of raising rivals’ costs is sufficiently effective that no outright refusal is needed to marginalise Virgin Media in the downstream market.

5. Conclusions

This short report presents the conclusions of our review of the paper prepared by CRA and Prof. Van Reenen on behalf of Sky and submitted to Ofcom on 29 October 2007. CRA and Prof. Van Reenen argue that Sky has no incentives to foreclose competitors in the UK pay TV industry and deny the existence of a vicious circle which prevents, restricts or distorts competition and harms consumers. Their claims and assertions do not reflect the available evidence, are internally inconsistent and are both conceptually flawed and unjustified. Our own review of the Parties’ Joint Submission and Sky’s economists’ response leads us to conclude that the Parties’ case is not only theoretically plausible but also is consistent with the characteristics of the UK pay TV industry and the detailed account of Sky’s behaviour provided in the Joint Submission.
Annex A. Errors and Inconsistencies

CRA and Prof. Van Reenen report entitled “Sky's “incentives” to foreclose competition in the UK Pay TV Industry” contains a significant number of errors and inconsistencies. We have highlighted some of them in the main text. We list certain others, in what follows:

- In paragraph 10, Sky's economists complain about the Parties' "inappropriate references to economic articles on 'network effects' in telecoms or software, without explaining or identifying the analogy with pay TV". We have counted 13 references to economic articles in CRA and Prof. Van Reenen’s report, but only one relates to the pay TV industry: Harbord and Ottaviani (2001). CRA and Prof. Van Reenen quote that paper in support of their claim that Sky has no incentives to foreclose its downstream competitors. They omit to mention, however, that in the model developed by Harbord and Ottaviani, integrated firms have the incentive to resell their premium programming at supra-competitive per-subscriber fees in order to soften downstream competition.

- In paragraphs 33 to 35, Sky's economists argue that consumers have a "general preference for programme variety", which is, however, ignored when they deny the existence of bidding advantage enjoyed by an incumbent with control over a certain amount of content when content contracts are staggered (paragraphs 101 to 103).

- In paragraph 35, the Parties are criticised because “they fall short of actually identifying credible network effects — e.g., a plausible mechanism whereby the value of the product to one consumer depends on how many others also consume it”. This merits several comments: (i) Sky’s economists’ definition of network effects corresponds to what the economic literature denotes as “direct” network effects, whereas the Parties refer to the existence of “indirect” network effects in their Joint Submission (see footnote 53); (ii) CRA and Prof. Van Reenen should acknowledge that the pay TV market is indeed characterised by indirect network effects (also called cross-side network effects) given that they consider that “pay TV channel providers operate in a two-sided market" and as is well-known those markets are characterised by such network effects;46 (iii) given that they consider the pay TV market a two-sided market, their criticisms of the dynamic foreclosure theory underlying the Parties' vicious circle are surprising.

- Their references to the literature on vertical foreclosure are biased and selective. We have already mentioned the problems with the way the paper by Harbord and Ottaviani is quoted in paragraph 51 of CRA and Prof. Van Reenen’s response. Their statement that “a supplier who can charge non-linear prices for the upstream input will always have incentives to license all downstream outlets” (paragraph 51, emphasis in the original) is (a) incorrect, 46 See, for example, Jean-Charles Rochet and Jean Tirole (2003). Platform Competition in Two-Sided Markets. Journal of the European Economic Association, pages 990-1029, 2003.
because that result only holds if the seller has commitment power, as made clear by Patrick Rey and Jean Tirole (2007); and (b) irrelevant in practice since Sky is alleged to rely on per-subscriber fees.

- The discussion in paragraphs 53 to 56 suggesting that Sky’s preference to “retail its sport and movie channels directly on other platforms, rather than by means of a wholesale contract with a third party retailer” is aligned with social welfare is biased. There is a very different interpretation of that preference, which has been ignored by CRA and Prof. Van Reenen: Sky is seeking to maintain its retail advantage so that the vicious circle continues to operate.

- In paragraph 63, we read that “switching to Sky is time-consuming and costly for some consumers, and actually impossible for others”. Yet in paragraph 98, the Parties’ are criticised by not identifying “specific sources of switching costs that might render Sky’s subscribers especially ‘sticky’”. Finally, in paragraph 38 we find the reason behind this apparent contradiction, Sky’s economists appear to be unsure of the importance of switching costs in the pay TV industry: “and, to the extent that they exist, any switching costs between platforms” (emphasis added).

- In paragraph 104, Sky’s economists criticise the Parties’ “argument about the effects of short contract duration”. They argue that “short contract duration is an important factor in helping rivals in acquiring a portfolio of rights”. This is a surprising statement: if Sky has no incentives to foreclose downstream competitors, as they allege, the duration of the contracts should be of no relevance for entry.

- Finally, in paragraph 130, they state that “The [Parties] themselves recognise that both their downstream and upstream foreclosure stories are problematic in their own right, because foreclosing downstream and upstream competitors would likely be unprofitable for Sky”. We have read the Parties’ Joint Submission repeatedly to find where they recognise such things and have been unable to find the reference that would support the claim made by Sky’s economists.

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Annex B. The Authors

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