Proposed Merger Between BSkyB and Manchester United: An Economic Commentary

by

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Executive Summary

1. The proposed vertical merger between BSkyB and Manchester United raises potentially serious competition policy concerns. BSkyB is currently the UK's near-monopoly producer of premium sports and other channels for pay television. It is also the UK's largest pay TV broadcaster, with a 63% market share.
2. BSkyB holds the exclusive rights to broadcast Premier League football games until 2001. BSkyB's exclusive long-term contractual arrangements with the Premier League Football Association means that all other UK pay TV broadcasters must purchase this programming from BSkyB, their major competitor for downstream customers in the pay TV broadcasting market.
3. Manchester United is the UK's wealthiest and most important football club. It has been ranked 1st in Britain and 6th in Europe, and has a reported 18% of British fans. In 1997/8 Manchester United played in 12 of the 60 games broadcast live on pay television (i.e. 20% of broadcast games), matched only by one other team Arsenal, and it had the largest number of viewers.
4. Every link in the vertical chain, from the sale of broadcasting rights by football clubs, to the sale and distribution of sports broadcasts to customers, is currently under investigation by UK competition authorities.
5. BSkyB's exclusive long-term contractual arrangements with the Premier League Football Association are currently before the Restrictive Trade Practices Court (RTPC). These contractual arrangements:
   a) give BSkyB the exclusive right to broadcast Premier League Football matches until 2001
   b) prevent the broadcast of more than 60 of the approximately 380 available matches in any given year

These 'exclusivity' and 'buy to block' arrangements evidently limit the degree of competition in pay TV football broadcasting.

6. The Office of Fair Trading has been ruling on complaints concerning the terms under which BSkyB's programming is provided to competing broadcasters since 1994. Numerous claims of anticompetitive conduct have been made, including most significantly:
   a) BSkyB's wholesale prices to competing broadcasters are set in a manner designed to limit the take-up of competing broadcast services and to limit the profitability of providing these services, i.e. to partially foreclose effective competition in the broadcasting market;
   b) BSkyB's prices to its own customers and competing broadcasters are also designed to limit or foreclose entry into the wholesale programming market, in that their discounted pricing structure 'ties' the purchase of 'less monopolised' channels (i.e. where entry barriers are lower), to the purchase of 'more monopolised' channels, making it

difficult or uneconomic for competing programming producers to successfully enter this market

7. The combination of these upstream exclusive contracting arrangements and downstream selling arrangements (with arguably anticompetitive consequences) raises serious questions about the proposed merger of BSkyB and Manchester United. The merger would appear to replace an exclusive vertical contracting arrangement with vertical integration.
8. Where there is a single upstream monopolist supplier and more than one downstream competitor, the motive for exclusive contracting or vertical integration may be to prevent the dissipation of monopoly rents via downstream competition. This appears to describe the current arrangements in Premier League football broadcasting remarkably accurately. One motive for vertical integration may be that such exclusive contracting arrangements frequently come under attack from competition authorities, i.e. the OFT and RTPC in this instance. When exclusive contracting is prohibited, vertical integration may be one means to side-step the prohibition.
9. There is also evidence in the economics literature that such vertical mergers may create a ‘chain’ of possibly inefficient vertical mergers by competitors. That is, the integration decision of two leading firms can lead other firms to vertically integrate to overcome ‘foreclosure’ effects. Such ‘chains’ of vertical integration may be privately optimal but socially inefficient. The planned acquisition of Newcastle United by NTL may be an early example of this effect in action.
10. In 1992 there were two, and in 1996 there were three, bidders for Premier League rights respectively. By 2001, the market for FA Premier League rights could be expected to become more competitive, with the potential entry of new large bidders such as the digital broadcasters, and the growth and consolidation of the large cable companies such as Cable and Wireless, Telewest and NTL (the latter also having increased digital capacity).
11. Alternatively, the rights may not be available, or at least not under the same conditions as previously. The RTPC may follow the advice of the DGFT and break up the Premier League seller’s cartel. The Premier League clubs have also indicated an intention to develop their own digital channels by early in the next century.
12. One motivation for the BSkyB/ManuU merger may therefore be to secure rights for BSkyB in the face of increased bidding competition created by the entry of significant new bidders. By purchasing Manchester United, BSkyB will ensure itself the largest ownership share in Premier League broadcasting rights, and hence an advantage in any rights selling procedure, even if other bidders also vertically integrate.
13. Another motivation may be to alleviate the effects of an RTPC ruling that the exclusive vertical contracting arrangements operate against the public interest. If the RTPC forces premier league clubs to sell their broadcasting rights independently, then, post merger, BSkyB will be the de facto owner of Manchester United’s rights. Similarly if the rights are not made available to

broadcasters as Premier League clubs develop their own digital channels, BSkyB will have secured for itself the broadcast rights of the leading club.

14. Significant empirical and theoretical evidence exists in the economics literature that a small ownership share in the object being sold can yield a large competitive advantage in auctions and selling processes, even to the extent of inducing nonparticipation by other buyers if bidding is costly. Bidders with a large ownership share *relative to other buyers* increase their probability of winning the object, and in general pay less for it than they otherwise would, thus reducing seller revenues.

15. There is also evidence that downstream pre-emption or foreclosure effects may influence bidding behaviour in upstream auctions and other selling procedures. That is, bidders who care about their competitive position downstream relative to other bidders should be willing to increase their bids for the object being sold. Again nonparticipation may be strategically induced.

16. <u>If collective selling is maintained</u>, the merger will give BSkyB a small but significant ownership share in Premier League broadcasting rights of approximately 5%-7%. This is sufficient to ensure it a significant advantage in any future rights bidding processes.

17. <u>If collective selling is not maintained</u>, then by the merger BSkyB will have obtained for itself a 100% ownership stake in the broadcast rights for the UK's premier football club. Manchester United's broadcasting and pay per view rights will potentially be crucial for broadcasters in the coming century.

18. Another often cited motive for vertical integration is to avoid the 'chain of monopolies' or 'double monopoly mark-up' problem. This motivation however does not apply to a situation in which upstream inputs are sold using an appropriate non-linear pricing scheme, i.e. for a per unit price equal to marginal costs, plus a lump sum payment. Premier League broadcasting rights are sold under such a non-linear pricing scheme, and hence the double monopoly mark-up problem is not an issue in the proposed merger.

19. The key competition policy problem raised by the merger is that it will secure key Premier League broadcasting rights for BSkyB into the foreseeable future, and increase BSkyB's bargaining power in the market for football broadcasting rights, consequently entrenching its monopoly position in wholesale sports broadcasting.

20. In the absence of substantial and verifiable efficiency benefits therefore, our view is that the merger should not be approved. If it is approved however, mitigating remedies may be available. For instance, the nonexclusive sale of Premier League broadcasting rights and/or limits on the extent of the exclusive rights held by any broadcaster (as recently introduced in Italy). Such remedies may be usefully considered even in the absence of vertical integration by BSkyB and Manchester United, in order to encourage the development of a more competitive sports broadcasting market.

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1. Introduction

The proposed vertical merger between BSkyB and Manchester United raises a number of potentially serious competition policy concerns. BSkyB is currently the UK's near monopoly producer of premium sports channels for pay television, as well as being the UK's largest pay TV broadcaster. Since 1992 BSkyB has held the exclusive rights to broadcast Premier League football games, and its current contract with the Premier League remains in place until 2001. BSkyB's exclusive long-term contractual arrangements with the FA Premier League means that all other UK pay TV broadcasters must purchase this programming from BSkyB, their major competitor for customers in the pay TV broadcasting market.

Manchester United is the UK's wealthiest and most important football club. It has been ranked 1st in Britain and 6th in Europe, and has a reported 16% of British fans. In 1997/8 Manchester United played in 12 of the 60 games broadcast live on pay television (i.e. in 20% of broadcast games). This is despite Premier League regulations which specify that all 20 Premier League teams must appear at least once in a live broadcast in each year.

Every link in the vertical chain, from the sale of broadcasting rights by football clubs, to the sale and distribution of sports broadcasts to customers, is currently under investigation by UK competition authorities.[1] BSkyB's exclusive long-term contractual arrangements with the Premier League Football Association are currently before the Restrictive Trade Practices Court (RTPC). The Office of Fair Trading has made plain its view that the Premier League Association acts a tight seller's cartel. In addition, the terms under which programming is provided to competing broadcasters by BSkyB has been the subject of many years of controversy and intervention by the Office of Fair Trading. Indeed, since 1995 the Director General of Fair Trading has literally become the regulator of BSkyB's wholesale broadcasting business, approving BSkyB's wholesale pricing structure, and requiring BSkyB to keep separate wholesale and retail accounts and submit them annually to the OFT.

The RTPC Investigation

The RTPC is directly considering BSkyB's *exclusive*, *buy to block* contractual arrangements to purchase Premier League Football rights. These rights are sold collectively by the FA Premier League football clubs and:

- give BSkyB the exclusive right to broadcast Premier League Football matches until 2001
- prevent the broadcast of more than 60 of the approximately 380 available matches in any given year

These 'exclusivity' and 'buy to block' arrangements evidently have the effect of limiting the degree of competition in pay TV football broadcasting. Exclusivity forces all broadcasters to purchase the broadcasts rights from whichever

[1] There have also been investigations carried out by DGIV and the ITC.

competing broadcaster owns the rights (i.e. BSkyB), and the 'buy to block' arrangements restrict the supply of football broadcasts and potentially prevent the development of niche or local markets for football broadcasts.

The OFT Investigation

The Office of Fair Trading has been considering, and ruling on, complaints concerning the terms under which BSkyB's programming is provided to competing broadcasters, i.e. under the rate card, almost continuously since 1994. Numerous claims of anticompetitive conduct by BSkyB have been repeatedly made, including, most significantly:

- BSkyB's wholesale prices to competing broadcasters are set in a manner designed to limit the take up of competing broadcast services and to limit the profitability of providing these services, i.e. to partially foreclose effective competition in the broadcasting market;
- BSkyB's prices to its own customers and competing broadcasters are also designed to limit or foreclose entry into the wholesale programming market, in that their discounted pricing structure 'ties' the purchase of '*more monopolised'* channels to the purchase of '*less monopolised'* channels, making it difficult or uneconomic for competing programming producers to successfully enter this market.

This combination of upstream exclusive contracting, which limits the availability of football programming to downstream broadcasters and prevents the emergence of competitive sports broadcasters, and downstream selling arrangements, raises serious questions concerning the proposed merger of BSkyB and Manchester United. The merger would appear to replace an exclusive vertical contracting arrangement with vertical integration. In light of this, serious consideration needs to be given to its long term competitive consequences.

By 2001 the market for FA Premier League rights could be expected to become more competitive, with the potential entry of new large bidders such as the digital broadcasters, and the growth and consolidation of the large cable companies such as Cable and Wireless, Telewest and NTL (the latter also having increased digital capacity). Alternatively, the rights may not be available, or at least not under the same conditions as previously. The RTPC may follow the advice of the DGFT and break up the Premier League seller's cartel. The Premier League clubs have also indicated an intention to develop their own digital channels by early in the next century.[2]

One motivation for the BSkyB/ManuU merger may therefore be to secure rights for BSkyB in the face of this increased competition, and increased uncertainty concerning the conditions under which rights will be available in the future. By purchasing Manchester United, BSkyB will ensure itself the largest ownership share in Premier League broadcasting rights, and hence an advantage in any collective rights selling procedure, even if other bidders also vertically integrate.

[2] Manchester United has already created such a channel, which is part owned by BSkyB.

If collective selling is not maintained then by the merger BSkyB will have obtained for itself a 100% ownership stake in the broadcast rights for the UK's premier football club.

Our purpose in this paper is to provide an economic commentary on a number of the key competition issues raised by the proposed merger. Vertical mergers between firms with significant market power in either the upstream or downstream market (or both) are now widely recognised as raising significant competition policy concerns. This case raises two particularly significant issues:

1. The effects that the merger can be expected to have on the sale of football broadcasting rights once BSkyB is, in effect, sitting on both sides of the table as both a purchaser and a seller of these rights, i.e. the likely distortion caused to the rights selling procedure by the merger.
2. The exclusionary effects which BSkyB's current monopoly position in football broadcasting and its downstream pricing structure are already having, which are likely to be either strengthened or exacerbated by the merger.

In writing this report we have not had available sufficient information to consider all of the economic issues raised by the proposed merger. In particular, potential efficiency benefits claimed for the merger are not considered. We are dubious however that the efficiency gains will be sufficient to overcome the substantial competition policy problems raised.[3]

Section 2 of the paper deals very briefly with market definition issues. In Sections 3 and 4 we describe briefly the market positions of BSkyB and Manchester United. Section 5 discusses vertical integration and exclusive vertical contracting arrangements in the light of some of the recent economics literature. Section 6 considers the likely distortions to the selling procedure for football broadcasting rights of the BSkyB/Manchester United merger. Section 7 describes the competition policy problems which already exist in downstream broadcasting markets, which will be potentially exacerbated by the proposed merger. Section 8 contains concluding comments, and references are collected in Section 9.

2. Market Definitions

For the purposes of the analysis in this paper we intend to broadly accept the market definitions proposed by the Office of Fair Trading in 1996. The OFT concluded that:

1. Terrestrial television is not a close substitute for subscription television, and there exists a separate market for retail subscription television in the UK
2. There are also distinct and separate markets for premium sports and movie channels.

[3] Nor do we consider any putative overall benefits to English football from the Premier League revenue sharing agreements, which have the effect of subsidising smaller clubs at the expense of larger ones. Our analysis is exclusively concerned with the downstream effects of the cartelised, exclusive selling arrangements.

3. Derived wholesale or input markets for the supply of premium sports channels, and for the supply of sports broadcasting rights.

Fairly strong evidence that such markets exist may be inferred from the fact that the prices of premium sports and other channels to BSkyB's customers have risen sharply over he previous five years, with an average annual increase of 11.27% from January 1994 to January 1997. We understand that premium sports channels retail prices have increased by more than this. However we have carried out no independent analysis of the market definition issues.

3. The market position of BSkyB

BSkyB is the dominant pay TV broadcaster in the UK. 63% of pay TV customers purchase their service from BSkyB, with the next largest company - Cable and Wireless - having 12% of customers. BSkyB's share of the market for premium sports and movies channels is higher still.

In the wholesale market for premium sports channels BSkyB is effectively the monopoly wholesale supplier. The Racing Channel is the only other premium sports channel in UK pay television, and its customer viewing numbers do not register in industry surveys. BSkyB's position as the monopoly supplier in this market arises from its exclusive contractual arrangements with FA Premier League. BSkyB also holds a dominant position in premium movie channels.

The industry perception is that sports broadcasting, and Premier League football in particular, drive subscriptions in pay television. Some evidence for this is given by the fact that over 90% of all BSkyB subscribers in 1997 took its Sports Channel. In the same year 25 of the top 30 programmes on satellite television were football games. In addition, Sky Sports average viewing share in the year to February 1997 during the league football season was double its average off-season viewing share.[4]

4. Manchester United in FA Premier League Football

4.1 Manchester United

Manchester United is the UK's most important football club by far. The club is ranked 1st in the UK and 6th in Europe, taking into account on-pitch performance, number of fans, and sales revenues. Of the UK's football fan base of 3.3 million, 18% are Manchester United supporters. In 1996/7 Manchester United generated the highest annual revenues of any club in Europe by a wide margin, more than double the revenues of the nearest UK football club.[5]

Manchester United's television rights are currently sold within the Premier League collective selling arrangements, described immediately below. Within the Premier League Manchester United obtains the highest number of viewers, averaging 1.5 million viewers per game in 1997/98. It also has the most televised games and appeared in 12 of the 60 televised matches in 1997/98 (i.e. 20% of

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4 Source: Cable and Wireless Communications

5 Oliver and Ohlbaum Associates (1998)

televised games). It was closely followed by Arsenal which played in 12 televised games also, and averaged 1.4 million viewers per game.[6]

4.2 Football Association Premier League

The Football Association Premier League (the FA Premier League), formed in 1992, consists of 20 clubs and effectively acts as a tight sellers' cartel for the sale of television rights. Each club has a single vote on the board. The FA Premier League negotiates the sale of all broadcasting rights on behalf of all of the clubs. These rights are sold collectively and exclusively to a single purchaser. Under the current contractual arrangements between BSkyB and the FA League the league receives £185.8 million for the four years from 1997 to 2001 for these rights.

The quantity of Premier League games available for broadcast is also strictly rationed. 60 of the approximately 380 fixtures are made available for broadcast. In addition, members of the cartel are required to obtain permission from the FA Premier League before selling the rights to non Premier League fixtures.

A revenue sharing arrangement has been put in place which allocates significant revenues to those clubs whose games are not broadcast on a relatively equal basis with those clubs whose games are broadcast. Revenues from television broadcasting are shared between the clubs in the following manner:

- each club receives £878,725 in 1995/6.
- a *merit award* payment is made to clubs which depends upon their final position in the league. The first-placed club in 1995/6received twenty times £49,165, the second placed club nineteen times £49,165, and so on.
- a *facility fee* is paid for each television appearance of £77,255 for each live screening and £7,755 for featured highlights.

Thus the first placed club, if it appeared in 12 televised live matches and 25 times in television highlights, would have received approximately £3 million, whilst the last placed club, with three television appearances, would have received just over £1 million.

As with all cartel output or revenue sharing agreements, these arrangements create pressures for renegotiation, or for the more successful clubs to negotiate the sale of their rights individually rather than collectively. It has been estimated that the clubs which appear most frequently on television could increase their television rights revenues by more than 60% if revenues were shared strictly according to number of television appearances, under the current arrangements.[7] The advent of 'pay per view' broadcasts appears likely to increase this pressure.

[6] Premier League regulations specify that all 20 Premier League teams must appear at least three times in a live broadcast in each year.

[7] Ashurst Morris Crisp and Case Associates, *The Economics of League Football*, 1997.

4.3 Premier League selling procedure

The FA Premier League collective selling arrangements have to date operated as described in the figure below.

FA Premier League Selling Procedure[8]

FA Premier League has sold broadcasting rights via a competitive bidding process on two occasions in the past 6 years. First in 1992 and again in 1996. Prior to this rights were sold exclusively to a terrestrial television duopoly. Each Premier League club has a single vote and the votes of a minimum of 14 of the clubs are necessary to approve a bid.

The 1992 bidding process

In 1992 there were 2 bidders, ITV and BSkyB. The bidding process was organised informally, and more than one offer was made by each bidder. BSkyB won the rights with a bid of £304 million against ITV's offer of £262 million. However BSkyB was given an opportunity to submit its final bid after learning the value of ITV's second bid. There were subsequent complaints that ITV should have been given an opportunity to revise its bid.

The 1996 bidding process

The 1992 BSkyB/Premier League contract contained a 'meet the competition' clause in favour of BSkyB, allowing BSkyB to match, or improve upon, the bid of any competitor in the subsequent bidding process. There were three bidders in 1996: United News and Media, Mirror Group/Carlton and BSkyB. Bids were presented successively by the three bidders in a single afternoon. United News and Media bid £1 billion for a ten year contract; Mirror Group/Carlton bid £650 million for a four year contract; and BSkyB bid £670 million for a four year contract. United's bid was rejected on the grounds that the Premier League clubs were not willing to contemplate a long-term contract. No subsequent bidding occurred.

BSkyB's 'meet the competition' clause however would have given it a substantial advantage in this bidding procedure. Other bidders would have realised that they could not win the rights unless they were willing to pay more for them than BSkyB's maximum willingness to pay, i.e. at a price which BSkyB would have found unprofitable. Since BSkyB was the current holder of the rights, it would have presumably had the best information concerning the value of the rights in television broadcasting.

4.4 Pay per view rights

Pay per view rights are not currently treated any differently than normal live television broadcasting rights. However some analysts expect pay per view broadcasts to generate far more revenues than those currently paid by BSkyB to the Premier League for live broadcasts (e.g. up to £2 billion per annum by 2004 compared with the current BSkyB/Premier League deal which is worth less than

8 Horsman (1997) describes the selling process in some detail.

£50 million per annum).[9] There is already pressure within the Premier League to allow pay per view rights to be sold by individual clubs, coming, not surprisingly, from the clubs with the most valuable rights. Manchester United's pay per view rights would presumably be the most valuable of these.

5. Vertical integration, downstream competition and 'chains' of integration

5.1 Introduction

Using well-known arguments, the 'Chicago school' maintained that vertical integration or exclusive vertical supply arrangements rarely, if ever, raised competition policy concerns. The 'Chicago' view was that vertical integration, refusal to supply and exclusive dealing were motivated solely by efficiency considerations: antitrust problems were held to arise only from a lack of horizontal competition. The basic Chicago argument was that since there is only a "single monopoly profit" to be exploited by a monopolist, no additional profits could be gained from exclusive vertical contracts or vertical integration.[10]

However it has now been firmly established that the "single monopoly profit" argument fails to hold except in a rather narrow set of circumstances, and that the Chicago arguments were based on overly simple economic models. In particular the Chicago arguments ignored strategic interaction between firms with market power.[11] Recent economic theorising has shown that vertical integration and exclusive contracting arrangements may be motivated either by a desire to extend or increase market power, economic efficiency concerns, or both.

In the recent economics literature, motives for vertical integration or exclusive contracting have received fairly extensive study, and conditions have been identified under which market power and foreclosure effects are potentially important (especially Hart and Tirole, 1990; Bolton and Whinston, 1991). A first consideration is the degree of pre-existing market power or market concentration. Bolton and Whinston (1991) write for instance:

> "*Perhaps the best ex ante guide is the one already mentioned in Bork [1978], namely the degree of concentration in either the upstream or downstream market. Foreclosure effects are more likely to be present in situations in which one of these markets is highly concentrated*."

Similar sentiments are echoed throughout the literature (e.g. Hart and Tirole, 1990; Riordan and Salop, 1995).[12]

In the following subsections we briefly describe the motivations for vertical integration and exclusive contracting which have been identified in the modern literature, and which appear relevant to the current merger situation.

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9 *The Economics of League Football* op cit.

10 Bork (1978) is a particularly clear statement of this.

11 See Riordan and Salop (1995) for a detailed discussion.

12 Hart and Tirole (1990), for instance, recommend that '… vertical mergers involving efficient or large firms should be subject to particular scrutiny by antitrust authorities.'

5.2 Motives for exclusive contracting and vertical integration

5.2.1 Preventing downstream rent dissipation

Hart and Tirole (1990) and Bolton and Whinston (1991) study a number of models in which the motive for vertical integration or exclusive contracting is to reduce or foreclose market competition, either upstream or downstream. In one example, which appears to describe the current arrangements in Premier League football broadcasting under the collective selling arrangements reasonably accurately, a single upstream monopolist supplier potentially supplies more than one downstream firm, and there is competition between the two downstream firms to serve final customers. The motive for exclusive contracting or vertical integration is then to prevent the dissipation of monopoly rents via downstream competition. In the absence of exclusive contracting arrangements, the upstream monopolist will sell to both downstream firms, who dissipate the monopoly rents via fierce competition downstream. This in turn prevents the monopolist from realising its potential monopoly profits upstream, i.e. since it cannot commit itself to selling only to one of the downstream firms.[13]

In the absence of an ability to write exclusive bilateral contracts which would commit the upstream monopolist not to sell to one of the downstream firms, vertical integration can be profitable since it enables the monopolist to exclude one of the downstream firms, i.e. the downstream market is monopolised. The remaining downstream firm - now vertically integrated - is then able to extract monopoly rents from consumers and achieve the full monopoly profits.

If the downstream firm with an exclusive vertical contract, or which is vertically integrated, can in turn commit itself to a linear pricing scheme (e.g. the ratecard) then it can also re-sell to the excluded downstream firm at the monopoly retail price. The crucial point is that rent dissipation through downstream competition for customers is prevented by aligning the incentives of the upstream monopolist with one of the downstream competitors.

The motive for vertical integration, as opposed to vertical contracting, may be that exclusive contracting arrangements frequently come under attack from competition authorities.[14] Hart and Tirole (1990) and Bolton and Whinston (1991) can be viewed as providing a rather robust rationale for exclusive contracting or vertical integration where the former is not possible.

Economic models of vertical integration and exclusive contracting are necessarily both extremely simple and highly abstract, and many real-world complexities are ignored. Insofar as it is possible to describe the essence of the current collective selling procedure with such a simple model however, Hart and Tirole's analysis would seem to capture reasonably well at least one of the

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[13] 'Double marginalisation' would also prevent the achievement of full monopoly profits under linear, i.e. .per unit pricing. However Hart and Tirole (1995) assume that the upstream inputs are sold under a two part tariff, so this issue does not arise.

[14] Hart and Tirole (1990) argue that exclusive contracts and vertical integration are not perfect substitutes in all circumstances because, for instance, it may be optimal to continue supplying both downstream firms, post vertical integration, when there is both upstream and downstream competition.

potentially important motivations for such exclusive dealing arrangements in the markets of interest in this inquiry.

5.2.2 'Chain of monopolies' motivation

An alternative motivation for vertical integration identified in the literature is to overcome the so-called 'chain of monopolies' or 'double monopoly mark-up' problem. This arises when an upstream monopolist (or more generally, oligopolist) sells an input to downstream firms under a linear pricing scheme (i.e. at a per unit price) exceeding its marginal cost, who in turn add an oligopoly mark-up to the price of the final good. It is then possible that final downstream prices will exceed the monopoly level. One way to overcome this problem is via vertical integration so that the upstream division of the integrated firm can 'sell' the input to the 'downstream division' at a transfer price equal to marginal cost. Another solution is non-linear pricing, i.e. the upstream firm can sell its output to the downstream firm at a price equal to its marginal cost plus a lump sum payment less than or equal to the downstream firm's oligopoly profits.

Premier League broadcasting rights are sold in precisely this way, i.e. for a lump sum payment equal to a proportion of the winning broadcasters expected monopoly profits. Precisely what proportion depends upon the competitiveness of the bidding process. Hence the 'double mark up' problem does not arise here, and evidently it is not a motive for vertical integration in this inquiry.

5.2.3 Chains of inefficient vertical integration

Hart and Tirole (1990) also contains an analysis of more complex models of strategic interaction and competition between a number of upstream and downstream firms. In the case which seems most relevant to the current merger situation, i.e. in which there is a limited supply of the essential upstream input, and downstream firms must 'bargain' with upstream firms over the terms at which the input will be supplied, they consider the conditions under which vertical integration by one upstream and one downstream firm may provide incentives for subsequent vertical integration by the remaining firms. Briefly, the argument is that when the first two firms, say U_1 and D_1, vertically integrate, the remaining downstream firm is disadvantaged because it is no longer able to purchase inputs from U_1. This may cause D_2 to exit the industry, thus disadvantaging the remaining upstream firm U_2 because there is then only one purchaser in the market for its input. This may lead to U_2 and D_2 to vertically integrate to prevent the exit of D_2 , even though they had no incentive to do so previously. Such 'chains' of vertical integration may be socially inefficient, although individually profit maximising for the firms.

Again we would not wish to claim that such simple economic models capture everything that is relevant to a real-life merger situation. However the Hart and Tirole analysis does potentially provide an explanation as to why 'waves,' or chains, of vertical mergers may occur. It likely captures some aspects of the situation which will arise if the collective selling arrangements by the Premier League are discontinued.

If the Premier League clubs sell rights individually rather than collectively, competition to secure the rights of the leading teams may give rise to incentives to vertically integrate. Once the two industry leaders have integrated, i.e. BSkyB and Manchester United, further vertical mergers may follow in the type of 'bandwagon' effect identified in Hart and Tirole (1990).[15] The consequences of such chains of vertical mergers for both competition and efficiency are far from straightforward to evaluate. However where such mergers are not motivated by productive or investment efficiency advantages, they are unlikely to improve consumer or producer welfare in aggregate.

6. The upstream effects of the merger

A merger between BSkyB and Manchester United also has the potential to distort the market for the sale of Premier League football rights to a significant degree in the future. By its purchase of Manchester United, BSkyB will obtain a share in the revenues earned by the Premier League from the sale of broadcasting rights, as well as voting rights in the selling procedure itself. The nature and extent of this share will depend upon whether or not collective selling is maintained. Under the collective selling arrangement currently in place, BSkyB would obtain approximately 5%-7% of the total revenue received by the Premier League from the sale of rights. If collective selling is prohibited BSkyB will evidently have at least a 50% share in any fixture played by Manchester United, and an ability to veto the sale of any such rights to other broadcasters.

An overall analysis of the strategic relationship between the Premier League as an upstream seller of football screening rights and BSkyB as a downstream wholesale buyer is offered in Annex B. It is argued that BSkyB's market power within this relationship will be substantially enhanced by a merger with Manchester United. An important part of this argument concerns the distortion to the selling procedure of the screening rights created by the merger. Annex A provides illustrative examples in support of the claims on this front that are made below.

6.1 Distortion to selling procedure if collective selling is maintained

6.1.1 Selling procedures with buyers owning a share in the rights for sale

There is a burgeoning economics literature which analyses the outcomes of selling procedures when one or more of the potential buyers has an equity stake in the object being sold.[16] Numerous selling procedures have been examined, including standard auction forms (first price and second price auctions…), as well as more general selling procedures. Two robust conclusions have emerged:

[15] The planned acquisition of Newcastle United by the cable company NTL may well be an example of this. If collective selling is maintained, then, as we explain in Section 6 and Annex A below, the acquisition will yield few rights bargaining advantages for NTL, given that BSkyB will have a much larger 'toehold' in these rights. If collective selling is abandoned however, then owning a stake in one of the smaller football clubs may be preferable to having no stake at all.

[16] Cramton, Gibbons, and Klemperer (1987), Bulow, Huang and Klemperer (1998), Klemperer (1988), and Engelbrecht-Wiggans (1995). See Section 9 and Annex A for further references.

1. Ownership stakes in the object being sold always result in sellers being willing to bid more for the object than they otherwise would have.
2. Large ownership shares relative to other buyers confer an advantage to the buyer with the larger ownership share, and may prevent the achievement of efficiency, i.e. the object will not always be sold to the buyer which values it most highly.
3. With asymmetric ownership stakes, the object will frequently be sold for less than it otherwise would have been.

The precise nature and direction of the distortion to the outcome of the selling procedure depends upon the details of the selling procedure being used. However the conclusions stated above emerge quite generally. Further, it is important to note that even a small ownership share can confer a competitive advantage if other buyers' ownership shares are even smaller, or zero. That is, it is the *relative* and not the *absolute* size of the ownership share which matters. Klemperer's (1998) analysis of 'almost' common value auctions makes this point clearly:

> *"In most auctions, in practice, there are at least slight asymmetries between the bidders. ... One potential acquirer may already have a small ownership stake. Or one potential acquirer may have a reputation for aggressive bidding. ... Small asymmetries such as these can crucially effect who wins, and at what price.... An apparently small advantage can greatly increase a bidders probability of winning and greatly reduce the price he pays when he wins."*

The reasons for this effect are worth understanding. Recall that a common value auction is one in which the object being sold is worth the same to each bidder, but in which the bidders may have different information about how much the object will eventually turn out to be worth. For example, the audience for a particular football game may be the same whoever holds the right to televise it, but different market researchers may assess the size of the anticipated audience differently.

The 'winners' curse' arises in an auction when a bidder finds that he has bid more than the object for sale turns out to be worth. In a common value auction, the bidder who wins the auction is most likely to be 'cursed' because his market research was unrealistically optimistic compared with that of his rivals. Clever bidders therefore ask themselves in advance what their new estimate of the worth of the object would be if they were to win the auction and so find that the other bidders all bid less. The use of these new estimates lowers the amounts that bidders are willing to offer. That is to say, the winners' curse problem leads clever bidders act conservatively by shading their bids downwards. Klemperer (1998) points out the implications for auctions that are not quite common value because the bidders begin with small asymmetries:

> *"Giving a bidder a small advantage ...makes him bid a little more aggressively. While this direct effect may be small , there is a large indirect effect in an (almost) common value auction. The bidder's*

> *competitors face an increased 'winner's curse' (i.e. it is more dangerous for them to win the auction against a competitor who is bidding more aggressively). So the competitors must bid more conservatively. So the advantaged bidder has a reduced winner's curse and bid more aggressively still, and so on. In consequence an apparently small edge for one bidder can translate into a very large competitive advantage…."*

Klemperer (1998) (see also Bulow, Huang and Klemperer, 1998), argues that the sale of financial assets, oil fields, take-over bids, and the PCS auctions for the airwaves in the United States, all represent 'almost' common value auctions, because there are typically at least small asymmetries between bidders. The same logic would appear to apply with equal force to the sale of football broadcasting rights.

The most relevant example of an auction or selling procedure of this type discussed by Klemperer (1998) (also Bulow, Huang and Klemperer, 1998) is that of a take-over bid where one bidder has a small ownership stake - or 'toehold' - in the target company. This is modelled as the advantaged player receiving a small fraction θ of the asset sale price. The result is that the player with the 'toehold' always wins the asset in equilibrium, and typically at a price lower than it would have been in the absence of a 'toehold'.

When more than one player has a toehold, the player with the larger toehold retains a significant competitive advantage. Bulow, Huang and Klemperer (1998) analyse the outcomes of an ascending bid 'English' auction in which either of two bidders may establish a 'toehold', i.e. purchase shares.[17] They show that:

1. The probability of winning increases in the size of a bidder's toehold relative to the other bidder's toehold. In particular a player with a zero share in the object being sold has a zero probability of winning, for any size share held by the other player, no matter how small.
2. Increasing a bidder's stake always makes him bid more aggressively.
3. Increasing a bidder's share or toehold always increases his expected profits from winning the auction.

Bulow et. al. summarise the results of the analysis as follows:

> *"… Even small toeholds can have a large effect on the competition between the bidders. A bidder with a large toehold bids more aggressively, […essentially because every price she quotes is both a bid for the company and an ask for her own shares]… and wins the auction with a higher probability. If the bidders' toeholds are sufficiently asymmetric, the bidder with a smaller toehold can be forced to quit at a very low price and the auction can generate much lower expected revenue for the non-bidding shareholders*."

It is particularly important to note that small asymmetries in share ownership can even lead to a failure of some potential bidders to enter the auction at all when

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17 This analysis is treated in more detail in Annex A, where examples are given.

participation in the auction is costly, even to a small extent.[18] A disfavoured potential bidder may see no point in preparing a bid if his chances of winning against a favoured bidder are not sufficiently high. Given small asymmetries in share ownership, bidders who expect to lose to the bidder with the largest ‘toehold’ may find nonparticipation optimal, rather than incurring the costs of information gathering and preparing and submitting bids.[19] Although one way out of this difficulty for the seller is to try to ensure that more than one buyer has a ‘toehold’, if ‘toeholds’ are asymmetric then the larger bidder retains a significant competitive advantage.

Significant empirical evidence for the existence of ‘toehold’ effects has been collected, and much of this is surveyed in Klemperer (1988) and Bulow, Huang and Klemperer (1998).[20] Take-over bids, PCS auctions, and mergers have been studied. Klemperer (1998) uses the example of Pacific Telephone's cheap acquisition of a Los Angeles PCS licence in one of the major auctions run in the USA by the Federal Communications Commission as a telling example in which there was almost no competition for the licence as a result of Pacific Telephone widely advertising its `toehold’. This consideration has been of major importance in the design of the coming radio communications auction to be run by the British government. A sealed-bid stage is currently planned in the auction in order to encourage entry by one or more bidders who is not a current incumbent in the cellular telephone industry.

Klemperer argues that sealed-bid, first-price auctions substantially mitigate the entry deterrence problem. However, when the seller is not a government, there is the problem of whether the seller can credibly commit to accept the highest bid registered in the auction even if he is later offered a higher amount by someone who initially underbid.

To summarise, the two essential results of these analyses are that:

1. Share ownership, or ‘toeholds’, confer significant competitive advantages and may guarantee effective control of the asset by the ‘toeholder’;
2. Share ownership or ‘toeholds’ can result in the asset being sold at significantly lower prices by reducing the aggressiveness, or willingness to participate, of bidders without a ‘toehold’. This results in less revenue for the seller unless the seller can commit to a particular auction form which prevents it from accepting higher subsequent bids.

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[18] The costs of information gathering and preparing a bid are likely to be sufficient to count for this purpose.

[19] Bulow, Huang and Klemperer (1998) for example, suggest that, “*...an ownership stake significantly less than 50% may be sufficient to guarantee effective control; a toehold may make it much less likely that an outside bidder will enter….*” Similarly Betton and Eckbo (1998) find that toeholds may increase the probability of a successful single-bid contest by lowering the chance of entry by a rival bidder.

[20] Further references to the empirical literature are provided in Annex A.

6.1.2 Selling procedures with negative externalities

A related branch of the economics literature analyses the performance of selling procedures or auctions when the buyer's valuation of the object depends both upon the potential profit stream to be obtained from ownership and its effects upon downstream competition. Such selling procedures are said to have 'negative externalities.' They are characterised by the fact that buyers care not only about winning the object for themselves, but also upon their downstream competitive position if another buyer obtains the object. Again the conclusions of this literature are that buyers value the object more highly if they are concerned with their downstream market position, and are willing to bid more for it to prevent their competitors from acquiring it.

Jehiel and Moldovanu (1997a) for instance, show that bidders reservation values for an object such as a cost-reducing innovation or an essential input for downstream production are increased by the presence of negative externalities, i.e. when they care about who wins the object. Jehiel and Moldovanu (1997b) demonstrate that this effect can even lead to some buyers strategically not participating in the selling procedure. The reason is that by participating in the auction some buyers may find that prices are bid to excessive levels, because other bidders are afraid of the consequences of letting a particular buyer win. A buyer may be better off if they can commit themselves to not bidding for the object. One of the applications cited by Jehiel and Moldovanu (1997a) is the sale of an essential input where there is downstream competition between buyers.

6.1.3 Application to BSkyB/Manchester United merger

There are obvious and close analogies to be drawn between the conclusions of the economic literature on asymmetries and externalities in auctions and the BSkyB/Manchester United merger. If BSkyB becomes the de facto owner of Manchester United, then it will have a relatively large ownership stake in the sale of broadcasting rights to Premier League football games compared with other potential buyers. (Recall that it is the relative size and not the absolute size of an ownership share that counts in deterring rivals. The auction process acts as a 'multiplier' on the size of the effect.) The conclusion of the auction literature is that BSkyB's stake will significantly ratchet up its strategic advantage over its competitors when bidding for broadcasting rights, because its own risk of overbidding is lowered. while the risk of its competitors is increased. As a consequence, BSkyB will be more likely to win the rights---even in situations in which its valuation does not exceed that of other bidders. If bidding is sufficiently costly, competing bidders may even drop out of the auction altogether, judging their probability of winning too small to justify incurring the cost.

Similarly, the literature on auctions with downstream negative externalities also applies directly. As the current monopolist wholesale broadcaster of premier league football BSkyB's downstream market position depends upon its ownership of these rights, and its market position would undoubtedly deteriorate if the rights were obtained by a competitive broadcaster. Further BSkyB's ability to influence the downstream market structure would be seriously eroded if it lost its exclusive rights to Premier League football (see Section 7 below). The negative externality then is BSkyB's downstream market position and its ability to use its monopoly position to prevent entry and limit competition into sports broadcasting production and retail broadcasting.

Both of these effects work in the same direction. Given even a small ownership stake in Premier League broadcasting rights, BSkyB should be willing to bid more aggressively for them than it otherwise would, discouraging other bidders from bidding as aggressively as they otherwise might have, or even discouraging their participation altogether. Likewise, concern about its downstream market position should lead to a similar effect. Perhaps paradoxically, the first effect can lead to the seller receiving lower revenues for the object, i.e. the bidder with an ownership stake receives the object at a lower price, unless the seller can commit himself to not accepting higher offers after a first round of sealed bids.

6.2 Distortion to selling procedure if collective selling is prohibited

BSkyB's position in the market for the sale of broadcasting rights is changed if collective selling is prohibited, but not necessarily weakened. On the one hand BSkyB will lose its share in the revenue from the sale of broadcasting rights for fixtures in which Manchester United is not participating. On the other hand BSkyB will hold a large share in the rights to Manchester United fixtures and perhaps absolute control, or veto power, over the sale of those rights. Since Manchester United is by far the most important team in Premier League football, BSkyB's position will be potentially strengthened rather than weakened should collective sale of rights be abandoned, at least in the short run.

If the collective sale of rights is abandoned, BSkyB will do even better in the short run, since its bargaining power will be enhanced as a consequence of the bargaining power of the Premier League becoming fragmented. However, the longer run implications are less straightforward to quantify. One possibility, noted above, is that BSkyB's downstream rivals will also vertically integrate, with consequences for downstream competition which are difficult to predict, but which may raise new competition policy problems. If BSkyB remains the only vertically integrated player in the market however, then it will clearly have a uniquely strong position in the market for football broadcasting rights.

7. The downstream effects of the merger

BSkyB was, until recently, the only vertically integrated programme producer and pay TV broadcaster in the UK, and still holds a uniquely powerful position in the UK pay TV market. Numerous investigations in to BSkyB's pricing and related practices have been carried out since 1995 by UK and European competition authorities. Two significant claims of anticompetitive conduct by BSkyB have been repeatedly made by competing broadcasters and programming producers:

1. That BSkyB's wholesale prices to competing broadcasters are set in a manner designed to limit the take up of competing broadcast services and to limit the

profitability of providing these services, i.e. to partially foreclose effective competition in the retail broadcasting market;

2. That BSkyB's wholesale prices to its own customers and competing broadcasters are also designed to limit or foreclose entry into the wholesale programming market, in that their discounted pricing structure 'ties' the purchase of '*more monopolised'* premium channels to the purchase of '*less monopolised'* channels, i.e. where barriers to entry are lower, making it difficult or uneconomic for competing programming producers to successfully enter this market

Given BSkyB's dominant market position in the entire vertical chain, such claims need to be taken seriously. We discuss the economic evidence for each in turn, after describing BSkyB's current pricing structure.

7.1 BSkyB's wholesale pricing structure

7.1.1 The DTH linkage and minimum carriage requirements

BSkyB currently sells programming to cable operators under its 'rate card' which specifies the wholesale price as a percentage of it's DTH ('direct to home') retail price. Under an agreement currently being negotiated between BSkyB and the DGFT, the DTH linkage is likely to be abandoned in January 1999. BSkyB has also imposed minimum carriage requirements upon cable companies, under which a pre-set percentage of subscribers must be supplied with a package of channels whether they wished to purchase them or not.[21]

7.1.2 Discounting and 'tying' in the rate card

BSkyB's wholesale rate card has always contained deep discounts for the purchase of additional premium channels, i.e. quantity discounts. The new ratecard currently under discussion within the industry continues this pricing structure.

Figure 2: BSkyB Proposed Ratecard

Premium Channel Package	**Fee per Subscriber**
Sky MovieMax	£8.05
Sky Premier	£10.05
Single Sports	£9.05
Dual Movies	£11.55
Dual Sports	£11.55
MovieMax+Single Sports	£10.55
Premier + Single Sports	£12.55

[21] Under a ruling by the ITC, minimum carriage requirements must be completely removed by the year 2000.

Dual Sports + MovieMax	£13.55
Dual Sports + Premier	£14.55
Dual Movies + Single Sports	£14.05
Dual Movies + Dual Sports	£15.55

Thus, for instance, the purchase of *both* MovieMax and Single Sports incurs a total cost of £10.55, which represents a marginal price for Single Sports of £2.50, as opposed to the price of separate purchase of £9.05. A competing sports broadcaster thus competes with an extremely low marginal price per subscriber. Similarly Dual Sports + Premier costs £14.55 whilst Dual Sports alone costs £11.55, so Sky Premier is purchased at a marginal price of £3.00, as compared to its stand alone price of £10.05 (see Table 6 in C&WC submission).

7.2 Foreclosure of effective competition in the broadcasting market

Cable operators have claimed that BSkyB's pricing practices prevent them from achieving reasonable margins on the sale of BSkyB programming to their customers, and that this threatens the financial viability of their pay television operations, and their ability to provide effective competition to BSkyB. This also affects the speed and longer term viability of their capital investment programs.

These issues have received detailed treatment in cable company submissions to the Office of Fair Trading, the European Commission and more recently to the current MMC inquiry. We therefore do not wish to treat them in any detail here. It is perhaps of interest to note however that the telecommunications regulator, OFTEL, has provided substantive independent backing for these claims in its 1996 submission to the OFT:

> *The key issues for the inquiry for the [OFT] inquiry concern Sky's use, or its ability to use, dominance in one part of the market to leverage or maintain its position in another .... Our concerns centre on Sky's pre-eminent role in the supply of programming together with a significant share of the retail distribution market, and whether its pricing and other terms and conditions of supply could retard the development of the cable companies by for example, holding back penetration rates or increasing the rate of churn.*
>
> *... The analysis set out in this submission suggests that there are good grounds for considering that Sky's pricing and other policies are tending to hold back the development of the cable companies and therefore are threatening the prospects for competition in Pay TV in both the short and the long term.*

Some of the detailed concerns expressed by OFTEL about BSkyB's pricing policies have since been addressed, in whole or in part, by the OFT, but many have not. Hence the broader concern for the development of competition in the pay TV market would appear to remain as an issue for this inquiry.

7.3 Foreclosure of entry into the wholesale programming market

The second competition policy problem mentioned above was that BSkyB's wholesale pricing structure may be designed to limit or foreclose entry into the wholesale programming market. As figure 2 makes plain, BSkyB's rate card offers significant discounts on the purchase of subsequent premium programming given that previous premium programming has been purchased. In effect this discounted pricing structure 'ties' the purchase of channels at particular prices to the prior purchase of other channels. It has been claimed that this makes it difficult or uneconomic for competing programming producers to successfully enter this market, because they will typically be competing against highly discounted programming prices, in many instances sold at prices less than cost (i.e. predatory pricing).

It is now well understood that such 'tying' or 'mixed bundling'[22,23] of unrelated products can have the anticompetitive effects claimed for it, and that the introduction of such discounted pricing packages may be motivated solely by the changes in market structure they induce, i.e. by partially or totally foreclosing the market to competition.[24] M. Whinston (1990) "Tying, foreclosure and exclusion," *American Economic Review*, 80: 837-859 contains a particularly thorough and rigorous analysis. Whinston (1990) demonstrates that 'tying' may, in certain circumstances, lead to the exclusion of an efficient competitor from the market, and result in a reduction in both consumer surplus and aggregate economic welfare.[25] As Whinston writes:

> *"The central concern in the leverage literature is that tying may be an effective (and profitable) means for a monopolist to affect market structure of the tied good market (i.e. monopolise it) by making continued operation unprofitable for the tied goods rival. ... Our results demonstrate that tying can make continued operation by a monopolist's tied market rival unprofitable, leading to the foreclosure of tied goods sales. ...Such a strategy can be a profitable one for a monopolist, often precisely because of this exclusionary effect on market structure."*

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22 In the jargon of economists, "bundling" means that commodities are made available only in packages; "mixed bundling" means that goods may be purchased as a package or separately, but at different prices depending upon which option is chosen. Whinston (1990) defines "tying" to cover both of these possibilities, viz. "a firm engages in tying when it makes the sale (or price) of one of its products conditional upon the purchaser also buying some other product from it."

23 BSkyB's retail customers must first purchase Sky's basic programming package before premium channels are made available. Thus BSkyB 'bundles' basic channels and basic and premium channels, and offers 'mixed bundles' of premium channels. In our example below we focus upon the latter.

24 Since we have no evidence on BSkyB's programming costs, we refrain from further comment on the predatory pricing issue raised above.

25 Under other circumstances exactly the opposite result may also be derived: viz. in equilibrium mixed bundling may exclude an inefficient competitor. Distinguishing the circumstances under which either one or the other of these outcomes may occur is not straightforward. See further below.

Whinston's analysis focuses upon the incentives of a monopolist to engage in tying for the purposes of influencing market structure and eliminating rivals in sales of the tied good, whilst ignoring other possible motivations. In particular in his models a monopolist in the 'tying' good market attempts to foreclose competition in the 'tied' good market by driving its 'tied' good rival's profits below the point where remaining in the market is profitable. The strategic incentive to foreclose sales in the tied good market occurs because once the monopolist has committed to offering only tied sales it can only reap its profits from its monopolised product by making a significant number of sales of the tied good.[26]

In an analysis which is complementary to Whinston's, Carbajo, de Meza and Séidman (1990) demonstrate that bundling may be strategically motivated even though it does not lead to the *exclusion* of a rival from the market. Like Whinston (1990), Carbajo et al. (1990) consider a model in which a monopolist in one market faces a competitor in a second market. In contrast to Whinston however they focus on cases where the rivals' entry or exit decisions are unaffected by bundling. They show that bundling may be profitable because it causes rivals to act less aggressively (i.e. it softens price competition in the tied good market). If Bertrand competition prevails in the tied good market, bundling is always profitable since in the absence of bundling prices in the tied good market are driven down to unit costs. Bundling however allows the monopolist to differentiate its product from that of its rival: in equilibrium consumers with high reservation prices for both goods purchase the bundle. The firms are therefore no longer such close competitors, and so both are able to raise prices above cost. The fact that the rival is induced to raise price is what makes bundling profitable.[27] As Carbejo et al. write: "*In contrast to previous explanations which rely on price discrimination, in the models developed here bundling is profitable because it induces oligopolistic rivals to compete less aggressively*."

Neither the analysis of Whinston nor of Carbajo et al. however provide clear guidance as to when foreclosure or softening of price competition motivations for bundling are likely to be of importance vis a vis other motivations, such as pure price discrimination. Here as elsewhere however, market concentration is the most important determinant of when and whether tying raises competition policy concerns.

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[26] Our example below demonstrates that the same effects carry over to mixed as opposed to pure bundling, although the mechanism is slightly different. Under mixed bundling the monopolist in the tying good is able to price discriminate in a manner which reduces the profits of its competitor in the tied good market. Since BSkyB engages in both pure and mixed bundling, the Whinston analysis applies directly.

[27] Carbajo et al. also consider the case of Cournot competition, and find that in this case bundling may be profitable. Once again, bundling induces a favourable response from the rival, though of a different kind. If by bundling its products the monopolist is able to commit to a higher output level in the duopoly market, market share is gained at the expense of the rival and, since price exceeds marginal cost, profits are shifted to the monopolist.

We have already seen that the position of BSkyB in the wholesale broadcasting market and the retail subscriber market means that both markets are already highly concentrated. Indeed in certain programming areas, such as premium sports and movies, BSkyB's position in the wholesale broadcasting market amounts to a near monopoly. In other areas entry barriers are presumably lower. These are precisely the sorts of conditions under which the modern 'leverage' theory would seem to raise significant concerns.

Because the foreclosure possibilities that Whinston (1990) and Carbajo et al. (1990) describe involve relatively complex economic modelling, we confine ourselves to illustrating them here in a simple example that suffices to make the main points. We provide immediately below an example of tying in the pay TV market in which:

(i) tying by a firm with a monopoly in one market results in the exclusion or foreclosure of an efficient competitor from the tied good market, and reduces consumer and aggregate welfare; or

(ii) tying by the monopolist forces the tied good competitor into a 'niche' market in which it serves only a single customer (at a high price), rather than two customers (at a lower price). Tying again reduces consumer surplus and aggregate welfare in equilibrium.

In the absence of competition in the 'tied' good market however, and hence the absence of a foreclosure motive, we also show that tying may be beneficial because it allows a monopolist to provide more products to consumers, thus increasing aggregate consumer surplus and profits. This follows the analysis of Chae (1992) which is discussed further below.

7.3.1 Example of tying in television broadcasting

The example considers two suppliers of 'premium subscription television channels': 'BSkyB' and an 'independent producer'. 'BSkyB' offers two channels, premium 'sports' S and 'movies' M. The independent producer offers a single competitive 'movie' channel I. Channels are produced at zero marginal cost per subscriber, but at a fixed production cost of X per channel. There are two consumers, A and B, whose willingness to pay for premium channels are given in Table 1 below.

Consumers are assumed willing to pay for *a maximum of two channels.* The willingness to pay for any two channels simply equals the sum of the willingness to pay for each of them.

Table 1: Consumer willingness to pay

Owner	**Channel**	**A**	**B**
'BSkyB'	S M	10 3	3 10
'Independent'	I	6	11
'BSkyB'	S+M	13	13

'BSkyB' + 'Independent'	I+S	16	14
	I+M	9	21
	I+S+M	16	21

Thus consumer A has a high willingness to pay for a premium sports channel, and prefers the independent's movie channel to BSkyB's. Consumer B prefers movies to sports and marginally prefers the independent movie channel over the BSkyB offering.

Two types of pricing behaviour are considered. In the first case, channels are priced independently, i.e. 'a la carte.' In the second case BSkyB engages in 'tying' or 'mixed bundling', i.e. it sells the first channel for a given price, and the second one at a lower marginal price, contingent upon purchase of the first channel. We assume throughout that BSkyB is the first-mover or 'Stackelberg leader' in the pricing game, and chooses prices which will maximise its profits, given that the independent's price will be a best response.

'A la Carte' Pricing

Under 'a la carte' pricing BSkyB sets prices for channels S and M independently, i.e. unconditionally. A useful property of the example is that, when prices are chosen in this way, BSkyB always has a dominant strategy: its profit maximising strategy does not depend upon the price chosen by the independent producer. To see this note that BSkyB would have to set price no higher than 3 for either of its channels in order to attract more than one consumer. However, this strategy results in less revenue than the alternative strategy of charging a high price and selling to a single consumer only. Hence, given that it is going to offer either of the two channels, BSkyB's dominant strategy is to set $P_S = P_M = 10$.

The independent producer then maximises its profits by setting $P_I = 6$ and selling to both consumers. Consequently, consumer A buys channel S from BSkyB and channel I from the independent producer; while consumer B purchases channels M and I.

In this unique equilibrium, BSkyB's profits are 20-2X and the independent producer's profits are 12-X. Consumer surplus - the difference between consumers' total willingness to pay and their actual payment - is 5, and total welfare, the sum of profits and consumer surplus, is 37-3X.

Tying or mixed bundling

Tying is represented by a price pair $\{P_1,P_2\}$ for BSkyB such that the consumer may purchase either one channel for price P_1 or both channels (i.e. the bundle) for price P_2.[28] For tying to be profitable BSkyB must be able to attract more consumers than it otherwise would under ‘a la carte’ pricing.

Let Z be the surplus a consumer obtains from buying the BSkyB bundle, as opposed to consuming only its most preferred channel. The independent producer can attract the low-willingness-to-pay consumer A only if $6\text{-}P_I > Z$, or $P_I < 6 - Z$.[29] Such a pricing strategy, which would in fact attract both consumers, would yield revenues no greater than 12-2Z. If instead the independent attempts to attract the high-willingness-to-pay consumer B only, it only needs to set $P_I <$ 11-Z, earning revenues of 11-Z. If Z > 1, that is 11-Z > 12-2Z, the most profitable strategy for the ‘independent’ producer is to sell to consumer B only, yielding a profit of at most 11-Z-X.

If BSkyB sets the price for a single channel at 10, and the price for the bundle of both channels S and M at 12, consumers obtain a surplus of 1 from buying exclusively from BSkyB. The independent producer’s best response to this price schedule is to set P_I at, or slightly below, 10 and sell to consumer B only. One can verify that this is in fact an equilibrium price pair. By offering consumers a surplus of 1 from buying the bundle, BSkyB can force the independent to offer the high price and serve only a single consumer.

In this equilibrium BSkyB sells the bundle of S and M to consumer A, and channel M to B, yielding profits of 22-2X. The independent sells to consumer B only and its profits are 10-X. Consumer surplus is 2, and total welfare is 34-3X. BSkyB’s profits are thus higher than under ‘a la carte’ pricing, while consumers and the independent producer are worse off. Consumer A is now taking channels S and M, even though his willingness to pay is higher for channels S+I. Consumer B is choosing the same two channels as before, but is paying a higher price.

If X > 9, BSkyB can in fact do even better. By reducing the price of the package to X+2 (yielding consumers a surplus of Z = 13 – X – 2 = 11 – X from the package), BSkyB forces the independent producer to charge less than X (= 11 – Z) in order to attract any demand at all. However, such a strategy is never profitable. Consequently, BSkyB will sell the package to both consumers while the independent producer chooses not to enter. BSkyB’s profits are 4 (= 2×[X+2]-2X); consumer surplus is 22-2X (=2×[13-X-2]); and total welfare is 26-2X. Compared to ‘a la carte’ pricing, both consumers now end up consuming an inferior product.

For X > 10, if the price of the BSkyB package is set at X+2, consumer surplus from consuming the package is Z = 11 – X < 1. Consequently, by the argument given above, the independent producer’s best response would be to target both

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[28] In general BSkyB would want to differentiate the prices for single channels according to demand. However, due to the assumed symmetry of consumer preferences, in the example BSkyB would not choose to do so.

[29] We assume that, since BSkyB is the first mover, indifferent consumers choose the BSkyB channels. This may be justified by arguing that BSkyB entered the market first, and there is an infinitesimally small ‘switching cost’ involved in changing suppliers. Nothing essential hangs on this issue.

consumers through a low price and earn revenues of 2X-10 (= 2×[6-Z]), which is sufficient to cover costs. If instead, BSkyB offers the package at 7+X/2 (implying that Z = 13-7-X/2 = 6-X/2), the independent producer can earn revenues of at most X (= 2×[6-Z]), and hence would not enter. Under this strategy BSkyB again sells the package to both consumers; its profits are 14-X (= 2×[7+X/2]-2X); consumer surplus is 12-X (= 2×[13-7-X/2]); and total welfare is 26-2X.

The (unique) foreclosure equilibrium outcome will be realised so long as 9 < X < 12. Consumer surplus and total welfare are always less under tying; in particular, when 10 < X < 12, the 'a la carte' pricing outcome in which only channel I is offered is preferred by consumers and is welfare superior to the tying outcome in which both S and M are available.

Table 2 below summarises the results from the analysis of the example.

Table 2

Equilibrium	X < 9		9 < X < 10		10 < X < 12	
Payoffs	a la carte	tying	a la carte	tying	a la carte	tying
BSkyB's Profits	20-2X	22-2X	20-2X	4	0	14-X
Independent's Profits	12-X	10-X	12-X	0*	12-X	0*
Consumer Surplus	5	2	5	22-2X	5	12-X
Total Welfare	37-3X	34-3X	37-3X	26-2X	17-X	26-2X

A * indicates where tied market foreclosure occurs.

Discussion of example

The case in which X < 9 is an example of 'partial' foreclosure. By tying its products, BSkyB reduces the attractiveness of a low-price strategy by the independent producer, and the independent producer is induced to a 'less aggressive' response by raising the price of channel I. As a consequence, channel I, for which there is a high willingness to pay across the market, is reduced to a 'niche' channel. This case therefore illustrates the analysis of Carbajo et al (1990).

The outcome in the case when X > 9 is closer to the spirit of the analysis of Winston (1990). This case demonstrates how, by bundling its products, BSkyB is able to foreclose the market to competition entirely. Note that this occurs even though channel I is uniformly more highly valued by consumers than channel M.

It is important to point out that the detrimental effect of tying on consumer and total welfare in these examples arises solely from the full or partial exclusion of the competitor in the tied good market. If BSkyB were instead a monopolist in both markets (i.e. for premium sport and movie channels), protected by high entry barriers, welfare would be improved by tying. To see this recall that under 'a la carte' pricing BSkyB offers both channels at a price of 10 and each consumer purchases only one channel. By offering S and M as bundle however, and setting the price of the bundle at 13, BSkyB could increase its profits from

20-2X to 26-2X. Consumption would also increase although consumers would not gain, since in either case all consumer surplus is extracted by the monopolist. Nevertheless, total welfare would increase.

The latter result illustrates the analysis in S. Chae (1992), "Bundling subscription TV channels – a case of natural bundling," *International Journal of Industrial Organization* 10: 213-230. Chae considers a model in which products are public goods (all costs are fixed) and there are cost complementarities (consumers pay a fixed set up cost but there are no additional costs of allowing consumers to take more channels). Tying here is a means of pure price discrimination, since the monopolist faces no competitors, and permits the monopolist to raise additional revenues. Since all costs are fixed, higher revenues means that the monopolist may find it profitable to introduce more channels, or extend availability to more consumers. Consequently, in this setting, restrictions on bundling always tend to reduce total, as well as consumer, welfare.[30]

As our example demonstrates, Chae's result does not generalise to an oligopoly setting. By engaging in tying, a firm with monopoly power in one market may increase its market share and reduce the profitability of its competitors in the tied good market. Consequently, while the monopolist's profits increase, both competitors and consumers may loose out. Tying can even lead to the foreclosure of superior products as illustrated in our example.

7.3.2 Concluding comment

It is possible to construct examples in which tying either reduces consumer and aggregate welfare by totally or partially foreclosing 'tied' good market competition, or improves efficiency by excluding an inefficient competitor. Distinguishing which of these cases, if either, is actually occurring in any given market is a complex matter, well beyond the scope of the current analysis. The broad market concentration criteria mentioned above may provide some guidance however, as to the circumstances under which tying deserves strict scrutiny by competition policy authorities.

Given this, and to prevent any possibility of misunderstanding, it seems wise to include a general caveat with respect to the above discussion. It is a well-known feature of modern industrial organisation theory that a wide variety of postulated phenomena of interest can be derived as equilibrium behaviour in a carefully-enough chosen model or example. This feature of game-theoretic modelling may be viewed as either a strength or a weakness, or both. On the one hand, it has led some economists to question the usefulness of such modelling exercises.[31] On the other hand the ability to model strategic interaction in imperfectly

[30] As is easily demonstrated, Chae's result does not carry over to other production technologies with less pronounced economies of scale and scope.

[31] F. Fisher (1989) "Games economist's play: a noncooperative view," *Rand Journal of Economics*, 20:113-124, and J. Sutton (1990) "Explaining everything, explaining nothing?: game-theoretic models industrial economics," *European Economic Review*, 34: 505-512. A useful discussion is P. Milgrom and J. Roberts (1987) "Informational asymmetries, strategic behaviour and industrial organisation," *American Economic Review*, 77: 186-190.

competitive markets has permitted the resolution of a number of important debates both in economic theory and in competition policy.

Most economists would now agree that it is important to demonstrate in a theoretical model that particular types of potentially anticompetitive economic behaviour - which have been the subject of long controversies (such as predatory pricing, tying and bundling, exclusive vertical contracts etc.) - can be the result of rational economic behaviour. Such demonstrations do not amount to a proof that this behaviour is occurring in any particular set of circumstance. However by choosing models carefully, guidance can hopefully be provided as to the industry and market conditions under which the phenomena may occur, and hence when they should be of concern to competition authorities.

Our discussion above of tying in the pay TV market falls squarely within this category. We have not attempted to model the pay TV industry in the UK, nor to analyse all of the strategic pricing options available to BSkyB or its competitors. We have, however, attempted to make broadly plausible assumptions concerning cost structures and consumer demands. Our examples therefore simply serve to illustrate the theoretical possibilities established in the more general models of Whinston (1990), Carbajo, De Meza and Seidman (1990) and Chae (1992), and we claim nothing more for them.

8. Conclusions

Vertical mergers between firms with market power in either the upstream or downstream market, or both, are now widely recognised as raising significant competition policy concerns. The modern economics of vertical mergers is well-described in the recent paper by two well known antitrust economists Michael Riordan and Steven Salop (1995) "Evaluating vertical mergers: the post-Chicago approach," *Antitrust Law Journal*, 63. They note that, "… some vertical mergers have the potential for anticompetitive effects by creating, enhancing or facilitating the exercise of market power." Like Bolton and Whinston (1995), Riordan and Salop emphasise that vertical mergers are of particular concern where one or both of the parties already holds a dominant position in their respective, vertically-linked markets. Where such competition policy concerns are raised they suggest that clear evidence of efficiency benefits must be presented to offset them.

In the markets of concern in this merger investigation, Manchester United clearly has market power in the upstream market for the sale of football rights. It is the largest and most profitable member of a cartel which sells the exclusive rights to its product under long term contracts to a single downstream producer. It is not possible to quantify the influence Manchester United exerts in the decisions taken by the FA Premier League, however it seems certain that this influence reflects it's position in premier league football.

BSkyB is a monopolist in the wholesale broadcasting of premier league football, and a near monopolist in the provision of premium sports (and movie) channels. It also holds a dominant position in the retail pay TV broadcasting market. By virtue of its vertical integration and exclusive contractual position, BSkyB's wholesale pricing structure effectively determines the profitability of its competitors' businesses in retail pay TV broadcasting. It has also been claimed that BSkyB has used it's wholesale and retail pricing structure to prevent the emergence of competition from other broadcasting producers, and we have argued in section 7.3 above that such a conclusion is not inconsistent with modern economic theory.

We contend that the key competition policy problem raised by the merger is that it will secure key Premier League broadcasting rights for BSkyB into the foreseeable future, and increase BSkyB's bargaining power in the market for football broadcasting rights, consequently entrenching its monopoly position in wholesale sports broadcasting. The economic analysis described above would appear to provide support for this conclusion. In particular the motive for vertical integration may be to side-step any prohibition of the exclusive contracting arrangements currently in place, or the voluntary abandonment of the Premier League selling arrangements. Vertical integration and exclusive contracting can, in certain circumstances, lead to the monopolisation of downstream markets and allow the extraction of upstream monopoly profits. We have suggested that the conditions in UK sports broadcasting are not dissimilar to those described in the modern vertical foreclosure literature.

There is also overwhelming empirical and theoretical evidence that a small ownership share in Premier League broadcasting rights will confer a large competitive advantage upon BSkyB in future rights auctions or selling processes, possibly discouraging participation by other buyers. Coupled with downstream pre-emption or foreclosure effects on bidding behaviour, we conclude that if collective selling is maintained, the merger will give BSkyB a significant advantage in any future rights bidding processes. If collective selling is not maintained, then BSkyB's position in the upstream market will also have been significantly strengthened relative to other non-vertically integrated competitors.

In light of the significant competition policy problems which already exist in UK sports broadcasting, and in the pay TV market, and the additional concerns raised by the merger, our view is that the merger should not be approved in the absence of substantial and verifiable efficiency benefits. We are dubious however that any efficiency gains will be sufficient to overcome the substantial competition policy problems raised. Since the key competition problem is upstream exclusivity in the sale of rights (and BSkyB's position as the holder of these exclusive rights), mitigating remedies may be available. For instance, the nonexclusive sale of Premier League broadcasting rights and/or limits on the extent of the exclusive rights held by any broadcaster (as recently introduced in Italy). Indeed, such remedies may be usefully considered even in the absence of vertical integration by BSkyB and Manchester United, in order to encourage the development of a more competitive sports broadcasting market.

9. References

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Annex A Strategic Toeholds: Examples and Empirical Evidence

Introduction

This annex provides an explanation of the winners' curse and a worked example illustrating the "toehold effect" that arises in common-value auctions with small asymmetries between the bidders. We also summarise some of the relevant empirical evidence which has been collected on toehold effects in various contexts. The evidence that toehold effects matter is now fairly overwhelming.

BSkyB's acquisition of Manchester United provides an archetypal example of such a toehold. Manchester United currently receives only about 6% of the revenues from the sale of the exclusive rights to televise Premier League football, but its take-over by BSkyB will magnify this ownership toehold into a significant strategic advantage for BSkyB in the next sale of exclusive rights in 2001.[1]

The Winner's Curse

In a common-value auction the object sold has the same value to each bidder, although different bidders may have different information about what that value is. Auctions for oil tracts fit this scenario quite well. The amount of oil in the ground is the same whoever buys the tract, but bidders will have received differing geological reports and so will differ in their estimates of how much oil there is.

The "winner's curse" is a much discussed phenomenon in ascending-price, common-value auctions. In the oil-tract example, the winner of the auction will have outbid his rivals because his geologists produced the most optimistic report. The fact of winning reveals this information to the winner. He then lowers his estimate of how much oil is likely to be present, because he now knows that the geologists employed by the losers must have produced more pessimistic reports.

The winner will only curse if he did not anticipate that this would happen if he won. A wise bidder knows that the levels at which rivals drop out of the auction reveals information about their geological reports. A surviving bidder should then add this information to the information he had before and so modify the bids he would otherwise have made. Since the information he acquires is always that bidders who drop out of the auction before him have received more pessimistic reports than his, he will always be induced to shade his bids downwards. If he shades his bids optimally, he will avoid the winner's curse altogether.

[1] Ownership of Arsenal would have a roughly similar effect.

This annex considers what happens to this argument when a small asymmetry is introduced, so that the object being auctioned no longer has the same value to each bidder. For example, after BSkyB acquires Manchester United, it will receive a small percentage of the revenue from the sale of football rights. It will therefore be prepared to pay a little more for the rights than a rival with the same information. However, this direct effect is multiplied when we consider how much each bidder should shade his bids to avoid the winner's curse.

The result is that a bidder with a toehold will fall out of the auction at a higher price than a bidder with the same information but no toehold. The actions of a bidder with a toehold are therefore less informative than the actions of a bidder without a toehold. To avoid the winner's curse, the bidders without a toehold therefore find it necessary to shade their bids more than they would if nobody had a toehold. This makes their bids more informative to the bidder with a toehold, who therefore shades his bids less. This makes his bids even less informative to the bidders without a toehold, who therefore find it necessary to shade their bids yet further. And so on. The same reasoning applies equally well when several bidders have toeholds of unequal size. What is then important is the *relative* sizes of the toeholds.

This annex concludes by summarising some of the empirical evidence on this effect.

Example: The Wallet Game

We illustrate the toehold effect with a worked example taken from a very accessible paper by Klemperer (1998). In Klemperer's “Wallet Game,” the auctioneer confiscates the wallets of two victims, Alice and Bob, who then take part in an ascending-price auction, the winner of which obtains the contents of both wallets. Alice knows that her wallet contains α pounds. Bob knows that his wallet contains β pounds. The two wallets together are therefore worth $\alpha+\beta$ to both Alice and Bob, but they have different information about how large $\alpha+\beta$ is likely to be.

This strictly common-value auction has a simple symmetric solution.[2] Alice stays in the auction until the price reaches 2α and Bob remains in until the price reaches 2β. Then, if Alice wins the auction when Bob drops out at price $P=2\beta$, she will have paid P for an object that she now knows is worth $\alpha+ P/2 = \alpha+\beta$. She gains thereby if and only if $\alpha+P/2 > P$, or $P < 2\alpha$. Since Alice won however, she now knows that $\alpha>\beta$, so $2\alpha>P$. She is therefore pleased to be the winner at any price below 2α, and sorry to be the winner at any price above 2α. In equilibrium the winner is always the player with the highest initial ‘signal’, i.e. Alice wins if and only if $\alpha>\beta$ and Bob wins if and only if $\beta>\alpha$.

Note that the players’ take account of the *winner’s curse* in this equilibrium. Given that the price has reached 2β, Bob knows that the expected value of the prize exceeds 2β, since Alice must have at least β in her wallet or she would

[2] In a symmetric equilibrium, Alice and Bob do the same thing if they have the same information. There are also asymmetric equilibria, which the text neglects.

have dropped out of the auction earlier. Yet Bob must still drop out at this price, because the expected value of α *conditional on Bob winning* is just P/2.

Now consider the effect of awarding a 'toehold' to Alice in the form of a bonus of £1 to her if she wins. The striking result is that Alice now *always* wins the auction no matter how much money Alice and Bob had in their wallets when they were confiscated by the auctioneer. To see this, consider how their behaviour will vary from the symmetric solution of the common-value case.

Alice will now bid as though she had α+1 pounds in her wallet. This magnifies Bob's *winner's curse*. Should Bob now win against Alice at any given price P, he will find that Alice's wallet contain one pound *less*. He will therefore now bid as though he had β-1 pounds in his wallet. This reduces Alice's *winner's curse*. Should Alice win against Bob at any given price P, she will therefore find the wallets contain one pound *more*. She will then bid as though she had α+2 pounds in her wallet, and so Bob will bid as though he had β-2 pounds in his wallet. And so on. Bob cannot rationally quit the auction before the price reaches β, since he knows for sure that the combined wallets contain at least this much. However, in the unique equilibrium of the Wallet Game in which Alice is awarded a £1 bonus, Bob drops out when the price goes beyond β. Alice stays in until Bob quits. Her small toehold therefore ensures that she always wins, paying β for a pair of wallets that are worth $\alpha+\beta$. Her £1 bonus is therefore magnified into an all-round gain of β by an ascending-price auction. Her gain of β is transferred from Bob if he would otherwise have won the auction, and from the auctioneer if Alice would otherwise have won the auction.

The Wallet Game with 'toeholds'

The Wallet Game is easily modified to examine the effects of share ownership or 'toeholds', i.e. where one player receives a share of the sale price P, rather than a fixed prize if they win. To see this we now let Alice receive a fraction θ of the price P at which the wallets are sold, whether she wins or loses. The result is again that Alice will always win the auction in equilibrium. The reason is that Alice now always an incentive to bid a little higher than she would have in the absence of a toehold, because by doing so she pushes up the price at which the wallets are sold, and hence her payoff when she loses. By bidding up the price by a small amount $\in$, Alice receives $\theta\in$ with probability close to one, but loses $(1\text{-}\theta)\in$ with probability close to zero. The former always exceeds the latter for $\in$ small enough, so Alice always bids a little more aggressively than she would have without the ownership stake.

The effect, as before, is to magnify Bob's winner's curse since he will find slightly less money in the wallets at any given winning price P, so Bob must quit earlier. This alleviates Alice's winner's curse so she can bid even more aggressively, etc. The result is that in equilibrium Bob's bid cannot exceed β and Alice always stays in the auction until Bob drops out.

Bulow, Huang and Klemperer (1998) have extended the above analysis to consider what happens when both players have 'toeholds'. They show that the player with larger toehold retains a substantial advantage, even when the toeholds are arbitrarily small, although she no longer always wins. To keep things simple, we continue to assume that Alice and Bob have the same kind of information that applies in the Wallet Game, but now both α and β are normalised so that their maximum value is one. It is assumed that both Alice and Bob now have positive toeholds, i.e. small shares in the ownership of the asset being sold. It turns out that there is a unique equilibrium, in which the odds of Alice or Bob are winning are in exact proportion to their ownership stakes.

To evaluate the toehold advantage to the bidder with the higher share in the ownership of the asset for sale, it is helpful to look at an example in which Alice owns 5% of the asset and Bob owns 1% of the asset. Overall, Alice is now five times more likely to win. Consider first the case in which α=2/3 and β=1/3, so that Alice would win if there were no toeholds, paying P=0.67 for an asset worth 1. With toeholds, , Alice will actually bid up to 1.54 and Bob to 0.45, so that Alice wins the auction, but pays only P=0.45 for an asset worth 1. In the second case we consider, α=1/3 and β=2/3, so that Bob would win if there were no toeholds, paying P=0.67 for an asset worth 1. With the specified ownership stakes, or toeholds, however, Alice will actually bid up to 1.21 and Bob to 0.88, so that Alice again wins the auction, but pays only P=0.88 for an asset worth 1.

Bidding with multiple toeholds

Following the analysis in Bulow, Huang and Klemperer (1998) we may extend the above example still further by calculating all of the equilibria for the Wallet Game in which the contents of the 'wallets' are sold via an ascending bid 'English' auction.[3] We assume two risk neutral bidders each owning shares θ_1 and θ_2 in the object being sold, with $0 \leq \theta_i \leq ½$, i=1,2. Each bidder has some private information concerning the value of the object, which is represented by a 'signal' denoted t_i, i = 1,2. Bidders' signals are assumed to be independent and uniformly distributed on [0,1]. This means that a signal t_i = 0.23 is more 'optimistic' than 23% of the possible signals bidder i might receive, and more 'pessimistic' than 77%.

The object is sold using a conventional ascending bid English auction in which the price starts at zero and rises continuously until one bidder drops out. When one bidder drops out the rights are acquired by the remaining bidder at the 'drop-out' price. A pure strategy for bidder i is a price b_i at which he or she will drop out if the other bidder has not already done so.

The equilibrium bid functions for players 1 and 2, given that the expected value of the object to each bidder is just the sum of the values of the private information, $v(t_1,t_2) = t_1 + t_2$, are given by:

3 Bulow, Huang and Klemperer (1998) discuss how the analysis changes when different auction forms are used (e.g. a sealed bid, first-price auction).

$$b_1(t_1) = 2 - \frac{1}{1+\theta_2}(1-t_1) - \frac{1}{1+\theta_1}(1-t_1)^{\theta_1/\theta_2}$$
$$b_2(t_2) = 2 - \frac{1}{1+\theta_1}(1-t_2) - \frac{1}{1+\theta_2}(1-t_2)^{\theta_2/\theta_1}$$

Given the equilibrium bid functions, the winning bidder, profits and expected sale prices as a function of the players' 'toeholds' (θ_1,θ_2), and 'information' (t_1,t_2), can be calculated. Bulow, Huang and Klemperer (1998) calculate bid functions and equilibria for all possible values of players' information (t_1,t_2) and characterise the properties of the equilibria for this bidding game. They show:

1. Player 1 wins the auction with probability $\frac{\theta_1}{\theta_1+\theta_2}$ so that the probability of winning increases in the size of player 1's toehold relative to player 2's. In particular a player with a zero share in the rights has a zero probability of winning for any size share held by the other player, no matter how small.
2. Increasing a bidder's toehold always makes him bid more aggressively, i.e. $\frac{\partial b_i(t_i)}{\partial \theta_i} > 0$ for all $t_i < 1$.
3. Increasing a bidder's share or toehold always increases his expected profits, for all values of his information signal.

In fact these properties of the equilibria continue to hold in much more general models in which the value of the object to the bidders is not simply the sum of the two signals.

Empirical relevance and evidence

As the preceding examples show, a small toehold acquired by one bidder can have the effect of making it inevitable that a bidder without a toehold will lose. If bidding is costly, a disadvantaged bidder may then choose not to enter the auction at all. Klemperer (1998) draws particular attention to the 1995 take-over of Wellcome by Glaxo for £9 billion, although Zeneca and Roche reportedly valued the business at £10 billion or more. But why should they have incurred bidding costs in the tens of millions if Glaxo's toehold made it very unlikely that either company would win a bidding war against Glaxo? Similar reasons would seem to explain the lack of any serious competition for the Los Angeles PCS licence won by Pacific Telephone in one of the big FCC auctions for radio spectrum.

Significant evidence that small toeholds effect outcomes in takeover bids has been collected by a number of authors. The most thorough analysis would appear to be that of Betton and Eckbo (1998) who have analysed data from 1353 tender offer contests between 1971 and 1990 in the United States. They find that:

- toeholds increase the likelihood of a single bidder contest; and

- bidders without a toehold are less likely to revise their bids upwards after the initial round of bidding.

Related empirical evidence is presented in Walkling (1985). We will not attempt to survey the empirical literature here, most of which has been published, however fairly extensive references are given below.

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Industry Structure, Rights Bargaining and Vertical Integration

Introduction

This annex provides an overall assessment of the current structure of the markets for Premier League football broadcasting, and the effect that the merger with Manchester United would have on the market power exercised by BSkyB within this structure. The analysis is painted with a very broad brush, but we see such a simplifying exercise as necessary if the essential market-power issues are not to be obscured by the mass of detail that inevitably accompanies merger investigations.

Many of the ideas presented here have been adapted from a paper on vertical integration by Hart and Tirole (1990), described briefly in Section 5 of our main report. However, we depart from Hart and Tirole (1990) insofar as we shift the focus of attention from the effects of a vertical merger on downstream competition, to its effect on upstream bargaining over the division of the monopoly rents acquired downstream. It is at this level that the purchase of Manchester United has the greatest potential to enhance BSkyB's market power.

In Section B.2 we provide a brief overview of the current industry structure. Section B.3 considers the strategic implications for the bilateral monopoly operated by BSkyB and the Premier League cartel of a merger between Manchester United and BSkyB, on the assumption that the cartel continues its practice of selling exclusive broadcasting rights. Sections B.4 and B.5 then discuss the strategic implications of the merger for the bargaining that takes place *within* the Premier League cartel about the terms of its relationship with its partner in the bilateral monopoly. Finally, in Section B.6, we consider the implications of the Premier League cartel breaking up. Section B.7 concludes.

Overview of industry structure

We assume throughout that the relevant markets for the consideration of a merger between BSkyB and Manchester United are those described in Section 2 of our report. That is, the market for the supply of sports broadcasting rights, the wholesale market for premium sports channels, and the retail pay TV sports broadcasting market. We further assume that Premier League football is a sufficiently important component of premium sports broadcasting to be treated as a separate submarket. The current industry can thus be thought of as having three layers:

- the *upstream layer* consisting of the production of football games;
- the *downstream wholesale layer* which sells television broadcasts to distributors; and
- the *downstream retail layer* which sells broadcasts to consumers.

The upstream layer consists of the Premier League football clubs, which are currently organised into a cartel. The cartel restricts the supply of games that can be screened to at most 60. It then sells the exclusive rights to these games to just one wholesaler, namely BSkyB. It is this selling of exclusive rights that creates a monopolised downstream industry.

Within this vertical structure BSkyB currently owns the *exclusive* rights to all Premier League football games available for screening. It is therefore the monopoly wholesaler of Premier League football broadcasts, and the near-monopoly producer of premium pay TV sports channels.

BSkyB is also vertically integrated into retail pay TV broadcasting via its ‘direct to home’ satellite business, where it also holds a dominant position. It nominally faces competition at the retail level in the screening of football games, notably from the cable operators. However BSkyB not only competes on price with its retail competitors, it also controls their costs through its wholesale pricing (i.e. the ratecard). To a first approximation therefore, its retail competitors can be seen as the independently owned ‘distribution arms’ of a vertically integrated downstream industry operated monopolistically by BSkyB.

Section 7 of our main report describes some of the anticompetitive practices which have been claimed to operate in the downstream markets. As in the analysis of Hart and Tirole (1990), in which exclusive vertical arrangements are used to foreclose downstream competition, BSkyB, through its setting of both *wholesale* and *retail* prices, is able to prevent the dissipation of monopoly rents which flow from exclusive access to football programming. It has also been claimed that BSkyB uses it’s pricing structure to prevent the emergence of competition from other broadcasting producers via ‘tying’, as predicted for example, by Whinston (1990).

Mechanisms like `tying', and monopolistic pricing in the `ratecard', which BSkyB uses to control competitors, are important in that they prevent the dissipation of monopoly rents via downstream competition at the wholesale and retail levels. However it is the relationship between the *upstream* and *downstream* levels which is most relevant to an assessment of the impact of the proposed merger with Manchester United. The relation between the wholesale and retail layers in the downstream industry impacts here only to the extent that it impinges upon the value of the broadcasting rights traded upstream. Restrictive practices such as tying may, and typically will, be used to ensure that something close to the full monopoly rents are realised downstream. However even if such restrictive practices were curbed in the downstream markets, major concerns with the merger would still remain

9.1 Upstream rights bargaining and bilateral monopoly

Our contention is that the current relationship between the Premier League cartel and BSkyB is best seen as a *bilateral monopoly*. The buyer and the seller in this bilateral monopoly have a joint interest in realising the downstream monopoly rent. This is achieved by limiting or restricting the degree of competition in the downstream wholesale and retail markets, either via market foreclosure as described in Hart and Tirole (1990) and Whinston (1990) for instance, or by ‘raising rivals costs’ so that they are unable to effectively compete away monopoly rents at the retail level.

Having maximised the size of cake theoretically available for division, the bilateral monopolists upstream are then faced with the bargaining problem of how to divide the monopoly rents between them. Economic theory has something to say about what factors in the economic environment are relevant to the manner in which the cake is divided, but the conclusions of the theory offer little more than what common sense would predict in this context. In particular, the fact that BSkyB's role as buyer in the bilateral monopoly is periodically contested (and will be contested again in 2001) is important, because it provides the Premier League with a potential *outside option*.

We should note that we offer no opinion here on the welfare implications of the existence of the Premier League cartel *at the upstream level*. It has been argued, for instance, that smaller Premier League clubs would be unable to survive without the subsidies they receive from the collective sale of football screening rights.[4] Whether or not this argument is valid, or even persuasive, is beyond the scope of our analysis, but such considerations might properly persuade a regulator to allow the Premier League cartel to continue collecting its share of the monopoly rent derived from the downstream sale of televised football. It would still be necessary, however, to treat the Premier League as a cartel in considering the implications of a merger between BSkyB and Manchester United. Since, as we will argue, the balance of bargaining power between BSkyB and the Premier League cartel will be shifted in favour of BSkyB by such a merger, any welfare benefits that derive from the survival of the Premier League cartel would be correspondingly reduced.

Bargaining over monopoly rents

Before considering the impact of a merger between BSkyB and Manchester United on the workings of the bilateral monopoly currently operated by BSkyB and the Premier League cartel, it will be useful to review the basic model that economists use to study bargaining problems.

When the bargaining involves only one buyer and one seller, the basic information required for an analysis is the amount of surplus available for division, and the payoff that each will receive if the bargainers fail to reach an agreement. The pair of disagreement payoffs is said to be the *status quo* for the problem. For example, in a house sale, the seller may value the house at £300,000 and the buyer at £500,000. The available surplus is then £200,000. The status quo arises when both sides make nothing from the prospective sale of the house.

In many cases, it is useful to think of the payoffs being bargained over as income *flows* rather than simple sums of money. For example, in a wage negotiation, a union and a firm bargain over the revenue flow that remains after

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[4] Ashurst Morris Crisp and Case Associates (1997) *The Economics of League Football.*

the subtraction of nonlabour costs. Confusion sometimes then arises over the location of the status quo, but the influential bargaining theory of Rubinstein (1982) makes it clear that the status quo belongs at the pair of income flows the bargainers would receive during a prolonged disagreement. It is important to recognise that these disagreement flows are usually vulnerable to *strategic manipulation*. A union may choose to strike, or use work-to-rule or some other less costly means of exerting pressure on the firm. Similarly management may build up stocks in advance of a strike to alter its payoff in the event of prolonged disagreement.

In addition to the *status quo* point, it is also vital to take account of the *outside options* of the two bargainers. A bargainer's outside option is the income flow he will receive if he abandons the negotiation altogether and takes up his next best opportunity. In the case of a wage negotiation, a worker's outside option may well be his weekly unemployment benefit. To study the impact of outside options in a bargaining problem, we first predict what each bargainer would get *if outside options were absent*. Introducing outside options makes no difference to this outcome unless the predicted outcome assigns one of the bargainers something less than his outside option. That bargainer then gets a little more than his outside option and the other bargainer gets the rest of the surplus (Binmore et al, 1989).

The 'three-player, two-cake' bargaining problem

The bargaining problem which arises from the sale of the exclusive rights to screen Premier League football is a little more complicated, because BSkyB had competitors in 1996, when the rights were last sold, and will potentially also have competitors in 2001, when the rights are to be sold again. If we simplify to the case when there is only one serious rival, we then arrive at what Binmore (1985) calls a 'three-player, two-cake' bargaining problem. The three players are the Premier League cartel, BSkyB and the rival bidder. The two 'cakes' are the respective flows of monopoly rents from the downstream monopoly if operated either by BSkyB or by its rival.

The *status quo flows* for this three player bargaining problem are then the incomes each party would receive if the sale of rights remained unresolved for an indefinite period. If there is no uncertainty, i.e. if the value of the rights to each bidder, the status quo point, and the outside options available to all of the parties are *common knowledge*,[5] bargaining theory makes the unsurprising prediction that the rights will be sold to whichever of BSkyB and its rival can put the larger cake on the table, i.e. to whomever is best placed to maximise the value of the rights in the downstream broadcasting markets.

If we assume for the moment that this is BSkyB, what price will be paid for the rights? This is a bilateral monopoly problem in which *the rival's maximum valuation of the rights serves as an outside option for the cartel*. Its solution depends on which of two cases apply. The two cases are distinguished by what

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[5] I.e. known to all bargainers, and known to be known, etc.

would happen if the Premier League cartel and BSkyB were to bargain in the absence of a rival bidder.

In the first case, the resolution of the two-person bargaining problem in which the Premier league and BSkyB bargain alone would assign the Premier League cartel *more* than the rival bidder's maximum valuation of the broadcasting rights being sold. The appearance of a rival bidder who converts the situation into a three-person problem then has no influence on the outcome, the deal between the Premier League cartel and BSkyB remaining unaltered. In the second case, the resolution of the two-person bargaining problem that would arise if the Premier League cartel and BSkyB bargained alone would assign the Premier League cartel *less* than the rival bidder's maximum valuation of the broadcasting rights being sold. Bargaining theory then predicts that the Premier League cartel will do a deal with BSkyB that assigns the cartel's outside option to the cartel. That is to say, the cartel should get the rival bidder's maximum valuation of the rights.

Past history suggests that it is the second case that applies. In brief, the rent that rival bidders would earn from running the downstream monopoly is not too small compared with the rent that BSkyB currently earns to make their existence irrelevant to the deal struck between BSkyB and the Premier League cartel. The Premier League cartel should then earn the equivalent of the flow of monopoly rents that would arise if the rival ran the downstream monopoly. BSkyB should earn the remainder of the flow of monopoly rents that arise when it runs the downstream monopoly.

The bargaining outcome just described is the same as would be expected if the Premier League cartel sold its broadcasting rights using an ascending-price auction. The price would rise until it reached the maximum valuation of the last surviving rival bidder, who would then drop out of the competition. BSkyB would then acquire the rights at the maximum valuation of its closest competitor for the rights. The fact that an auction for the rights was run in 1996 is therefore not inconsistent with our claim that we should regard the relationship between the Premier League cartel and BSkyB as a bilateral monopoly. The use of an *ascending-price* auction would merely confirm the outcome that would result from both partners exercising the bargaining power available to them within our simplified model.

A consequence of this analysis is that it would be a mistake to think of the rules of an auction organised by the Premier League cartel as a fixed institution that is robust to changes in the relative bargaining power of the cartel and BSkyB. As an example, consider the auction run in 1996. Because of the toehold considerations taken up in Section B.3.2, it would make a good deal of sense for the Premier League cartel to sell its broadcasting rights using a first-price, sealed-bid auction if it genuinely had the power to impose the rules of an auctioning institution on BSkyB (Klemperer, 1998). It is therefore not surprising to find that the auction actually used had the basic form of a first-price, sealed-bid auction. However, BSkyB evidently used its bargaining power to have the rules changed so that it was uniquely awarded the right to improve upon the bid of an opponent if this turned out to beat its own bid. BSkyB therefore achieved all of the advantages of an ascending-price auction for itself, while simultaneously denying them to its rivals.[6]

In brief, the fact that the institution used to sell football screening rights is formally an auction should not be allowed to distract attention from the fact that it is fundamentally the relative bargaining power within the bilateral monopoly operated by the Premier League cartel and BSkyB that determines the price at which the rights are sold. Attempts to regulate the selling institution that do not take into account all the many different ways in which bargaining power can be exercised outside the formal selling institution will therefore be in danger of addressing only a symptom, rather than the disease.

Manipulating outside options

In 1996 BSkyB managed to obtain a privileged position within the auction used to sell football screening rights. It thereby succeeded in lowering the *outside option* available to the Premier League cartel and hence improved its bargaining power within their bilateral monopoly. Regulatory intervention has prevented the same technique being employed in 2001. However, there are other ways in which BSkyB can lower the maximum amount that a rival would be prepared to bid in an auction without incurring excessive costs. Ideally it would like to deter its rivals from bidding at all, so that the cartel's outside option is reduced to zero.

As Annex A explains, one way of lowering the cartel’s outside option is to acquire a small stake or ‘toehold’ in the revenue derived from selling the Premier League rights (via the proposed merger between BSkyB and Manchester United). By obtaining a toehold, BSkyB may be able to deter rival bidders from entering whatever selling institution is employed, or to induce them to bid less aggressively within the institution.

The reason that BSkyB's merger with Manchester United would decrease the Premier League cartel's outside option in its bargaining with BSkyB is that some of the revenues that the bargain assigns to the cartel would be returned to BSkyB as Manchester United's share. This share amounts only to 5% -7% of the revenue, but as we explained in Annex A and in Section 6 of the report, such a `toehold' is ‘multiplied up’ in the context of an auction in which there is shared uncertainty concerning the value of the object being sold. BSkyB’s purchase of even a small share of the cartel's revenues therefore generates a potentially large reduction in the cartel's outside option, since rival bidders will drop out of a rights auction at a substantially lower price than before. BSkyB then benefits at the expense of both the Premier League cartel and its rivals for the wholesale rights.

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6 The fact that BSkyB’s did not need to exercise its privileged position in the 1996 auction does not affect this argument. The risk that its privilege created for its rivals forced them to bid lower than they would otherwise have done. On the other hand, BSkyB faced no similar risk in preparing its own bid.

In the above discussion we assumed that BSkyB was in the best position to exploit football broadcasting rights downstream, and hence that the only issue was the amount it would pay for these rights when faced with a rival bidder. However, the same considerations apply even if a rival were better placed to maximise the downstream monopoly rent. Whatever the downstream situation, BSkyB accomplishes two things by obtaining a toehold in the Premier League rights. By reducing the amount a rival is prepared to bid (through increasing its 'winners' curse'), it first makes it more likely that it will win the rights, even when its initial valuation is lower than a rival's. It simultaneously reduces the Premier League cartel's outside option, so that it obtains a larger share of the monopoly rents flowing from their exploitation

One response of rival bidders to the merger between BSkyB and Manchester United might be for potential rivals in the wholesale market to acquire Premier League clubs of their own. However Manchester United's strength within the Premier League cartel relative to practically any other team makes it unlikely that this could be profitable strategy, so long as the collective selling arrangements remain in place. As we noted in Section 6 and Annex A, a rival would have to acquire a significantly larger toehold than BSkyB in order reverse BSkyB's advantage after a merger.[7]

The ideal situation for BSkyB would arise if it could find a means whereby rival bidders could be neutralised altogether, so that the cartel's outside option would be reduced to zero. We would then be in the first case considered in Section B.3.1. BSkyB would therefore not thereby acquire the entire flow of monopoly rents resulting from the exploitation of the rights. The bargaining outcome would then be determined, as in a two-person bargaining problem, by the income flows that BSkyB and the cartel would receive during a prolonged disagreement, i.e. by their *status quo payoffs*. These payoffs were ignored in much of the preceding discussion where our focus was on the effects of a toehold on the sale of rights, and how this is likely to affect the Premier League cartel's *outside option* when bargaining with BSkyB. However they become critical when we consider the influence that BSkyB would acquire over decisions made within the Premier League cartel from its merger with Manchester United.

9.2 Manipulation of cartel decision-making

We have so far ignored in our discussion the opportunities for manipulating the decisions of the Premier League cartel that a merger between BSkyB and Manchester United would confer on BSkyB. We may examine this issue by regarding the decision-making of the cartel as *a multi-person bargaining problem* in which the bargainers are the Premier League clubs. While the Premier League cartel formally takes decisions according to a majority vote in which each team nominally counts equally, it would be naive to imagine that

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[7] In any case, once BSkyB has control of Manchester United, what is to prevent it from responding to a bid for Arsenal, Liverpool or some other strong club with a counterbid of its own. In such an ownership battle, BSkyB's ownership of Manchester United would confer on it all the toehold advantages that we have drawn attention to elsewhere.

the major clubs like Manchester United do not actually command a disproportionate amount of bargaining power. To see this, it is only necessary to ask what would happen if the major clubs were regularly outvoted. They would then have a strong incentive to break away from the cartel and sell the rights to their games independently of the minor clubs. The *status quo* in this multi-person bargaining problem (i.e. the payoffs each club would receive in the event of prolonged disagreement) therefore strongly favours the major clubs. Even if their threat to break away is not made explicit, its credibility must exert a strong disciplining effect on the way the minor clubs vote.

A merger between BSkyB and Manchester United will change the bargaining problem faced by the Premier League cartel when selling screening rights in two ways. It will change Manchester United's motivations, and it will shift the status quo of the multi-person bargaining problem faced by the Premier League cartel. Manchester United's motivations will be changed in that it will seek more favourable terms for BSkyB when it bids for screening rights.[8] As we noted earlier, it would be naive to think that the existence of a formal selling institution immunises the system from the possibility that BSkyB will be able to use its bargaining power within the cartel to exploit the small print of the institution so as to receive favoured treatment. In particular, we think it unrealistic that a regulator would be able to anticipate in advance all the ways in which BSkyB's bargaining power might be brought to bear

Credible threats and the status quo

In order to cash in the potential advantage that will accrue to BSkyB as a consequence of changing Manchester United's motivation when it bargains with the rest of the Premier League cartel, it is necessary that Manchester United have significant bargaining power within the cartel. Such bargaining power is brought to bear by refusing to agree unless or until one's demands are met. How credible is such a threat from a Manchester United controlled by BSkyB?

It would be a mistake to attempt to evaluate the credibility question by asking for the probability that Manchester United would permanently withdraw from the Premier League cartel and try to operate independently. So long as the cartel survives, the probability that Manchester United will withdraw from the cartel must be near zero, since BSkyB's current downstream monopoly depends on maintaining the exclusive rights to the cartel's output. It therefore has a very strong incentive not to cause the cartel to break up.

But this does not mean that the status quo for the cartel's bargaining problem is irrelevant. The *status quo* in a bargaining problem matters because it represents what *would* happen if there *were* disagreement - not because it is likely that a disagreement will actually occur. The bargainers actively seek to prevent a disagreement because of the losses they will suffer if disagreement occurs. The greater these losses are for some bargainers, the more they are willing to concede in order to avoid having to endure them.

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8 It is also presumably less likely to continue to join the other major clubs in the Premier League in seeing a need to subsidise less successful clubs

An additional reason for not evaluating Manchester United's bargaining power in terms of the probability of its splitting permanently from the Premier League cartel is that this is only the most extreme of the threat strategies that it has available. It is much more likely to delay a future agreement or to impede the successful operation of the current agreement, while simultaneously seeking to detach other clubs from the cartel. The latter manoeuvre in particular will threaten the weaker clubs who are currently being subsidised by the stronger clubs. While any such dispute is in train, both Manchester United and the other clubs in the cartel will lose revenue. These *reduced income flows during the dispute* determine the relevant *status quo* for their bargaining problem.

What matters to the shape of the final agreement is the *relative* size of these disagreement flows. Manchester United is already well placed in this regard: the value of its rights outside the cartel exceed those of practically any other club. The merger with a downstream broadcaster such as BSkyB, with football interests in other countries, will no doubt move the disparity in disagreement flows further in its direction. The final agreement reached by the cartel will therefore be correspondingly shifted towards BSkyB - to the disadvantage of both its potential rivals for the wholesale screening rights, and to the other Premier League clubs.

9.3 Informational advantages

Another potential advantage in the selling process which may accrue to BSkyB from its purchase of Manchester United is informational. An ability to obtain information concerning rival bids, and respond to it, can be a huge advantage in any auction or selling process.

The 1996 rights auction illustrates this point. Although nominally a sealed-bid auction, BSkyB's 'meet the competition' clause in its contract with the Premier League gave it the right to make a counter-offer if their original bid did not succeed. They were therefore immunised against the risk created by the need to guess at the bids its rivals would make in the auction. It turned out that BSkyB's bid exceeded the highest rival bid at the sealed-bid stage by a smallish margin, and so its privilege to bid again was not invoked. The point is however, that the existence of the 'meet the competition' clause had already influenced the bidding behaviour of both BSkyB and the rival bidders, in a manner which made it a near certainty that BSkyB would win the auction, and at a low price.[9]

The privileged position enjoyed by BSkyB in the 1996 auction was contractually explicit. However, a bidder in an auction does not need to be overtly favoured by the rules of the auction in order to enjoy an advantage over rival bidders. A major concern in the case of BSkyB's merger with Manchester United is the information that will become available to BSkyB, *but not to its potential rivals*, as a consequence of its participation in Premier League decisions. If BSkyB, for instance, becomes privy to information concerning the bids of its rivals, and is given an opportunity to rebid, the effect will be to

[9] This can be seen by asking the question, how much more would BSkyB have bid if it had not known that it could bid again?

precisely mimic the influence of a ‘meet the competition’ clause on the outcomes of the selling process.

Such an informational advantage can have similar effects as a ‘toehold’: it reduces the risk faced by BSkyB in the auction process and increases the risk faced by rival bidders. Such advantages, even when small, are ‘multiplied up’ into large potential advantages by the influence of uncertainty in the bidding process.

To see this, consider what would happen in the Wallet Game described in Annex A if Alice learned how much was in Bob's wallet before the auction began. Alice will then not stop bidding until the price reaches the combined value of the wallets. Bob can therefore only win by paying more than the wallets are worth. He cannot therefore win without suffering the winner's curse. There is therefore no point in his entering the auction at all if he knows that Alice knows his information as well as her own. An asymmetry in information can therefore be as distorting as a ‘toehold’ that takes a monetary form, or a contractual advantage such as a ‘meet the competition’ clause.

9.4 The cartel is broken up

Our last topic concerns what might follow if the collective sale of exclusive rights by the Premier League cartel were prohibited, or voluntarily abandoned. This possibility undoubtedly provides one motivation for BSkyB's proposed merger with Manchester United, and is also presumably the primary reason for NTL's intention to purchase Newcastle United.

It is necessary here to be careful not to compare how matters are *now* - with Manchester United and BSkyB unmerged and the cartel in operation - and how things *would be* if BSkyB merged with Manchester United *and* the cartel disappeared. The latter scenario obviously enhances the prospects for competition within the market for football broadcasting when compared with the former. The proper approach requires keeping the cartel situation fixed while comparing the effects of allowing a merger between BSkyB and Manchester United or forbidding the merger. The preceding sections do this for the case in which the cartel remains in place. This section attempts a similar comparison for the more problematic case when the cartel disappears.

In the absence of vertical mergers, a break up of the Premier League cartel would almost surely create greater competition for the broadcasting rights of individual teams, and would likely result in increased competition downstream in the market for televised football. This is because it would become more difficult for a single firm to monopolise all of the rights, and because a larger number of downstream firms would be willing to bid the relatively small amounts required for the rights of single clubs, as opposed to the rights for the entire Premier League.

This increased competition to secure a scarce upstream input would then potentially give rise to incentives for vertical merger for the reasons identified by Hart and Tirole (1990): namely, to ensure security of supply and to provide football clubs with appropriate incentives to supply rights exclusively, and thus prevent the dissipation of any monopoly rents downstream.

On the assumption that BSkyB had previously merged with Manchester United, it is therefore not hard to predict that this would be followed by a wave of vertical integration, since BSkyB's potential rivals in the downstream market will wish to secure their positions in the new market.

In Hart and Tirole's (1990) authoritative paper, downstream firms must bargain with upstream firms over the terms at which an essential upstream input - which is in limited supply - will be provided. They subsequently consider the conditions under which vertical integration by one upstream and one downstream firm may provide incentives for subsequent vertical integration by the remaining firms. If the Premier League clubs sell rights individually rather than collectively, competition to secure the rights of the leading teams may give rise to incentives to vertically integrate. Once the two industry leaders have integrated, i.e. BSkyB and Manchester United, further vertical mergers may follow in the type of 'bandwagon' effect identified in Hart and Tirole (1990).[10] Such 'chains' of vertical integration may be socially inefficient, although individually profit maximising for the firms.

The consequences of such chains of vertical mergers for both competition and efficiency are far from straightforward to evaluate.[11] However where such mergers are not motivated by productive or investment efficiency advantages, they are unlikely to improve consumer or producer welfare in aggregate.

There was a time when it was orthodox to follow the Chicago school of economics, which held that such vertical integration was harmless. The arguments supporting this view would still seem to hold when there is sufficient horizontal competition in both the upstream and downstream markets. However, as Hart and Tirole (1990) and others have shown, the same conclusion cannot be drawn when horizontal competition is (sufficiently) imperfect. It is not straightforward to predict to what extent the downstream market would be liberalised if the Premier League cartel were to cease selling exclusive rights to one buyer. However, it is clear enough that BSkyB's control of Manchester United would provide a major toehold advantage in bidding for the rights to screen games with other individual clubs. As mentioned in Section B.4, the same applies to bidding competitions for the ownership of other clubs.

If a merger between BSkyB and Manchester United were followed by the disappearance of the Premier League cartel, one would therefore presumably eventually see an industry that was effectively vertically integrated, and in which BSkyB's ownership of Manchester United had provided the leverage to

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[10] The planned acquisition of Newcastle United by the cable company NTL may well be an early example of this. If collective selling is maintained, the acquisition will yield few bargaining advantages for NTL, given that BSkyB will have a much larger stake in Premier League rights. If collective selling is abandoned however, then owning a stake in one of the smaller football clubs may be preferable to having no stake at all.

[11] Much will depend upon whether rights are held exclusively or whether the RTPC determines that such exclusive contracts are harmful to competition.

allow it to sustain a strongly dominant position in the market for televised football. Potential downstream rivals would doubtless have established footholds, and so the market would not be effectively monopolised as at present, but competition would be markedly less than one might reasonably expect if vertical integration were not a possibility.

9.5 Conclusions

If the Premier League cartel continues to operate, we believe that it is useful to view the relationship between BSkyB and the Premier League cartel, and the relationship between Manchester United and the rest of the Premier League clubs as bargaining problems. Our analysis of these bargaining problems suggests that BSkyB would gain substantially in bargaining power as a consequence of a merger with Manchester United, to the detriment of its potential rivals in the wholesale market for football screening rights and the football clubs other than Manchester United in the Premier and other leagues.

The situation if the Premier League cartel disappeared is more complex. However, a merger now between BSkyB and Manchester United would seem to guarantee that the resulting industry would effectively be vertically integrated, allowing BSkyB to dominate a very imperfectly competitive industry. Without vertical integration, some optimism about the prospects for effective competition seems appropriate.

9.6 Annex B References

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