Profitability and investor returns

Annex 9 to second pay TV market investigation consultation

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Section 1

Aggregate profitability analysis

Introduction

1.1 In this Annex, we revisit the profitability analysis we carried out in our December Consultation and consider the views of respondents. We then proceed to make an initial assessment of the profitability of a hypothetical wholesale channel business, “PremiumChannelCo”, which is constructed to consider Sky’s potential wholesale margins.

Aggregate profitability analysis – Ofcom’s conclusions in the December Consultation

1.2 In our December Consultation, we explained that, on the basis of the evidence and analysis available to us, it was not possible to conclude that Sky had earned excessive returns. Neither did we conclude that Sky had not earned excessive returns. Rather, our analysis in the December Consultation set out to apply the guidance provided in the Oxera paper for the OFT entitled “Assessing profitability in competition policy analysis” [1] (the ‘Oxera Paper’) where it was appropriate, even where issues such as measurement of economic values meant that the analysis was ultimately inconclusive.

1.3 As set out in the December Consultation, Ofcom’s analysis had regard to the Oxera Paper. Ofcom highlighted the difficulties in finding comparators to Sky and that Sky was unique compared to other UK market participants. This was because it had a long-running time series of readily available data on its financial performance and the returns offered to investors. Further, whilst Sky undertook some activities that were unrelated to pay TV, this was not as significant an issue as the extent to which other operators such as BT and Virgin had revenues from unrelated activities.

1.4 Ofcom noted that the differences in composition of businesses between Sky and other UK pay TV companies hindered like-for-like comparisons of returns. Further, it explained that comparisons with international benchmarks might be of limited value because of significant differences between countries. On this basis, Ofcom considered that such comparisons would not, in this case, provide robust evidence of the presence or absence of excessive profitability or returns.

1.5 Ofcom highlighted the problem that accounting based profitability measures can be a poor indicator of economic profit due to accounting distortions. Ofcom was concerned, for example, that the matching of costs and revenues on an accounting basis may not be appropriate for an economic assessment of profitability. Such issues are exacerbated when analysis is undertaken over short time periods, and, the time periods actually selected can have significant bearing on the results of the analysis. This is particularly true when operating margins, for example, have shown the significant variances over time that we demonstrated in the December Consultation.

1.6 In our December Consultation, we reviewed information on the profitability of Sky and investor returns. We found that it would be possible to conclude that profits were high in certain periods, although they did not appear to be high in other periods. Overall,

[1] Available at http://www.oft.gov.uk/shared_oft/reports/comp_policy/oft657.pdf

the analysis was inconclusive as to whether Sky had made excessive returns. The analysis did not overcome a number of estimation problems and highlighted the lack of suitable comparators for Sky.

Aggregate profitability analysis – responses to the December Consultation

1.7 In its response to our December Consultation, Sky said that it had "numerous issues with Ofcom's approach to analysing profitability" but did not detail these because, in its view, "Ofcom's conclusion would not be affected by conducting the analysis differently."[2]

1.8 In their joint response to Ofcom, Setanta and Top Up TV considered that Ofcom's financial analysis and assessment of Sky's profitability was cursory and insufficient. They argued that Total Shareholder Return ('TSR') is not an appropriate measure for assessing a company's financial strength in the context of a competition inquiry. They pointed out that the Oxera Paper advocates the use of the Internal Rate of Return ('IRR') as a profitability measure[3].

1.9 Specific points made included that Ofcom's TSR assessment does not measure Sky's financial strength or market position but rather how the company has performed against expectations and the assessment of its market position at flotation. Further, TSR does not disaggregate Sky's various businesses and Sky's TSR will be depressed due to a near 40% shareholding by News Corp, which removes the potential for any 'bid premium' in its share price.

1.10 They also commented on the inflation of Sky's asset base in the analysis through capitalising Sky's marketing expenditure (i.e. brand building, replacing churn, investing in growth). They argued that in practice the subscriber acquisition cost ('SAC' – usually quoted as a figure per subscriber) of maintaining the subscriber base should be regarded as a cost of the business operations whereas the SAC of growing the subscriber base could be regarded as a capital cost or investment which will produce future returns and that any capitalised marketing expenditures should be depreciated over a relatively short time. They further commented that Ofcom had not sought to adjust its assessment of Tobin's q for the other FTSE 100 companies in the same way it has adjusted its assessment for Sky.

1.11 They suggested that it is not clear why Ofcom compared Sky to other FTSE 100 companies and that it would be more appropriate to compare Sky with other major pay TV companies.

1.12 They further stated that by using the truncated IRR methodology advocated in the Oxera Paper, they calculated an IRR for Sky of approximately 40% over the financial years 2003 to 2007. They also argued that Sky's operating margin, profitability per subscriber, Return on Capital Employed ('ROCE') and Return on Equity (ROE) are also all substantially higher than those of comparable companies.

1.13 In its response, BT stated that a conclusion that Sky is not earning excessive profits could not be arrived at from the analysis provided by Ofcom. BT questioned the basis on which Ofcom had rejected IRR as an indicator and stated that the difficulties in using the IRR did not appear to be particularly material in this case. BT questioned why Ofcom felt it was appropriate to benchmark Ofcom's market based measures of

[2] Sky response to Ofcom's December Consultation, Section 3, Paragraph 9.2.
[3] Setanta Sport Holdings and Top Up TV Europe response to Ofcom's December Consultation, Section 11.

profitability against the FTSE100 and why Ofcom had not benchmarked Return on Sales and Gross Margin analysis against suitable comparable companies[4].

1.14 BT submitted that Sky had earned a ROCE of 36% in 2007 and that this had been consistently above Sky's cost of capital over the period from 2003 to 2007. It argued that Sky's margins had been above those of comparable companies over the last three years over a range of profitability measures. BT also argued that Sky had made significant investments in loss making companies in the past, which would imply that it was only reasonable to assume the profitability of the business would increase in the future.

Our current view on aggregate profitability

1.15 We have reviewed our analysis of aggregate profitability in light of consultation responses. Here we present the outcomes of this review. We look at the following issues, drawing particularly on the Oxera Paper:

- The importance of establishing appropriate cash flow and MEA estimates.
- Issues with disaggregating cash flows for particular lines of business.
- The lack of reliable estimates of MEA values.
- An assessment of the IRR calculation provided by respondents.
- The use of market-based approaches for profitability analysis.

1.16 The Oxera Paper emphasises that the average ROCE over a given period can be used as a proxy for IRR if, among other conditions, "the correct asset valuation is used"[5]. Ofcom considers that arriving at the "correct" asset valuation is problematic in this case because there are likely to be considerable intangible and other assets for which estimating an economic value (an "MEA", or "Modern Equivalent Asset" value) could be seen as subjective. This is because, in several instances, there is a lack of alternative replacement assets which could be seen as substitutes and for which a valuation could be readily obtained. Ofcom does not consider that accounting ratios would, in this case, provide robust evidence of excessive profitability or returns.

1.17 The Oxera Paper refers to ways in which the IRR could be estimated over a truncated period – but highlights that this analysis is conditional upon the assets at the beginning and end of that time segment being appropriately valued[6]. As already set out (and as developed further below), there are important questions about the appropriate values that could be ascribed to a firm's assets at any given period of time, meaning that an IRR calculation can be subject to significant uncertainty. Furthermore, the ways in which those questions should be answered are likely to depend upon particular circumstances, both of the businesses in question and the nature of any potential competition concerns.

The importance of establishing appropriate cash flow and MEA estimates

1.18 The Oxera Paper stresses that:

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[4] BT response to Ofcom's December Consultation, Annex 1.
[5] Box 4.3, page 54 of Oxera Paper.
[6] Paragraph 4.9 of the Oxera Paper.

> "Estimating the IRR requires reliable data on cash flows and opening and closing asset values. The IRR is therefore relatively easy to implement where such data is available over a sufficiently long period and where there are robust estimates of MEA values. This is more likely to be the case when assessing past performance in industries that are established, with long historical datasets, such that MEA values are estimated with some degree of accuracy. Sectors that fall into this category may include, for example, manufacturing, retailing, utilities, banking, pharmaceuticals and telecommunications"[7].

1.19 It goes on to state:

> "In other cases, however, good data may not be available; for example because of a lack of reliable data on cash flows, reliable estimates of MEA values, or both. These three situations are described below, together with the implications for the application of the IRR and its proxy measures"[8].

Issues with disaggregating cash flows for particular lines of business

1.20 In relation to the first issue highlighted by the Oxera Paper, being a lack of reliable data on cash flows, the paper highlights that:

> "The second reason for the lack of reliable cash flow data is if the competition authority is interested in the profitability of a company's activities in a particular line of business only. Companies are commonly involved in multiple activities and publicly available accounting reports normally provide data primarily at the company or group level, with only limited disaggregated information. The authority would therefore have to obtain more disaggregated information and seek to allocate the costs and revenues of the company across the different lines of business. To the extent that disaggregated data is poor and the cost- and revenue-allocation exercise is difficult… the resulting cash flow data may be poor"[9].

1.21 In the December Consultation, Ofcom highlighted that there were a number of activities that Sky engaged in that were not directly related to pay TV and that, in an analysis of publicly available data, this could present issues in trying to estimate an IRR which related directly to Sky's UK pay TV operations. In some cases, the disaggregation of data could be particularly complex because of the presence of a number of different product lines with shared costs and revenues.

1.22 As already noted, Ofcom considers that the bulk of Sky's activities are driven by costs and revenues associated with pay TV. On this basis, Ofcom considered it appropriate in the December Consultation to conduct profitability analysis through market-driven measures that were grounded in Sky as a whole.

1.23 The IRR calculation supplied by Top Up TV and Setanta in their joint response demonstrates the difficulties that can be encountered when attempting to disaggregate the cashflows of a multi-product line company such as Sky.

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[7] Paragraph 4.67 of the Oxera Paper.
[8] Paragraph 4.69 of the Oxera Paper.
[9] Paragraph 4.70 of the Oxera Paper.

1.24 Setanta / Top Up TV's calculation attempts to isolate the impact of broadband costs and revenues by excluding investments in broadband, including capital and operating costs. It also excludes the revenues recognised as "Broadband revenues" in the published accounts. These relate primarily to revenues earned from business customers and from residential customers who pay an additional charge for the benefit of higher broadband usage customers.

1.25 In Ofcom's view, however, such an adjustment is not sufficient in the context of a competition analysis. This is because the legal or contractual form of broadband revenues is not necessarily a good reflection of their full economic effect.

1.26 The respondents' calculation includes all revenues associated with pay TV subscriptions. These subscriptions include entitlements for Sky subscribers to utilise a "free" broadband product and the core broadband product is bundled "free" with the pay TV subscription. Whilst the contractual form of a subscription might be that broadband is "free" with a pay TV subscription, in an economic sense Ofcom would expect that customers place some value on having access to broadband when they pay their pay TV subscription. Some element of the subscription revenues would therefore be appropriately attributed to receiving the broadband service. The provision of broadband service could also be expected to have a number of other benefits for the pay TV business, such as increasing customer satisfaction with their package and reducing overall churn.

1.27 The respondents' calculation does not take account of this effect. Although it excludes costs associated with broadband, it does not exclude the full revenues that might be attributed to broadband where they are not explicitly accounted for. By therefore including some of the returns attributable to broadband without including the broadband cost base, the respondents' calculation mismatches the economic costs and revenues associated with broadband and pay TV, serving to increase the apparent returns on the pay TV business.

1.28 A full disaggregation of the broadband and pay TV business would require a much more substantial recognition of the interplay between the two product lines. Assessing these accurately would present substantial difficulties as many of the effects may not be explicit. Accordingly, there are difficulties in formulating an accurate cashflow estimate for the pay TV business which the respondents' calculation does not address. Similar issues would arise in trying to disaggregate other lines of business, meaning that arriving at an accurate standalone cashflow would be problematic.

The lack of reliable estimates of MEA values

1.29 In relation to the second issue highlighted by the Oxera Paper, being a lack of reliable estimates of MEA values, the paper states that:

> "[It] may prove difficult to obtain a robust estimate of the MEA values…The possible range of asset values may be very wide. Typical sectors where this may be the case include those characterised by rapid technological change, such as information technology. Sectors with high levels of intangible assets, relative to fixed assets, that are difficult to value could also fall into this category — for example, professional services firms. A relatively low fixed capital intensity often (but not always) goes together with high intangibles. In some cases, it is possible to estimate the true MEA value, even if the fixed assets are low, by using other available

> indicators. For example, the MEA value of trading companies, which have low fixed assets, can often be estimated on the basis of their working capital… Where MEA values are difficult to determine, it will also be difficult to obtain a robust and meaningful estimate of the IRR. Again, the competition authority may choose to rely on the ROS, gross margins and market valuations in addition to (or instead of) the IRR"[10].

1.30 As stated in the December Consultation, Ofcom considers that unadjusted book values might not be a good estimator of the economic values of Sky's assets. Costs written off through the profit and loss account in a single period might have an enduring value that is not captured on the balance sheet. Ofcom's December Consultation set out our concern that a number of intangible assets might not be captured on Sky's accounting balance sheet, such as the existence of enduring brand benefits from marketing spend or the enduring value of a subscriber base which is "written off" as a cost at the time of subscriber acquisition. It also highlighted the uncertainties associated with trying to estimate the economic value of such assets. Notwithstanding that Ofcom undertook some attempt to estimate values for some of these assets, it was clear that the possible range of asset values in this case was wide in the absence of other readily available indicators.

Assessment of the IRR calculation provided by respondents

1.31 Ofcom considers that the fact that there are potentially significant cost and revenue allocation issues and the presence of a large number of intangible assets for which it is difficult to estimate an MEA means that an IRR calculation is unlikely to provide robust evidence of excessive profitability or returns. The issue of intangible assets is particularly important in this context: failure to take adequate account of intangible assets for a business with a long history of significant investment in its brand could lead us to overstate the level of the business's profitability.

1.32 This assessment is reinforced by consideration of the IRR calculations submitted by Setanta and Top Up TV in their joint response to the December Consultation. The calculation submitted by the respondents showed that, on two different bases of calculation, the IRR for Sky during a five year period (financial years 2003-2007) was between 39.5% and 40.4%. The respondents claimed that as this figure was clearly well in excess of Sky's cost of capital, it demonstrated excessive returns.

1.33 Ofcom considers that the basis of the IRR calculation presented by the respondents is flawed in certain respects, and we outline these below. After making appropriate adjustments, Ofcom considers that the analysis remains inconclusive and demonstrates this through the use of sensitivities.

Appropriate treatment of asset values and taxation

1.34 Firstly, the mechanics of the calculation supplied by the respondents do not, in Ofcom's view, use the appropriate time periods for certain cashflow items. In particular, the opening and closing assets are implicitly treated as occurring at the mid point of 2003 and 2007 respectively, when a more conventional approach to an IRR calculation would be to treat the opening assets as being purchased at the start of the first period and the value of the closing assets as being realised at the end of the final period. In this case, adjustment of the calculation to reflect the more conventional approach reduces the IRR estimate by several percentage points.

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[10] Paragraphs 4.72-4.73 of the Oxera Paper.

1.35 Secondly, taxation was treated as being payable within the same period as the cashflows earned. Ofcom considers it would be more appropriate to lag taxation payments so that tax is paid in the period following that in which the taxable profit was earned. Adjusting the calculation in this respect serves to increase the IRR estimate, although the effect is small.

1.36 Taken together, these adjustments reduce the IRR implied in the respondents' calculation to between 32.6% and 32.7%.

The sensitivity of the IRR calculation to uncertainty on MEA values

1.37 These returns still appear high. However, they are highly sensitive to a number of assumptions. In particular, they assume that they capture an appropriate MEA value for all Sky's assets as at the beginning and end of the period. The opening values placed on these assets within the respondents' calculation are £2.4bn in one case and £1.8bn in another.

1.38 By contrast, in 2002/3, Sky's enterprise value (as measured by the stock market capitalisation and debt position) was approximately £14bn. The gap between the respondents' estimates of Sky's asset value at the start of the period and the estimate that would be obtained by looking at the stock market valuation is therefore very wide.

1.39 Part of the discrepancy may relate to the adjustment of the calculation by the respondents to attempt to disaggregate certain activities. Part of the discrepancy might be attributed to the failure of the supplied calculation to estimate the MEA of tangible assets; these have been included at book value, which tends to be a poor indicator of economic value.

1.40 It is also important to consider the possibility that the calculation fails to incorporate intangible assets that are not present on the balance sheet. The Oxera Paper highlights the risk that intangible assets may be accumulated at substantial cost and, "if ignored, can lead to an overestimate of the rate of return of that business."[11] The Oxera Paper also cautions that accounting standards adopt a cautious view in the measurement of assets and that traditional accounting systems therefore "often do not reflect the underlying economic value of intangible assets."[12]

1.41 By their nature, intangible assets are difficult to identify, but the Oxera Paper highlights a range of examples. Potential candidates highlighted in the paper that may be considered as intangible assets but that are excluded under accounting rules include "human resources, intellectual property, brand value and customer networks."[13] Ofcom considers that brand value, the value of knowledge and experience and the presence of a series of contracts which were in place at the time are among the intangible assets that might be appropriate to include if performing an IRR calculation for Sky based on an economic perspective. However, there is considerable uncertainty about the way in which the value of these (and other) intangible assets could be estimated in the absence of readily available and applicable comparators.

1.42 One approach to estimating the MEA of the opening assets would be to use the enterprise value placed on the assets by the market. Both Ofcom and respondents to

[11] Paragraph 5.19 of the Oxera Paper.
[12] Paragraph 5.20 of the Oxera Paper.
[13] Paragraph 5.21 of the Oxera Paper.

the December consultation have expressed caution about utilising market values as a means of estimating the economic value of Sky's assets because, for example, as well as incorporating the economic value of tangible and intangible assets they may also incorporate shareholders' anticipation of earning future super-normal returns.

1.43 However, it is not necessary to come even close to the full enterprise value implied by the stock market in order to demonstrate the sensitivity of the respondents' IRR estimate to changes in the estimate of opening values. In fact, the sensitivity of the calculation to the inclusion of other assets is transparent when a relatively modest adjustment (compared to the enterprise value) is included in order to represent some degree of understatement of asset values at the start and end of the period.

1.44 As noted above, Sky's enterprise value at the start of the period was around £14bn, while the respondents assume an opening asset value of £1.8bn to £2.4bn. Adjusting the calculation to take account of a hypothetical £4bn understatement of opening assets at the beginning of the period would mean that the total "opening assets" were between £5.8bn and £6.4bn – both less than half the observed enterprise value at the time and leaving considerable scope for the possibility that the observed total enterprise value incorporates distorting factors such as the anticipation of future super-normal profit.

1.45 If the closing value of the additional assets is maintained throughout the period (in nominal terms) then this adjustment to the respondents' calculation results in an IRR of between 10.1% and 13.3%.

1.46 Ofcom does not regard this result as definitive; it is, in fact, an illustrative adjustment used only to demonstrate sensitivity. However, given the disparity between the market's assessment of Sky's economic value at the start of the period and the assessment implied in the respondent's calculation, Ofcom does not consider that such an adjustment is implausible. At the very least, Ofcom anticipates that at least some of the disparity between the observed enterprise value and the MEA estimate in the respondents' calculation is reflective of intangible assets which have not been captured by the respondents. The range of possible MEA values is wide and in Ofcom's view, this presents very significant difficulties in calculating a robust IRR calculation, as is anticipated in such circumstances in the Oxera Paper.

The difficulty in establishing an MEA value for subscribers

1.47 Setanta / Top Up TV's calculation makes an adjustment to the opening and closing asset bases by including estimates of the value of the opening and closing subscriber bases. Specifically, the respondents' calculation values Sky's subscriber base on the basis of the acquisition costs associated with marginal subscribers.

1.48 The respondents' result is partly dependent on the assumption that subscriber values rise significantly over time. Whilst the acquisition costs of marginal subscribers might plausibly increase over time, this does not necessarily imply that Sky is earning super-normal profits on existing subscribers. The market "price" for a marginal subscriber can fluctuate for a number of reasons which might be unrelated to any activity by Sky itself or to any inherent increase in the value of existing subscribers. Such fluctuations should therefore be treated with caution.

1.49 The market "price" for a marginal subscriber could also increase for reasons which are not directly related to anticipated returns on the pay TV business itself but rather, anticipate higher revenues from that subscriber from other product lines offered by the multi-product line business. For example, the anticipated additional revenues that

might be earned from selling higher usage broadband packages to high usage customers may mean that Sky is willing to pay a higher average cost for new subscribers than would have been the case absent the ability to gain revenues from this product line. We have not at this stage sought to unbundle these alternative product lines.

The sensitivity of the IRR calculation to changes in the time period selected for analysis

1.50 Additionally, as already set out, the respondents' calculation is based on a fixed time period. Although the respondents argue that the time period is justified for a number of reasons, Ofcom considers that there are potentially valid reasons that might be considered to justify a longer or shorter run assessment. Given the already described volatility of returns exhibited by Sky, this could significantly affect the outcome of the calculation, and the IRR result will therefore be volatile and highly sensitive to the time period selected.

1.51 For example, if the five year period is extended back by one year, such that it covers the 2002-2007 period (instead of the 2003-2007 period) then the IRR calculation provided by the respondent (after having applied Ofcom's timing adjustment) gives a result which falls from 32.6%-32.7% to 23-23.8%.

1.52 Alternatively, if the five year period is moved back by one year, such that it covers the 2002-2006 period (instead of the 2003-2007 period) then the IRR calculation provided by the respondent (after having applied Ofcom's timing adjustment) gives a result which falls from 32.6%-32.7% to 20.9-23%.

1.53 Both of these calculations take 2002 as the starting point and include opening asset values of £2.5bn or less. This was at a point when the enterprise value of Sky was approximately £14bn. Again, the difference between the MEA values implied in the calculations and the enterprise value of Sky seems very large, casting significant doubt on the result of the IRR calculation and whether it adequately captures the opening and closing values of intangible assets.

1.54 The respondents suggested that extending or shifting analysis to incorporate the 2002 financial year would lead to a distorted result because as well as including an "opening value" for subscribers to Sky's legacy analogue platform, it would also incorporate the operating cashflow cost of transitioning them to the digital platform[14]. At the end of the 2001 financial year, there were approximately 200,000 analogue subscribers contained within a total DSat subscriber base of 5.5m[15]. Excluding these analogue subscribers from the opening subscriber base in 2002 (in anticipation that the costs of acquiring these customers is taken into account in the operating cost for that year) increases the IRR result by approximately 1 percentage point. This does not, in Ofcom's view, undermine its conclusion that the IRR result is highly volatile to the time period selected as a basis for calculation.

1.55 The analysis set out here shows that the results are highly volatile to different assumptions regarding the appropriate asset values and scope and the time period selected for analysis. Different but plausible approaches to estimating product line profitability and capital intensity can also impact the IRR result. The plausible range of outcomes is considerably broader than those presented here, particularly when the

[14] Conference call between Top Up TV / Setants representatives and Ofcom, 3 September 2008.
[15] Sky Annual Report 2001, available at http://library.corporate-ir.net/library/10/104/104016/items/166599/AR01.pdf

cumulative impact of multiple changes in assumptions is taken into account. Given the uncertainties over MEA values for a business that has invested considerably in its brand over a long period, and the particular circumstances in this case, Ofcom considers that a profitability assessment based on a truncated IRR approach is unlikely to yield a robust conclusion about Sky's profitability.

1.56 As already set out, the lack of robust comparators and the inappropriateness of accounting ratios in this case also meant that they were unlikely to provide robust evidence of profitability or returns based on the information available to Ofcom.

1.57 In the December Consultation, Ofcom therefore attempted to apply market-based approaches to the analysis, being the other main method of conducting profitability analysis set out in the Oxera Paper.

The use of market-based approaches for profitability analysis

1.58 In the December Consultation, Ofcom set out the basis on which it utilised market based approaches such as Tobin's q and Total Shareholder Return. However, Ofcom noted that they were also subject to a number of factors which limited their applicability in this case and rehearsed many of the arguments which were put forward by respondents.

1.59 In conducting its market based analysis, Ofcom benchmarked Sky's returns against broad comparisons in the market through the use of three UK market indices. Some respondents suggested that Ofcom should have benchmarked Sky's returns against either specific media companies or indices of media companies.

1.60 As already set out, there are no specific media companies which share either the operational or geographic characteristics of Sky sufficiently closely to make a direct comparison appropriate.

1.61 Comparing Sky to a media index does not circumvent this problem; rather, it would serve to compare Sky to a number of companies which exhibit specific characteristics which are very different from Sky. Media indices suggested to Ofcom by respondents are comprised of many businesses with highly specific operating models. These include newspaper companies, classified directories publishers, online property portals and publishers of educational materials and academic journals. These businesses, whilst residing in the same "media" sector, do not appear particularly compelling comparators for a business which has, as its main revenue source, subscriptions to pay TV.

1.62 Given that the specific characteristics of these comparator companies, Ofcom does not consider that they provide a benchmark for Sky's TSR which is any more compelling than a comparison with a broad basket of UK listed companies and in the specific circumstances of this case, the utilisation of a media index as a benchmark would not yield a substantially more robust result.

Conclusion on aggregate analysis of profitability and returns

1.63 The profitability analysis contained in the December Consultation proved inconclusive, an outcome that is anticipated by the Oxera Paper, which states:

> "[Where] neither reliable cash flow data nor robust MEA values are available… the competition authority is unlikely to obtain any meaningful estimates for the IRR or the proxy measures. A

> profitability assessment under such circumstances may not yield useful results"[16].

1.64 As set out in the preceding paragraphs, the analysis remains inconclusive, even taking into account the points made by respondents to the December Consultation.

1.65 Since December, Ofcom has obtained further financial and operational data that has facilitated a further financial analysis, being a margin analysis of "PremiumChannelCo" – a hypothetical construct which seeks to replicate a premium channel wholesale business which wholesales to Sky and other operators. Details of that analysis are set out in the following section.

[16] Paragraph 4.74 of the Oxera Paper.

Section 2

Wholesale margins

Why it is important to look at wholesale margins

2.1 Chapters 4 and 5 of the main consultation document established our view that Sky has market power in the narrow markets for:

- The wholesale supply of channels or packages of channels containing live FAPL matches ("Core Premium Sports channels"); and
- The wholesale supply of channels or packages of channels which include the first TV subscription window of film content from the Major Hollywood Studios ("Core Premium Movies channels").

2.2 It is therefore highly relevant to attempt to establish whether Sky is making a high margin from the parts of its business most focused on supplying these products. We have termed this part of the business "PremiumChannelCo". We include within PremiumChannelCo not just Core Premium channels, but all premium channels. This includes all sports and movies channels that Sky supplies on a wholesale basis – i.e. Sky Sports 1, 2, 3 and Xtra, and all the Sky Movies channels.

2.3 Concluding that such high margins might exist is not inconsistent with the initial views we expressed in the December Consultation on issue of profitability. Apart from the uncertainty as to the true results from the overall business, it is also possible that one part of Sky's business might be making a high return while another was not.

Profitability of PremiumChannelCo

2.4 In order to assess wholesale margins, we consider a hypothetical business – PremiumChannelCo. Sky's retail DSat offering is assumed to be a separate retail business. PremiumChannelCo is assumed to purchase content, package it into channels and supply those channels to Virgin Media and other cable operators, Sky's retail business and commercial premises. It earns revenues from selling these products on the same wholesale rate-card to both Virgin Media and other cable operators and Sky Retail, from advertising, and also from direct sales to commercial premises. The fundamental difference between this construct and the way in which Sky itself is structured is that Sky's DSat business is ass7umed to be split into wholesale and retail components in order that the wholesale profitability can be assessed.

2.5 Our initial analysis shows that PremiumChannelCo could be expected to earn gross margins of around [✂] % on premium sports channels and around [✂] % on premium movie channels. We have attempted to extend this to look at the operating margin of PremiumChannelCo, This seems to yield a figure of around [✂] %. This is higher than Sky's overall operating margin of 15.2% and is in a part of the business that we would expect to be relatively asset-light.

2.6 Assessing the profitability of PremiumChannelCo requires a number of allocations and apportionments to be made from Sky's accounts as currently constituted. This is because PremiumChannelCo constitutes only a part of Sky's overall business. In particular, it does not constitute the part of Sky's business that provides or retails

"Basic-tier" content channels and it does not constitute operations related to Sky's own retail offering to residential DSat customers.

Description of costs and revenue streams for premium content

2.7 When we consider Sky's overall business, we observe that there are four main revenue streams which Sky earns on premium content.

- The revenues which Sky earns from retailing its premium content to its residential DSat customers.
- The revenues which Sky earns from wholesaling premium content to third party retailers, such as Virgin Media.
- Revenue earned by Sky from retailing its premium content to commercial premises, including pubs and clubs.
- Advertising revenues generated by the sale of airtime on Sky's premium channels.

2.8 The first three of these revenue streams are earned from cash payments to Sky in return for entitlements to view, resell or publicly display content. The precise nature of the pricing structure varies in each case, but purchasers generally have the opportunity to purchase premium sports and premium movie content separately or to buy both of them together in a "bundle", whether the customer is a wholesale one or a customer purchasing a retail subscription from Sky.

2.9 The fourth revenue stream is earned from charging advertisers in return for supplying them with commercial impacts (that is, providing advertisers with viewer exposure.) In practice, the contracts with advertisers and advertising agencies will often cover the supply of impacts across a number of different channels, potentially including premium movie channels, premium sport channels and other channels operated by Sky. Once again, this means that in order to estimate the profitability of premium sports and premium movie content individually, an estimate must be made of how much advertising revenue could reasonably be said to accrue to impacts supplied on each type of premium channel. This is despite the fact that, in practice, impacts on each channel are generally more likely to be sold as part of a broader supply of impacts.

2.10 The costs associated with premium content can be thought of in two broad categories: direct costs and indirect costs.

2.11 The most significant direct cost of premium content is the cost of the rights themselves. These are the monies paid by Sky to the rights holders, being sports bodies in the case of premium sports content and the film studios in the case of premium movies content. The majority of these costs are likely to be specific to each of premium sports and premium movies and, unlike subscription or advertising revenues, are generally not shared across multiple areas of activity. Insofar as some of these costs are shared with other activities (e.g. because they relate to the rights to highlights or other clips used to produce Sky Sports News) then this will imply that the estimated margins for PremiumChannelCo (as set out below) are too low.

2.12 Other direct costs include the costs of production for premium sports and premium movie content. For premium movies this might include the scheduling and play-out for premium movie channels. For premium sports, this might include the more

significant costs of wrapping the sports coverage into programmes including, for example, the cost of filming the event and studio presentation.

2.13 Other costs involved in premium sports and premium movies are, to at least some extent, indirect and are shared either between the two types of premium content or between a broader range of activities. For example, the legal and compliance activities related to premium content might be shared broadly across a range of channels, as is the case for the cost of advertising sales on premium sports and premium movie channels. In the case of these costs, estimates need to be made to establish the appropriate amount of cost which should be incorporated into a profitability analysis which seeks to examine separately the returns earned from premium sports and premium movies.

2.14 To consider the profitability of PremiumChannelCo, only certain costs and revenues related to premium content are relevant. We need to consider only those revenues that it would earn from wholesaling premium channels to third party retailers (including both Virgin Media and Sky Retail) and from retailing premium content to commercial premises.

2.15 It is also necessary to exclude costs which are not directly relevant to the activities of PremiumChannelCo. For example, when considering the appropriate marketing costs to be included, it is necessary to distinguish between marketing which is directly related to premium channel promotion and that which is related to Sky's particular retail propositions or to other forms of content outside the scope of premium sports and premium movies.

2.16 As the preceding discussion shows, the estimation of both costs and revenues for each of premium sports and premium revenues and any assessment of profitability in these lines of business is subject to a number of difficult but necessary estimates which seek to provide an initial view of profitability and pricing.

2.17 In the following section, we provide a description of how we can estimate revenues and direct costs for PremiumChannelCo in order to derive a gross margin. We first estimate margins on premium sports content and then consider margins on premium movies content. We then go on to estimate the operating margin.

Profitability of premium sports content

2.18 In order to assess the profitability PremiumChannelCo's sports content it is necessary to consider the revenues and costs that could, on a reasonable view, be attributed to premium sports.

Revenues: advertising and sponsorship

2.19 Consistent with the approach taken in Annex 8, Ofcom considered advertising revenue on the same basis that Sky reports to Ofcom its qualifying revenue for each channel. Based on an analysis of Sky's qualifying revenue returns for 2007, Sky Sports channels earned approximately [✂] in advertising and sponsorship revenues.

Revenues: commercial premises

2.20 Sky informed Ofcom that the revenues earned from subscriptions from commercial premises totalled approximately [✂] for the year ended June 2007[17]. This was

[17] Sky response to Ofcom questions of 2 July 2008.

broadly consistent with the prior year. This is a mixture of revenue from various establishments, including public houses, bars, health clubs, betting offices and hotel rooms.

2.21 An analysis of the types of commercial premises subscribing to the service, as well as a review of Sky's marketing literature, suggests that the primary driver for commercial premises subscriptions is sport. To reflect this, we have assumed that [✂] % of revenues from commercial premises could reasonably be attributed to sports-driven subscriptions, with the remaining [✂] % representing a contribution for movies subscriptions.

2.22 This allocation means that [✂] of revenue per year appears to be derived by Sky's premium sports channels being sold into commercial premises.

Revenues: wholesale revenues from Virgin Media

2.23 Sky sells its premium sports content to Virgin Media at a wholesale rate which is set out within a wholesale rate-card. The rate-card sets out prices per Virgin Media subscriber per month which vary according to the quantity and mix of premium sports and premium movie content supplied to the Virgin Media subscriber.

2.24 Some of the packages sold on the rate-card therefore contain only premium sport or premium movies, whilst other packages contain a mix of premium sport and premium movies.

2.25 Revenues from a package which contains only premium sport clearly represent revenues earned from premium sport content. Likewise, revenues from a package which contains only premium movies represent revenues earned from premium movie content.

2.26 Where revenues relate to packages which mix premium sports and premium movie content, we have allocated these revenues pro-rata to average revenues per subscriber for separate premium sports and premium movies packages. This calculation was consistent with the approach used in Annex 8. We recognise that this is a simplification, and discuss alternative allocation approaches below.

2.27 Using this method, it appears that Sky's premium sports content would earn approximately [✂] of revenue from Virgin Media customers based on the same rate-card data used in Annex 8.

Revenues: wholesale revenues from Sky's residential DSat customers

2.28 In order to estimate Sky's wholesale profitability on its premium sports channels, we have estimated revenues on the basis of the Sky DSat retail volumes for each package, multiplied by the implied cost of the package as set out in the wholesale rate-card. This approach assumes that the rate-card reflects a fair input price for Sky's premium channels. It is also representative of the revenues that we could expect PremiumChannelCo to earn if it were a wholesaler of channels to Sky Retail in the same way that it wholesales channels to Virgin Media.

2.29 Using the number of subscribers for each package type for the year and apportioning revenues from premium sports and premium movies packages in a manner consistent with the Virgin Media wholesale calculation set out above, this calculation suggests that if Sky applied the wholesale rate-card price to its own DSat retail

subscribers, premium sports would have yielded revenues of approximately [✂] based on the same rate-card data used in Annex 8.

Premium sport revenues: summary

2.30 The preceding steps yield an estimate of Sky's revenues for premium sport as follows:

	£m
Advertising and sponsorship revenues	[✂]
Commercial premises	[✂]
Virgin Media wholesale revenues	[✂]
Sky DSat "wholesale" revenues	[✂]

	[✂]

Premium sport costs

2.31 Sky's 2008 preliminary results state that "Sports costs rose by £87m year on year to £929m [in the year to June 2008]"[18]. This suggests that the direct costs associated with premium sports channels totalled £929m.

Premium sport gross margins

2.32 In aggregate, then, if we consider the margins that we might expect to be earned by PremiumChannelCo on premium sports content then it appears that it would earn a gross margin of approximately [✂] % as shown below.

	£m	
Revenues	[✂]	
Direct Costs	(929)	
Gross Margin	[✂]	([✂] %)

Profitability of premium movies content

2.33 We now turn to estimates of the revenues and costs which could be attributed to the wholesale of Sky's premium movies content.

Premium movies: revenues

2.34 Using the same approaches to revenue allocation for premium movie content as was set out for premium sports content yields an estimate of PremiumChannelCo's revenues for premium movies of [✂], as follows.

	£m
Advertising revenues	[✂]
Commercial premises	[✂]
Virgin Media wholesale revenues	[✂]
Sky "wholesale" DSat revenues	[✂]

	[✂]

[18] http://phx.corporate-ir.net/phoenix.zhtml?c=104016&p=irol-newsArticle_Print&ID=1181722&highlight=

Premium movies: costs

2.35 Sky's 2008 preliminary result announcement states that movies costs amounted to £281m in the year to June 2008[19]. In contrast to our revenue estimate, this figure appears to include the costs of PPV movie content, although we have not sought to exclude these costs. Excluding PPV content from the cost base would increase margin estimates.

Premium movies: gross margins

2.36 In aggregate then, Sky appears to make a gross margin of approximately [✂] % on its premium movies content, as shown below.

	£m	
Revenues	[✂]	
Direct Costs	(281)	
Gross Margin	[✂]	([✂] %)

Alternative allocation methods

2.37 Among the assumptions which underpin the gross margin analysis above is the attribution of "bundled" revenues between sports and movies. In the calculation set out above, bundled revenues were split on the basis of their standalone wholesale rate-card price.

2.38 Inevitably our results are sensitive to this assumption, and we have therefore considered alternatives. In particular, we have looked at the preferences of consumers that buy premium bundles.

2.39 As part of our consumer research programme, we asked subscribers to premium content bundles containing both premium sport and premium movies to describe which element of the bundle was the main driver for purchase and which element of the bundle was considered an incremental purchase. The results were as follows[20]:

- 47% wanted sports and bought movies as it was a relatively cheap add-on.
- 23% wanted movies and bought sports as it was a relatively cheap add-on.
- 23% valued both sports and movies equally.
- 7% did not know.

2.40 By distributing those respondents that were unable to express a preference pro-rata to the responses that did, it is possible to estimate that just over half of premium bundle subscribers (50.5%) value sports more highly than movies and purchased movies as a "relatively cheap" incremental add-on to the primary purchase driver of sports. The remainder of the population were equally divided between those who saw

[19] http://phx.corporate-ir.net/phoenix.zhtml?c=104016&p=irol-newsArticle_Print&ID=1181722&highlight=
[20] Source: Ofcom pay TV research phase 3, base: all multi channel TV households subscribing to Sky Sports and Sky Movies (450). See December Consultation Annex 14 for details.

movies as the main purchase driver (with sports a relatively cheap incremental add-on) and those who valued sports and movie content equally.

2.41 Because the majority of respondents to Ofcom's research considered that one or other of premium sports or premium movies drives the initial purchase and that the remaining content is considered a "relatively cheap" incremental purchase, it may be appropriate to apportion revenues for the bundle between premium sports and premium movies in a way that reflects these preferences. As an approximation of the value that consumers attach to the "relatively cheap" add-on versus the main purchase driver, Ofcom has again used Sky's wholesale rate-card as a means of apportioning revenue.

2.42 Allocating bundled wholesale revenues on the basis of consumer preferences as expressed through the distinction between the "main driver" and "add on" purchases would increase PremiumChannelCo's subscription revenues attributable to premium sport to approximately [✂] and decrease the subscription element of wholesale revenues attributable to movies to approximately [✂]. This would point to a gross margin for premium sport of [✂] % and a gross margin for premium movies of [✂] %.

2.43 In summary, this analysis shows that presented in the way described, gross margins for the wholesaling of premium sport are in the region of [✂] % and gross margins for the wholesaling of premium movies are in the region of [✂] %. These gross margins are not definitive, since they incorporate a number of different assumptions about cost and revenue allocation. They are also potentially volatile year to year for a number of reasons, such as fluctuations in sports rights costs. The margins presented here do not, therefore, reflect an analysis of long term profitability, but rather a snap shot based on current conditions.

2.44 We believe that the approach outlined above is potentially appropriate given both our understanding of consumer preferences and the availability of stand-alone prices for sports and movies. However, when allocating bundled revenues between a number of component product lines, there is a wide range of potential outcomes. For example, an alternative analysis would be to use the *standalone* price of one product (i.e. either sports or movies) as the appropriate valuation of that product for *all* consumers of the bundle, and use the *incremental* price of the other product as the valuation those consumers place on that product. Carrying out this analysis first for sports and then for movies would give the widest possible range of outcomes. If the standalone price used was that for movies and the incremental price used was that for sport, then our analysis suggests that gross margins would be [✂] % for movies and [✂] % for sport. Alternatively, if the standalone price used was for sport and the incremental price used was that for sport, then gross margins would be [✂] % for movies and [✂] % for sport.

Operating margins

2.45 The analysis above has estimated that gross margins are in ranges of [✂] % for Sky's wholesale premium movies business and [✂] % for Sky's wholesale premium sports business, depending on how revenue for combined sports / movies bundles is allocated. This compares with operating margins of 20.7% for Sky's pay TV business and 15.2% for Sky's business as a whole, as reported in Sky's 2008 preliminary

results[21]. We have concluded our analysis by attempting to assess operating margins for Sky's wholesale premium channel business as a whole.

2.46 It is difficult to determine accurately which of Sky's group-wide operating costs would be incurred by a hypothetical standalone wholesale premium sports and premium movies business, and Ofcom has not, at present, carried out the detailed review of Sky's internal accounts that would likely be required to reach a definitive view.

2.47 However, Sky's 2008 preliminary results show that in addition to programming costs, it incurred the following operating costs:

	£m
Transmission and related functions	542
Marketing	743
Subscriber management	700
Administration	530

	2515

2.48 There are good reasons for believing that substantial elements of these operating costs are not relevant to the wholesaling of premium content that would be undertaken by PremiumChannelCo. For example, it is highly likely that subscriber management costs should be exclusively borne by the retail part of the business. Similarly, although it is somewhat unclear where transmission costs would fall in a wholesale/retail relationship, very little of the "transmission and related functions" cost is likely to be related to the activities of PremiumChannelCo. However, even excluding these two large cost items leaves a pool of operating costs of over £1 billion. It is not possible without further investigation to attribute these costs appropriately to Sky's wholesale business.

2.49 Sky has indicated to Ofcom that in its view an appropriate allocation of operating costs to a business such as PremiumChannelCo would be in the order of [✂] for the year to June 2008. Ofcom has not yet undertaken work to independently determine the appropriateness of this figure and as such, it needs to be considered with some caution. Furthermore, we have not sought to split this figure between sports and movies.

2.50 By deducting these operating costs from the gross margin, Ofcom estimates that operating margins for PremiumChannelCo overall would be approximately [✂] %, somewhat higher than Sky's operating margin for pay TV (20.7% in 2008) and operating margins for Sky as a whole (15.2% in 2008.) Consensus city estimates suggest that near term operating margins for the business as a whole are not expected to change dramatically in the next few years.

2.51 In summary, our margin analysis, based primarily on data obtained for the year to June 2007 suggests:

- Gross margins on movies are significantly higher than those observed on sports
- Operating margins for the part of Sky's business hypothetically contained within PremiumChannelCo are higher than those observed or expected for Sky as a whole.

[21] http://phx.corporate-ir.net/phoenix.zhtml?c=104016&p=irol-newsArticle_Print&ID=1181722&highlight=