Markets vs regulators and the battle to determine market structure: evidence from the UK cable industry

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Abstract

It is well known that it is difficult to dislodge incumbents if new entrants provide identical services via identical channels. Hence, it was expected that, especially in a broadband world, the main competition for fixed-wire networks would come from cable operators. The UK was one of the first countries in Europe to develop cable as a practical alternative to fixed-wire telephony, but in the event not only was the initial structure of the industry seriously flawed but the cost of creating cable networks proved to be a recipe for bankruptcy. However, once restructured post-bankruptcy, the remaining two cable operators may finally fulfil their destiny.

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Introduction

The so-called "triple play" (the provision of television, telephony and Internet access) via cable is gradually coming to pass in most advanced countries although so far it has passed a few by such as Italy. The cable industry has the somewhat unfortunate characteristic that a huge investment must be made up-front to dig up roads and lay cables before any subscribers can be connected and hence any revenue earned, so the industry's slow progress towards maturity is not unexpected. Nevertheless, one interesting issue this raises is the extent to which the speed at which the industry is developing is determined by the nature of the industry's structure in individual countries. This issue – the extent to which industry structures are determined by governments/regulators and/or financial markets – has attracted remarkably little attention, in part, one suspects, because it is a pragmatic rather than a theoretical issue, and this article will hopefully shed some light on the matter via a detailed study of the development of the cable industry in the UK.

Background

Because the reception for terrestrial TV in the UK was of high quality, and satellite dishes were being erected in their millions, the UK never looked like particularly fertile ground for cable TV. The 1990 broadcasting act rewrote the licence for cable TV (known as "local delivery") operators (WOAC, 1995, p. 20)[1]. Within Europe, only the UK and Sweden permitted cable companies to offer telephony prior to 1997, a move eventually copied in the USA under the terms of the 1996 Telecommunications Act. Altogether, there were originally some 165 cable franchises covering 95 per cent of the UK. At the end of 1996, there were 130 cable franchises grouped together under the management of 15 multiple systems operators (MSOs), down from an original 17. The then nine largest MSOs were all predominantly North American owned – Nynex and Bell Cablemedia, for example, both owned 18 franchises although the company with the largest overall equity stake was Telewest. There had been a significant turnover in franchises, with only a handful remaining in the hands of the original franchisee. The main historic problem was the difficulty of raising finance, although that had been addressed with some success. Total investment exceeded $8 billion, roughly one half of the total anticipated cost, the major part of which had been spent on the network of ducting.

By January 1998, the number of homes passed by cable was 10.1 million at which point only 22 per cent of households were subscribers, much

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the same proportion as in 1993. At heart, the problem for cable was simple: inducing people to sign on in the first place was fairly easy whereas holding on to them was much more difficult. Churn rates for cable TV remained very high, frequently between 40 and 50 per cent a year although most service customers retained cable telephony even if they gave up cable TV. The high churn rates meant that penetration levels remained far more static than the sharp increase in new subscribers tended to suggest, which was why it was thought to be unlikely that any cable companies would become profitable before 1997. An additional factor was that BT was authorised to compete fully in 2001 by sending live entertainment down its wires, and this was expected to erode the profitability of cable companies in the longer term. Nevertheless, the interest shown in Videotron by International Carriers, and the purchase of NTL by International CableTel[2] in Spring 1996, indicated that direct access to the residential consumer in order to market multimedia services had become an increasingly attractive proposition.

Consolidation

Access to the local loop had always been fundamentally important. An awkward problem for cable operators was that they were originally obliged to represent themselves as local rather than national operators that inevitably made many potential customers suspicious of their ability to deliver a quality service. This problem could partly be addressed via a process of takeover/merger, and this progressed steadily through 1995 and 1996. In October 1996, the industry was radically shaken up when C&W forged a link with Nynex CableComms, Bell Cablemedia and Videotron, the then second, third and seventh largest companies, in a complex deal which created C&W Communications (CWC). Significant elements of the deal were that C&W took a 32.5 per cent stake in Bell Cablemedia which used the proceeds to help pay for the agreed takeover of Videotron. The structure of CWC was initially dominated by C&W (52.6 per cent), Bell Atlantic (18.5 per cent) and BCE of Canada (14.2 per cent), with roughly 12.5 per cent floated on the stock market. The European Commission cleared the merger in December 1996 (Common Market Law Reports, 1997). BCE sold its stake to institutional investors in June 1998, and, in August, Bell Atlantic issued an exchangeable bond permitting the buyers the option to acquire its CWC stake in August 2002.

In the short term, CWC was heavily dependent upon telephony for its revenue. However, it opened negotiations to provide interactive services for its subscribers. It eventually decided to forgo the use of telephone lines and signed up with Network Computer (NCI) to provide a 200-channel service using its cables, with a national service intended to come on stream early in 1999, thereby permitting Internet access at between 20 and 100 times the speed of existing modems. The biggest loser looked initially to be Telewest, which had started the process of consolidation when it took over SBS CableComms, the then fifth-largest company, in 1995. With multiple ownership, high churn rates and a share price significantly lower than at its 1994 flotation, its future path was uncertain, and it was clearly in need of a partner if it was not to lose ground to CWC. Other relatively large operators included International CableTel, which paid $360 million in March 1996 to acquire NTL, the former transmission arm of the Independent Broadcasting Authority, thereby becoming a national operator (trading as NTL) at a stroke.

The expanded NTL suggested in 1997 that the remaining companies, other than CWC, should join together, but this suggestion was spurned. Its own response was to make an agreed all-paper offer of $580 million for Comcast UK Cable in March 1998, leaving only eight providers. In the meantime, Telewest's strategy was to pin its hopes on its combined telecommunications and television package called Teleplus, and to institute talks with Flextech to supply programmes for a separate channel in order to reduce its reliance on satellite operator BSkyB. However, put under pressure by an all-paper bid for General Cable by NTL, its response was to make its own bid at a total cost of $1.05 billion. This was immediately accepted by General Cable's largest shareholder and completed at the beginning of September.

In June, NTL responded with a bid for both ComTel and Diamond Cable. After absorbing ComTel (at a cost of $550 million), and Diamond Cable (at a cost of $630 million plus the assumption of $830 million of debt), NTL was left as one of the now three remaining companies of any size – CWC, Telewest and NTL. This left outstanding the issue of which operator was to end up with the north London franchise, Cable London, jointly held by Telewest and Comcast (now NTL), which was resolved when Telewest paid $690 million, financing the purchase with a one for 11 rights offer.

NTL's double bid was nevertheless unlikely to be the end of the story, and CWC duly approached Vivendi Universal and SBC Communications, minority shareholders in Telewest, with a view to forming closer links. However, it could not buy their stakes until the biggest shareholders in Telewest had exercised their right of first refusal. In

September 1998, MediaOne of the USA duly paid $405 million to acquire an 8.4 per cent stake in Telewest from SBC, leaving the latter with 1.3 per cent while thereby raising its own holding to 29.9 per cent. In December, Vivendi sold its 6.5 per cent stake, in this case to institutional investors.

Early in 1999, Telewest opened exploratory talks with C&W with a view to buying parts of CWC. In the US, Microsoft was in the process of forming a relationship with AT&T, which was itself acquiring MediaOne as well as forming a joint venture with BT in the UK. In order to avoid conflicts of interest and regulatory problems arising from these developments, Microsoft was offered MediaOne's stake in Telewest in May 1999, paying with its own stock worth roughly $2.5 billion, and was expected to support a link between Telewest and CWC, although, interestingly, Microsoft already held a 5 per cent stake in NTL. Once it acquired the stake, Microsoft and Liberty Media would be in a position to exercise joint control over Telewest, and although they were both US-based, the matter technically fell foul of the European Union's merger control directive.

However, in July 1999, C&W confirmed that it had also entered negotiations with NTL and France Télécom with a view to selling to them the residential cable interests of CWC (CWC Consumer Co.), representing roughly three quarters of its value, for $12.5 billion, while retaining the old Mercury long-distance network (CWC Data Co.). NTL's decision to pursue a joint approach with the French operator reflected the fact that it was loaded down with debt and C&W wanted to be paid partly in cash. France Télécom agreed to buy a 10 per cent stake in NTL at a cost of $1 billion, consisting of $250 million in equity and $750 million in convertible bonds.

At this point in time the three surviving cable companies were roughly equal in size, so the issue was ultimately whether there would be one further merger, leaving a duopoly, or two, leaving a single operator. This was resolved via a complex deal, announced on the 26 July 1999, which had three components. The first consisted of an offer by C&W for the 47 per cent of CWC not already in its ownership at a cost of just under $10 billion. The second consisted of an offer by NTL for CWC Consumer Co. in the form of 85 million new NTL shares, $4.5 billion (£2.85 billion) in cash and $3 billion (£1.9 billion) in assumed debt[3]. The third consisted of a cash injection of $5.5 billion (£3.5 billion) into NTL by France Télécom in return for a 25 per cent stake in the enlarged company as a replacement for its previous proposal. It would be allowed to increase that stake to a maximum of 34 per cent after 2002, while NTL would not permit any other single shareholder to acquire a stake in excess of 15 per cent without France Télécom's agreement.

To everyone's surprise, the Secretary of State decided in November 1999 to refer the takeover on the grounds that there would only be two operators left in the market. This was odd, to put it mildly, since each area was permitted only one provider irrespective of how many there were nationally (*The Economist*, 1999). Hence, no one was surprised when the Competition Commission gave the takeover a clean bill of health in March 2000, imposing no conditions whatsoever. A separate decision on the France Télécom investment was made by the secretary of state and the director general of fair trading under section 75G of the Fair Trading Act and was allowed to proceed on 10 May 2000 subject to an undertaking for the divestment of Crown Castle UK by the French carrier. This decision also provided final clearance for the takeover and CWC duly de-listed with its assets being rolled up into a new holding company, NTL Incorporated[4].

The broadband battleground

CWC was not alone in seeking to broadcast digital cable services. In October 1997, a consortium consisting of Diamond Cable, General Cable, NTL and Telewest had formed a company named On Demand Management to negotiate deals directly with Hollywood film studios, thereby bypassing BSkyB. With digital cable set to be launched in the autumn of 1998, the company (under revised ownership and trading as Front Row) offered a 50-channel near-video-on-demand (VoD) service. BT, despite widespread belief to the contrary, had always been permitted to bid for cable franchises, and hence to provide entertainment services in a franchised area. Indeed, it had once owned a number that it had sold off (with the exception of the City of Westminster) before acquiring the Milton Keynes franchise in 1996. Given that its ducts already existed, it had some cause to regret that it had chosen not to bid for other franchises on the grounds that it would prefer to develop its own national network. However, responding to the European Commission's desire to see telcos dispose of their cable interests, and desirous of facilitating acceptance of its participation in the British Interactive Broadcasting (BiB) consortium, BT agreed in May 1998 to sell its two remaining franchises to NTL. It also announced that it would concentrate on its Internet activities rather than compete with cable companies in the provision of entertainment. This coincided, interestingly, with

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an announcement by NTL that it would shortly be offering a national voice telephony service with cut-price Internet access and, for those wanting it, digital terrestrial TV – the trigger for Microsoft's stake in NTL.

The battle for customers in the digital era began to hot up significantly in September 1998 when CWC offered to provide subscribers with a combined telephone and TV service for a base price of £11 a month, set at little more than the BT line rental alone. In addition, customers were offered various other additional packages at extra cost, as well as a free upgrade to digital when it was launched in 1999. NTL's response was a £16 a month TV plus Internet service in conjunction with Virgin Net, combining Internet access, e-mail and telephony delivered via a rented set-top box as well as an upgrade to digital. CWC announced that it would be launching its digital service at the beginning of July 1999, and that high-speed modems would become available the following year. The eventual intention was to provide 130 digital channels. In turn, Telewest announced that 200 digital channels would come on stream in December 1999, with 50 dedicated to near-VoD. Full VoD would follow a year or so later.

Meanwhile, in September 1999, NTL, acting in co-operation with Front Row, announced the launch of the first commercial VoD service in early 2000. NTL, subsequently decided to take the ultimate step and offer a free and unlimited Internet access service called NTLworld from mid-April 2000. Customers would be required to sign up with NTL for their voice telephony and spend at least £10 a month on voice calls. NTL argued that it would not lose money on the deal since it could offer subscribers other services such as digital TV and earn considerable revenues from advertising and e-commerce. However, this proved to be something of an indulgence so, in January 2002, NTL launched two new dial-up packages: "Pay as you go", a metered service at 1p per minute; and "Unlimited", an unmetered service at £10 per month. The broadband service was offered at a variety of speeds – (up to) 128 Kbps (currently on offer at £14.99 a month), 512 Kbps (currently £24.99 a month) – both prices including cable modem rental – and 1 Mbps (currently £49.99 a month). The comparable ADSL services provided along telephone wires by Freeserve and BTopenworld at 512 Kbps are currently £29.99 a month[5].

NTL after the takeover

Starting from this point in the proceedings it is helpful to examine the two surviving cable operators separately. By the end of 2000, in addition to its activities in the UK and Switzerland (Cablecom), NTL also owned Cablelink, a cable operator in the Republic of Ireland; a cable operator in France (IG Networks) formerly owned by France Télécom plus the latter's 27 per cent stake in Noos which had been amalgamated and since renamed NTL France; the national broadcast transmission system in Australia, renamed NTL Australia (subsequently sold to Macquarie Bank for $448 million in cash); 50 per cent of eKabel Investco which in turn owned 65 per cent of iesy Holdings, the Hessen cable network in Germany. To these was added in September 2001 a 35 per cent stake in Bredbandsbolaget (B2) in Sweden[6].

Immediately following final clearance for the takeover of CWC Consumer Co, NTL launched its bundled telephony, TV and Internet package, NTL Digital Plus, priced at £13 a month across its franchises which now covered 50 per cent of the UK population. It was late into the market given that BSkyB had introduced its Sky Digital service and ONdigital its digital terrestrial television package 18 months previously. However, NTL argued that its interactive services, delivered free via NTLworld, to PCs and TVs were superior.

NTL's strategy for 2001 was essentially one of bedding down the above acquisitions and cutting costs. Since the major part of network roll-out was completed, capital expenditure was set to fall and CFO John Gregg forecast that NTL would be cash flow positive by the end of 2003. Meanwhile, it was fully funded and had no intention of proceeding with a merger with Telewest (Ward, 2001a). GE Capital was quoted as saying that it viewed NTL:

> As one of the best-positioned European broadband cable operators based on its strong management team, demonstrated record of execution and the quality of its geographic footprint (Larsen, 2001).

Yet on the very same day another newspaper report quoted a research note by HSBC claiming that NTL was top of the list of loss-making cable and telecommunications operators and was about to run out of cash although it was in no immediate danger of going bankrupt. It also cited Telewest as "non-viable", ascribing both companies' difficulties to high losses, huge debt burdens (£9 billion ($14 billion) in the case of NTL) and unstoppable spending plans.

Clearly, there was a fundamental conflict of opinion about NTL's prospects (Ward, 2001b). However, the huge debt continued to worry analysts who took the view that although NTL was performing well, it had no margin for error. Nevertheless, investors were cheered by positive second quarter figures and the share price, which had fallen by one third during the previous three days, surged by nearly 40 per cent to $7.30 on 19 July – albeit still a long was short of the $136 reached in January 2000. As Lex (2001) commented:

> The UK cable industry has pulled back from the brink of disaster.

But for how long?

In August, NTL and Telewest revealed that they were moving towards an operational merger via collaboration over purchasing, sharing customers, convergence of products and a joint national retail effort. However, NTL's plans to build digital set-top boxes with Microsoft were shelved as was the TV Internet service which was intended to extend NTL's reach beyond its franchises. In addition, NTL's bonds, already rated as "junk" by both Moody's and Standard & Poor's, were expected to suffer a further downgrade – which duly came in mid-December. To ease the debt situation and reduce interest charges running at $4 million per day, NTL put its Broadcast division on the block, hoping to raise $2 billion. By the end of September three bidders had emerged, among them France Télécom which by then was the largest single shareholder in NTL. Subsequently, NTL was forced to admit that most of the improvement in cash flow for 2002 would come either from job cuts (there were 23,000 employees in October 2000) and price increases. In an interesting insight into NTL's self-perception (some might say self-delusion) it extended the term of employee share options convertible at $64.39 and issued new ones at $44.50 at a time when the market price was $4.60.

On 10 December 2001, the share price fell below $1. Plans to reduce the workforce to 13,000 by the end of 2002 engendered a negative reaction as analysts, noting that the churn rate already stood at over 20 per cent, wondered how service levels could be maintained. They were also perturbed that the sale of NTL Broadcast was to be postponed as the best offer of under $1.5 billion was unacceptable. But the critical issue appeared to that certain covenants attached to secured bank loans were based on the achievement of earnings targets that might well not be achieved during 2002. Even if NTL Broadcast was to be sold, the secured lenders would get the cash ahead of NTL itself, and $570 million of the remaining facilities of $1.3 billion had been eaten up during 2001 Q3 alone. At 25 cents in the dollar, unsecured bonds were pricing in near-certainty of default. As Lex commented on 16 December, "the game may soon be up for NTL", now worth a mere $200 million.

During early 2002 various options were considered to refinance NTL, but at the end of the day no enthusiasm could be detected among potential "white knights" (the favourite was Liberty Media, which owned 24.6 per cent of Telewest and had recently taken control of UPC in The Netherlands, but it finally pulled out in early April) and a debt-for-equity swap now seemed to be the best, and probably the only, way forward. The severity of the situation is clearly seen in the figures for 2001 in Table I that reveal asset impairments of over $8 billion and an operating loss of $10.4 billion. Losses per ordinary share of $234.4 can only be described as impressive by any standard.

In mid-April, NTL published a draft restructuring plan whereby holders of debt in NTL's UK and Ireland arm, split off from the rest of the company, would swap part of their debts for 100 per cent of its equity while putting up $500 million in new working capital. Other unsecured bondholders would get 86.5 per cent of the equity in the European assets (Euroco) less the stake in Noos to be reclaimed by France Télécom. Ordinary shareholders would get 10 per cent of Euroco, plus warrants giving them 9 per cent of any upside in NTL UK & Ireland provided its market value rose above $10.5 billion. Preferred shareholders would get the rest of Euroco with the exception of France Télécom which would get a larger quantity of warrants in return for its preference shares, but even if they could eventually be sold for $1.8 billion the company would end up showing a $6 billion write-off on its books. It and other existing common and preferred shareholders would at a later stage be offered the chance to buy shares in NTL UK & Ireland equivalent to roughly 32.5 per cent of the restructured company's equity. The banks would not need to take a hit initially, but would be left with $2 billion of non-recourse loans to Cablecom. In the opinion of Lex (2002), Euroco was simply an unviable "rag-bag of cash-draining assets" and had been sacrificed in order to save NTL UK & Ireland which could – with $10.6 billion of debt written off in total, just about support $5.8 billion of debt post-restructuring[7]. Other commentators noted that none of the above addressed the operational difficulties whereby complaints had been flooding in over the past year ranging from lengthy installation delays to poor signal reception and lack of availability of programmes.

On 20 April, NTL and its bondholders rejected an offer by Liberty Media of $500 million in cash for the whole of Cablecom plus consent to buy enough bonds to secure 30 per cent of NTL UK & Ireland. This followed rejection of a $2 billion restructuring plan tabled by Liberty Media earlier in the month. In both cases the rejection reflected the view that Liberty Media was trying to get the assets on the cheap. Eventually, on 2 May, the debt-for-equity swap was agreed. The damage to shareholders did not seem to be so harsh for CEO

Table I NTL financial results for the year ended 31 December 2001 and 2002 ($million)

	2002[a] ($)	2001 ($)
Total revenues	3,265.1	3,189.6
Of which: consumer telecommunications and television (home)	2,074.1	2,069.2
business telecommunications (business)	880.1	836.8
broadcast transmission and other (broadcast)	310.9	283.6
Total expenses	2,272.3	2,537.5
Of which: operating	1,502.5	1,564.3
selling, general and administrative	769.8	973.2
ebitda	992.8	652.1
Asset impairments	445.1[b]	8,160.6[c]
Non-cash compensation	–	30.6
Other charges	389.2	297.9
Corporate expenses	18.7	24.3
Depreciation and amortization	1,541.6	2,540.3
Operating (loss)	1,401.8	10,401.6
Other income (expenses)	999.7	1,317.3
Of which: interest expense	780.2	1,240.8
recapitalization items, net	151.8	–
(Loss) pre-tax	2,401.5	11,718.9
Income tax benefit (expense)	25.7	118.1
Net (loss)	2,375.8	11,837.0
Pro Forma net income (loss) per common share ($)	47.05	234.4
Average number of shares outstanding (million)	50.50	50.5

Notes: These results apply to the new NTL Incorporated (NTL UK and Ireland). The new NTL Europe reported separately, and its results were also published in an amendment to Form 10-K. [a]Because the company's restructuring was not completed until 10 January 2003, it was required to prepare its financial statements for the year ending 31 December 2002 on a basis that reflected its results as though it had not emerged from chapter 11. A number of schedules are included in the source below that highlights the effects of the restructuring as if it had happened on 31 December 2002. [b]Comprising fixed assets ($56 million), licence acquisition costs ($29 million) and goodwill ($360.1 million). $434.5 million was attributable to the Home division. [c]Comprising mainly licence acquisition costs ($58.8 million) and goodwill ($8,077.8 million). $6,048.1 was attributable to the Home division and $2,113.0 million to the Business division

Sources: www.ntl.com filings and press release of 31 March 2003, p. 15

Barclay Knapp and CFO John Gregg who remained in post (in the former case, the creditors' committee reconfirmed his position in June[8]) nor for any other executives left in post all of whom would be given share options notionally worth up to 10 per cent of the shares in NTL UK & Ireland.

On 8 May 2002, NTL Communications Corp., NTL Incorporated and certain subsidiaries filed the pre-arranged joint reorganisation plan (the plan) under chapter 11 of the US Bankruptcy Code. The UK operating subsidiaries, Diamond and Triangle, were not included. In accordance with the plan, NTL Incorporated and its subsidiaries and affiliates would be split into two separate groups, with two independent public companies emerging under the names of NTL Incorporated, which would inherit the principal assets in the UK and Ireland, and NTL Europe which would inherit the continental European and certain other assets. All of the outstanding securities of the former NTL Europe and certain former subsidiaries including NTL Communications would be cancelled. NTL Incorporated would then issue shares of common stock and Series A warrants and NTL Europe would issue shares of its common stock and preferred stock to various former creditors and stockholders of the NTL Group.

Post publication of the plan, NTL acquired the defunct ITV Digital's customers list, developed an electronic programming guide, signed a deal with Pace Micro to offer a new generation of set-top boxes and announced the expansion of the number of digital channels to 150, the same as BSkyB. It claimed that the fault rate had been reduced from 25 per cent in late 2000 to 3.5 per cent. However, it was revealed that it had lost, net, 73,400 UK customers in the three months to 31 March. After taking account of disconnections and non-paying Internet customers, its total UK subscriber base had fallen from 4.2 million to 3.5 million. Nevertheless the financial situation was overall much improved (Grande, 2002b). Cablecom was subsequently put up for sale and NTL opened its broadband network to rival ISP Freeserve although it would earn only network use fees with Freeserve keeping access fees paid by NTL customers. In mid-May, NTL claimed to have

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200,000 broadband customers of whom two-thirds paid the £24.99 monthly fee for the bundled 512 Kbps service (see above). This number subsequently rose to 500,000 by mid-December although total subscriptions continued to fall.

On 5 September, the US Bankruptcy Court approved the restructuring plan and NTL was expected to emerge from bankruptcy protection in October. However, this was postponed due to ongoing negotiations over the fine print of the restructuring plan, particularly the cash injection of $500 million that was finally agreed on 1 January 2003. The cash was to be provided in return for issuing bonds falling due in 2010 and carrying a staggeringly high interest rate of 19 per cent compared to a typical junk bond yield of 7 per cent. Analysts tended to view this as a sign of desperation. On 10 January 2003, NTL finally emerged from chapter 11 reorganisation.

In March 2003, James Mooney was appointed non-executive chairman, one of six non-executives in addition to president and CEO Barclay Knapp on the board of directors. At the same time, Scott Schubert was appointed as CFO and Simon Duffy as COO. As part of the press release of 31 March 2003, Mr Knapp noted that NTL had maintained total revenues in 2002 while sharply reducing capital expenditure. Coupled with cost-cutting and efficiency programmes, this had led to higher ebitda and operating cash flow (see Table I). The same themes would dominate operations during 2003. The re-capitalisation process and generally hostile climate for telecommunications providers had adversely affected the NTL business in particular resulting in the appointment of a new managing director, Tom Bennie. NTL Broadcast had suffered from the shutdown of ITV Digital but digital radio had done well and the division now owned and managed 2,228 towers. The home division had increased gross subscriber additions driven by industry-leading broadband offers and a return to the power of NTL's dual and triple play bundles. It ended the year with 2.7 million on-net customers and 91,000 off-net customers (see Table II). Triple-play customers numbered 373,000, some 14 per cent of the customer base.

In July 2003, NTL took advantage of the fact that its share price had risen sharply to propose that shareholders subscribe to $1.05 billion of new shares. The money to be raised would be used partly to retire $583 million of seven-year bonds carrying a 20 per cent rate of interest. William Huff would be permitted to raise his stake of 13 per cent to a maximum of 19.9 per cent and Franklin Mutual Advisers from 8 per cent to a maximum of 15.8 per cent. However, this news was overshadowed by the announcement in August that Barclay Knapp would stand down as CEO in favour of Simon Duffy. Mr Knapp was doubtless happy to exit with a $2.1 million pay-off, share options and a well-paid consultancy contract. As for NTL, things looked much better in the second quarter, mainly because of much reduced interest costs. Although its net debt still stood at $6 billion, the value of the company had at least risen recently to $2 billion.

Telewest after the takeover

At the time of the Flextech takeover Telewest claimed to have launched the UK's first broadband cable modem service, branded as "blueyonder" and costing £50 a month in its 41 franchise areas. Its final pre-takeover full-year results for calendar 1999 revealed a pre-tax loss of £314 million ($530 million) on revenues of £539 million ($793 million) which included writing off £49 million of analogue set-top boxes – indicating whole-hearted dedication to digital delivery. The results were well received and the share price which, had already risen sharply from a 1999 low of £2, rose 10 per cent to £4.70 and subsequently to over £5. However, not everything was running smoothly since the European Commission had issued a formal statement objecting to Microsoft's stake, agreed a full year previously, and had allegedly drawn up a draft decision in July blocking the deal. At this point Microsoft withdrew its proposal to share control with Liberty Media, which simply left it as a prospective minority shareholder, and the commission took no further action. The deal was cleared by the UK secretary of state in November.

From April to September 2000 the Telewest share price fell like a stone. To some extent this reflected the pattern throughout the entire TMT sector. The problem was as much as anything caused by an absence of any positive news, although the eventual decision in respect of Microsoft at least relieved one major uncertainty. A further potential change in ownership was heralded by an agreement signed in June whereby Liberty Media agreed to merge its UK and Latin American cable interests (including the Telewest stake) into UnitedGlobalCom in return for a 45 per cent stake in the latter. It was also agreed that UnitedGlobalCom subsidiary UPC's broadband portal Chello would be used to provide Telewest services to its customers, with Telewest taking a stake in Chello. However, these complicated manoeuvres were subject to ratification by the holders of equities and bonds in the companies concerned and hence unlikely to be implemented for many months[9]. Meanwhile, Telewest reiterated that its complex shareholding structure

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Table II NTL Home – summary customer statistics

	Q2 2003	Q1 2003	Q4 2002	Q3 2002	Q2 2002	Q1 2002
Total customers	2,753,300	2,713,500	2,686,400	2,667,000	2,696,200	2,766,600
Customer additions	129,300	116,100	105,800	84,000	49,000	54,000
Customer disconnects	89,500	89,000	108,100	113,000	119,000	127,000
Net customer movement	39,800	27,100	2,300	29,000	70,000	73,000
Churn (annualised) %	12.9	13.0	15.9	16.4	17.1	17.9
Revenue generating units[a]	5,240,700	5,125,300	4,983,900	4,870,900	4,837,600	4,893,300
Television	2,022,800	2,037,700	2,055,300	2,065,300	2,109,000	2,186,000
Telephone	1,269,700	2,426,700	2,411,500	2,425,000	2,452,900	2,524,000
Broadband[b]	764,200	660,900	517,100	380,600	275,600	183,300
Average revenue per user (ARPU) (£)	41.04	40.65	40.03	38.89	39.60	40.07

Notes: [a]Details of the residential operating statistics as of 31 December 2002 can be found in the source below on page 30. The figures above refer to the UK but the source also gives those for Ireland which were fairly modest – for example, 368,000 for television. Altogether, at that time NTL had 11.4 million homes in its UK franchise of which it passed 8.4 million plus 475,000 in both cases in Ireland. [b]For the history see www.ntl.com/locales/gb/en/investors/companyinfo/broadband.asp
Sources: www.ntl.com filings and press releases of 31 March 2003, p. 6 and 12 August 2003, p. 7

would make it very difficult for it to be taken over by NTL.

Typical of the issues which cast a pall over Telewest's share price was publication in August of component shortages which would delay the roll-out of digital set-top boxes. Although Telewest preferred to see this as a mere glitch, it was exclusively tied to Pace Micro for supply of the boxes which in turn used a larger number of flash chips (a key component in scarce supply) than competitors' models. The half-year results, also published in August, revealed a widening pre-tax loss of £296 million on revenues of £514 million, boosted by the purchases of Flextech and Cable London (O'Connor, 2000a).

HSBC analyst Stephen Scruton consistently hammered away at the point that Telewest would continue to miss its profit forecasts if it carried on focusing on residential telephony rather than on the business market. Although Telewest CEO Adam Singer was prepared to admit that the digital roll-out had stalled, he argued that it was concentrating upon opportunities in the arenas of broadband content and connectivity and that the prospects for bundling services remained rosy (O'Connor, 2000b). As a manifestation of his confidence, Telewest acquired from Deutsche Telekom in November one of the few remaining regional franchises, the loss-making Eurobell, for up to £280 million in shares, thereby gaining 182,000 residential and business customers. However, the financial markets were not particularly positive about this nor were they by the third-quarter results which acknowledged that the shortage of set-top boxes had led to a reduction in end-year digital subscribers from 500,000 to 350,000 and that the churn rate was approaching 30 per cent, although half of this represented the loss of cable but not telephony subscriptions (Harding, 2000).

The situation stabilised somewhat in early 2001. In March, the separate debts of Telewest and Flextech were joined together as part of a refinancing package worth roughly £2 billion designed to cover running costs until 2007 now that the network construction phase was essentially complete. However, an additional £250 million was pledged to cover network expansion in the future. This meant that Telewest was fully funded until its forecast break-even point in 2003. The results for calendar 2000 which were published shortly thereafter revealed that the company had reached its target of 500,000 subscribers to its digital services, with aggregate turnover up 42 per cent to £1.1 billion helped by a contribution from Flextech and Eurobell. Business revenues were up 47 per cent but pre-tax losses widened to £706 million (see Table III). Monthly revenues per subscriber were £37.50, the highest of any cable operator in Europe. In his introduction to the annual report, CEO Adam Singer claimed that "it was a tough year, but we made it". He went on to state that "we are only at the beginning of the broadband revolution", but not everyone outside, or necessarily inside Telewest, was certain the company would still be there at the end.

Early in May, Liberty Media revealed that it had recently acquired an additional 20 million shares in Telewest, raising its stake from 24.6 to 25.2 per cent and the total held by itself, MediaOne and Microsoft (allowing for the dilution created by the issuance of new shares to purchase Flextech) to 50.1 per cent. Little has changed since then. The only other significant shareholder as of April 2003 aside from Liberty Media (25.2 per cent) and

Table III Telewest. Financial results for the calendar years 2000 to 2002 (£ million*)

	2002	2001	2000
Total turnover	1,346	1,323[a]	1,129
of which: consumer division			
cable television	336	329	279
telephony	495	488	445
Internet and other	63	40	16
business division	267	274	271
content division	170	192	118
Less: share of joint ventures	64	63	36
Equals: group turnover	1,267	1,260	1,093
Less: operating expenses pre-depreciation/amortisation	937	954	846
Equals: ebitda	330	306	247
Less: depreciation and impairment of fixed assets	577	455	399
amortisation and impairment goodwill/intangibles	1,605	1,173[b]	142
Equals: group operating loss	1,852	1,312	294
Less: net interest	510	464	408
Other (e.g. investment write-offs)	135	157	4
Equals: (loss) pre-tax	2,227	1,933	706
Tax	1	5	5
Debt (including finance lease obligations)	5,569	5,132	4,206
Basic (loss) per ordinary share (pence)	77.2	67.2	26.1

Notes: These accounts were prepared according to UK GAAP. [a]Of the increase of £194 million, £132 million was accounted for by Flextech and Eurobell. [b]Of which £992 million related to Flextech and £138 million to SMG and UKTV
Sources: Telewest (2001, 2002)

Microsoft (23.6 per cent) was The Capital Group Companies (6.5 per cent).

On the consumer front, Telewest offered a package of unlimited calls at any time of day for a fixed £25 a month, to include line rental and a basic package of digital TV channels, but raising it by £2 in July. Although the results for the first half of 2001 showed considerable improvement on 2000, the one major unresolved issue remained the size of the debt pile even if it seemed modest in relation to that of NTL, and the share price, which had stabilised during the period to June, once again began its seemingly inexorable slide, with Telewest falling out of the FTSE 100 index along the way. In December, Telewest drew down half of the £250 million reserve mentioned above, but with its bonds rated as "junk" by both Moody's and Standard & Poor's, its ability to raise further finance was severely constrained.

When he filed the results for 2001 in February 2002, chairman Cob Stenham bemoaned the fact that Telewest's "triple play" of services was making such good progress) its take-up was 70 per cent of total customers (see Table IV) (yet the share price resolutely remained depressed. Unfortunately, however, market conditions were such that Telewest was obliged to register an impairment charge of over £1 billion, largely accounted for by Flextech (see Table III) though fortunately this had no direct implications for cash flow. Moody's promptly pushed Telewest's debt rating even lower into junk territory, and with the company now worth little more than £400 million and about to be ejected from the FTSE 250, its gearing (debt to equity) ratio looked to be unsustainable[10]. Analysts remained divided as to whether Telewest could reach profitability before its funds ran out. Noting NTL's debt-for-equity swap plan (see above), some advocated that Telewest follow suit, while others advocated a merger with NTL and yet others the sale of Flextech although there were no obvious buyers on the horizon.

At the end of April Telewest announced that it would be reducing capital expenditure, cutting 1,500 jobs and amalgamating the consumer and business divisions. The collapse of ITV Digital was a further blow as Flextech had been supplying it with programmes in conjunction with the BBC, and the share price fell below 10p. Meanwhile, Liberty Media decided to approach the issue of taking control of Telewest by buying its bonds, now trading at less than half their face value. With five per cent already in its possession, Liberty offered to buy a further 20 per cent – with a face value of $850 million (for $350 million (£240 million)) under UK law, funds holding 25 per cent of an outstanding bond can block its involvement in a restructuring – but this was only partly successful. Telewest did not exactly endear itself to shareholders either when it announced that four of the executives who had overseen growing losses and the collapse in the share price during 2001 had received £609,000 of bonuses for their trouble and could achieve a further £1 million in 2002. The shareholder action

Table IV Telewest – summary customer statistics as at 31 December

	2002	2001	2000	1999
Homes passed	4,895,956	4,914,155	4,922,191	4,917,689
Total residential	1,758,625	1,765,619	1,691,341	1,648,915
Of which: dual or triple service subscribers	1,228,586	1,218,294	1,096,409	1,020,664
Cable television only	116,508	138,053	153,201	171,832
residential telephony only	395,133	401,286	441,731	456,419
Internet only	18,398	7,986	–	–
including: blueyonder broadband	262,219	85,122	6,893	–
Household penetration (%)	37.40	37.50	35.30	35.50
Average revenue per user (ARPU) (£)	41.80	40.03	37.50	35.27
Total business accounts	73,746	72,934	66,507	61,517
Annualised revenue per business account (£)	3,114	3,137	3,093	3,524

Sources: Telewest (2002, pp. 14-15; 2001, pp. 18-19; 2000)

group, Pirc, lambasted Telewest for its poor standards of corporate governance including the absence of independent non-executive directors[11]. The share price fell to 4p.

On 4 July, the Telewest board agreed to start talks on a debt-for-equity swap. Meanwhile, Microsoft offered to sell its stake to Liberty Media during the ensuing month, having withdrawn its three non-executive directors from the board of Telewest. The price represented $0.48 per ADR, or roughly $332 million in total. On 17 July, Liberty Media terminated its offer to buy the bonds despite having received 17 per cent acceptances and also withdrew its three non-executive directors from the Telewest board[12]. At the end of the month, CEO Adam Singer, who was opposed to an immediate restructuring, was dismissed and replaced by Charles Burdick (the former CFO) who preferred the title of managing director to indicate that he was only temporary. He then presided over the announcement of a further pre-tax loss of £239 million for the first half of the year although broadband subscriptions, especially for the new 1 Mbps version of Blueyonder, were holding up well. He expressed his willingness to sell non-core assets such as the 17 per cent stake in Scottish Media Group (SMG), but not Flextech (Pesola, 2002).

By early September, matters had become somewhat clearer. Telewest would retain £1.8 billion of bank debt and engage in a debt-for-equity swap with bondholders owed £3.6 billion. This would reduce its costs by £300 million a year. A further 1,000 jobs would be shed in addition to the 1,500 announced earlier in the year and capital spending would be cut by one-third. A merger with NTL would be investigated once it emerged from chapter 11. The non-payment of interest on two bonds in late September indicated the intent to conserve cash and the expectation that a voluntary restructuring deal would quickly be achieved, with bondholders receiving 97 per cent of the equity which was trading at the time at 1.3p or £38 million in total. The attitude of Liberty Media, which now held 11 per cent of the bonds, remained unclear. Surprisingly, however, the major problem appeared to be Crédit Agricole which petitioned the high court to have Telewest wound up, although this was widely viewed as a negotiating tactic.

By early November, Telewest had raised £37 million through the sale of non-core assets including its SMG stake sold to institutional investors at 85p a share. However, of the £45 million raised from the SMG stake, £27 million had to be passed on to a bank whose loan the stake had guaranteed. By mid-December, £2 billion of the outstanding bank loans had been renegotiated, but the Royal Bank of Scotland wanted to be repaid a £12 million foreign exchange debt before signing up to any deal. One month later, Telewest was able to announce that it had renegotiated £2.16 billion of the £2.25 billion outstanding with a new maturity of 2005 and he share price rose to 3.05p. However, major bondholders Liberty Media and Deutsche Telekom – set to end up with 8 per cent of the equity – continued to reserve judgement. It appeared that Liberty Media had refused to buy Microsoft's stake and, indeed, that it was negotiating the sale of a 5 per cent stake to William Bresnan, a private investor (Kirchgaessner, 2003).

At the end of March, the results for 2002 were published (see Table III). Although the operating performance was similar to that of a year previously, the need to make much larger goodwill and other write-downs meant that the pre-tax loss was up at £2.2 billion. However, the amount of debt outstanding was not significantly higher this time around. Progress with the restructuring was dragging on, but there was no immediate liquidity crisis. In early May, first quarter results for 2003 revealed total revenues at the same level as a year previously (£334 million) since a sharp rise in revenues derived from broadband (now with 310,000 subscribers) was offset by a loss of other

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customers. Charles Burdick announced that whereas Telewest had not been actively marketing its basic packages as a cost-cutting measure while it concentrated upon more profitable broadband customers, it now intended to take on BSkyB again. The proportion of subscribers who were taking the "triple play" of television, telephone and broadband had risen to 12 per cent and ARPU had edged up to £41.83.

At the end of May, IDT Corporation, a telecoms company with links to Liberty Media which holds a five per cent stake in its subsidiary IDT Telecom, announced that it had bought the Microsoft stake for a mere £3 million. Meanwhile, Bill Huff, who ran the eponymous US hedge fund, claimed to have garnered control over 20 per cent of Telewest's bonds with a view to opposing the restructuring plan which he had initially supported. Technically, he needed 25 per cent to strike the plan down, and few analysts believed that he would achieve that figure before the plan came before the high court. Mr Huff had already managed to become the largest shareholder in the restructured NTL with a seat on the board having acted as chairman on an interim basis, so it was presumed that he wished to do the same again at Telewest with a view to pushing for a merger.

The restructuring timetable stood as follows: in early June the documentation would be sent to investors; in late July the creditors would meet and 75 per cent of each class would need to vote in favour; in late August the High Court would pass judgement on the plan; and Telewest would subsequently be re-listed. Needless to say, this did not happen as scheduled, mainly because the rebels were able to force a delay, causing Telewest to renege on its agreement to leave a 3 per cent stake in the hands of the original owners – Mr Huff wanted this to be reduced to only 1 per cent. Mr Huff also sued Telewest for alleged "common law fraud" in relation to statements made in 2001 and 2002 but this, like a winding up petition which Mr Huff also became party to, were treated as negotiating ploys in the restructuring end-game.

The first half figures announced in July 2003 revealed flat turnover compared to a year previously together with a pre-tax loss of £200 million. Domestic subscriptions had fallen further to 1.72 million whereas broadband subscriptions had risen to 329,000. A total of 71 per cent of subscribers took at least two of the three available services – TV, telephone and broadband Internet, with 13.2 per cent taking all three.

In mid-September the rescue plan was finally agreed in principle by leading bondholders. Creditors would receive 98.5 per cent of the shares when Telewest relisted, probably in New York to facilitate any future merger with NTL. It would nevertheless be a further several months before all of the 26 creditor banks, together owed £2 billion, could be expected to sign the agreement. The share price fell to 2.35p. After the debt-for-equity swap, investors who bought at the £5.69 peak will have lost 99.994 per cent of their money.

Conclusions

The idea that dividing up the UK into over 100 cable franchises would in some way produce a competitive market was downright peculiar. Each had a monopoly in its own local market, and each local market was too small to permit economies of scale and scope. It is hard to conceive of an industrial structure less likely to survive in the longer term, and, of course, it rapidly began to evolve via a necessary process of consolidation that eventually left three major survivors. Needless to say, this was a hopelessly inefficient process compared to starting with a rational blueprint of how the authorities wanted the industry to end up, and the financial affairs of the survivors were, to put it mildly, untenable.

The financial model was always a precarious one. By the very nature of the beast, the cable operators had to spend enormous amounts of money up front digging up the roads to lay conduits in front of domestic and commercial premises. But to obtain any revenue they also had later to return and connect individual premises to the conduits. While this was economic in respect of premises with multiple occupancies (think of Hong Kong as an ideal market) it was very expensive to connect up, and supply digital boxes to, individual houses which might only take cable TV for one year before cancelling the contract, possibly in favour of BSkyB which was proving to be extremely successful, especially after the advent of digital services. What cable operators needed above all else was the "triple play" (subscribers taking cable TV, telephony and Internet access via a digital connection) and, in truth, the economics of such a play were certainly attractive compared to taking telephony from BT and cable TV separately.

The other financial drawback was the need to spend huge sums in the pursuit of consolidation. The CWC deal clearly over-stretched NTL (in retrospect, most analysts regarded it as the best deal Telewest never did even though at the time they argued that NTL would power ahead of Telewest as a result) as did the overseas ventures which proved more difficult than expected to integrate. Here again, however, the damage would have been mitigated had the financing been better managed. According to NTL CEO Barclay Knapp:

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> The mistake I made was not necessarily in terms of expansion but in terms of financing. If we had financed this with equity, we would essentially be where we will be after the restructuring.

Fair enough, perhaps, but it would be putting something of a gloss on his performance to accept that there was only the one fundamental error that brought down the company.

Needless to say, managerial style also played its part. When it came to restructuring, The Telewest board preferred the hands-on day-to-day style of management of CFO Charles Burdick to that of CEO Adam Singer (who had been inherited from Flextech) with his inspirational, entrepreneurial style of leadership. But they clearly believed that the latter style was appropriate to drive Telewest forward during its earlier growth phase. It is easy to argue with hindsight that a more conservative approach, especially to cash flow, should have been espoused much earlier in the day, but the companies themselves simply availed themselves of the plentiful funds that were made available by careless lenders and who can blame them for taking advantage. As ever, it was the same profligate lenders who later claimed that the money had been spent wastefully. An important lesson is that the cable companies badly underestimated BSkyB's competitive strength. Whereas competition from terrestrial sources proved to be rather weak (ITV Digital eventually collapsed into administration and BT was very slow in rolling out broadband) BSkyB emerged triumphant. It is, accordingly, something of an irony that the restructurings at NTL and Telewest will wipe out most of their debts and enable them to re-emerge as a more potent competitive threat to the one company that basically got its strategy right first time around. It may be argued that the cable model just needed more time (and money) to come good – the landmark of one million subscribers to broadband cable was reached at the end of April 2003[13]. And it was alleged that three out of four potential customers, given the choice between ADSL and a cable modem would choose the latter – but this is the one area where satellite is disadvantaged (at least for now) and the number of subscribers to other services provided by the cable companies have remained at best static for some time.

The only real issue that matters during the coming year is whether the cable companies will survive. NTL has at least emerged from its restructuring whereas Telewest has still to have its plan agreed by all parties. However, neither has been able to eliminate its debts and Telewest in particular looks vulnerable, especially given BT's belated progress in rolling out broadband. The original equity holders in both companies have lost huge sums of money, and it may be hard to understand why anyone would want to take the same risk again. But it has to be borne in mind that both companies will largely be owned by former bondholders who might now get some of their money back, and that with the days of heavy capital expenditure behind them, the figures inevitably look less daunting for the cable operators. Astonishingly enough, the NTL share price, has risen so far from $17 at the time of relisting to nearly $50. The great unanswered question is whether the companies will finally merge, but in that respect only time will tell.

Finally, we may ask whether markets or regulators have played the major role in determining the current structure of the UK cable industry. The answer is a resounding vote in favour of markets. The original structure for the industry proposed by regulators was a nonsense, and although, as noted, they made the occasional attempt to hold back the inevitable consolidation, they proved to be powerless in the one circumstance where regulators can do nothing but stand back and wring their hands, namely restructuring via the bankruptcy courts which is why it is proving such a popular recourse throughout the TMT sector. Whether this would anyway have come to pass if a more sensible structure had been permitted in the first place is a moot point, but at least the investors who have lost huge sums of money would have no one to blame but themselves.

Notes

1 Most of the ground rules concerning the development potential of cable are to be found in the 1984 Cable and Broadcasting Act.

2 NTL Incorporated is registered in Delaware. International CableTel originally listed on NASDAQ in April 1993 and was listed in Europe on EASDAQ in 1997.

3 A lengthy exposition of the various pieces of the takeover jigsaw and the precise sums involved expressed in pounds can be found in Competition Commission (2000), in respect of the takeover, the Commission Competition (2000, pp. 3-4) concluded that: because NTL and CWC operated in different geographical areas, the merger would have no direct effect on competition between them; there was no evidence that the merger would materially reduce potential direct or indirect competition such as competition among cable operators themselves in innovation or the copying of best ideas; the merger would not substantially affect the market power of NTL relative to content providers; the merger would not be expected adversely to affect competition between platforms, but rather would enhance the efficiency with which the technical advantages of cable could be be deployed; there would be no adverse effects on competition in telecommunications given the low market shares of both NTL and CWC compared to BT.

4 The various manifestations under which NTL has traded since being restructured to incorporate CWC Consumer Co. are rather confusing. The initial restructuring is set out in the Annual Report for 2001 available on www.sec.gov/Archives/edgar/data. This created a new holding company, NTL Incorporated which, in February 2001, transferred the residential broadband and business cable operations of CWC to NTL Communications Corp., a wholly-owned subsidiary. It was also given the assets of NTL Business.

5 See Annual Report for 2001/1114937 accessed via www.ntl.com

6 Annual Report for 2001

7 For a discussion of the restructuring see Grande, C. (2002a), "Liberty pulls out of bond tender", *Financial Times*, 18 July, available at: http://news.ft.com This also provides a helpful diagram of the group structure at that time. See also [5].

8 In fact, not only did Mr Knapp (and three other executives) negotiate massive salary, bonus and option packages in October 2002, but he was awarded a huge severance package which he had not previously been granted. So much for the price of failure! See www.timesonline.co.uk/business of 21 October 2002 and 16 January 2003.

9 See various articles in the *Financial Times* of 26 June 2000. In practice, in late February 2001, UPC bondholders rejected the plan to take a stake in Telewest.

10 See "Telewest knocked by bond rating downgrade", www.totaltele.com of 16 March 2002.

11 See Grande (2002c, d).

12 The directors were named in a US lawsuit filed by bondholders which claimed that Liberty's bond tender had failed to disclose information about its relationship with Telewest. See Grande (2002e).

13 This is, however, disputed by those who point out that the regulator, Oftel, has no absolute guidelines in relation to what is meant by broadband and that the Advertising Standards Authority has ruled that advertising a 128 Kbps service as broadband is misleading.

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