

4 The market for telecommunications

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Introduction

4.1. This chapter considers aspects of the telecommunication market that are relevant to the inquiry. It deals first with companies and their market shares, then considers obstacles to competition other than NP, the economic effects of which are dealt with in Chapter 7, and finally discusses regulation to encourage competition.

4.2. The telecommunication network may be divided into a number of components, of which the principal ones are:

- the access network (or local loop), consisting of links between individual homes/businesses and a telephone exchange;
- local and national links between telephone exchanges;
- international links to points in other countries; and
- links to and from mobile telephones.

This is, however, very much a simplification of the telecommunication network. Typically, a switched call goes through the access network, on to one of the national or local links and then to a different part of the access network (in the case of international calls and calls to mobile telephones,¹ the call does not go back on to the access network but instead passes on to the international network or the mobile network). Customers can purchase network services by renting one or more exchange lines connecting their premises to the supplier's exchange and paying for switched calls by quantity and duration, or alternatively in the case of fixed network services by leasing a line connecting two points. In considering the market it is useful to distinguish between access to the network and calls.

4.3. The access network is of special importance as all calls (except those between mobile telephones) must pass through it at least once. In the UK, although tariffs are falling, calls from mobile telephones are currently significantly more expensive than those from fixed-link telephones and the number of mobile telephones is a relatively small proportion, albeit rising rapidly, of the number of fixed connections² (see Table 4.1). At present, therefore, calls from mobile telephones are only a limited substitute for calls from fixed-link telephones, although the extent of substitutability is likely to increase in future.

¹The word 'telephone' is used in this chapter to include all pieces of apparatus that may be connected to the network. Similarly the term 'calls' includes both voice and data communication.

²Many of these connections (especially business connections) have more than one telephone or other piece of apparatus attached.

4.4. As well as the network, the telecommunication industry would normally be defined to include the provision of apparatus that may be attached to the network and the provision of value-added services over the network. Many network operators also provide value-added services and BT is also active in the equipment supply business. This chapter concentrates on the network rather than the supply of apparatus or the value-added services.

4.5. The network, like other aspects of the telecommunication industry, has for many years experienced rapid growth. Over the past decade, the volume of inland calls has risen by about 7 per cent a year and the volume of international calls by about 13 per cent a year.¹ The number of residential connections has increased by about 2.5 per cent a year and the number of business connections by about 6 per cent a year.²

Companies and market shares

4.6. Until 1986, BT provided the network in the whole of the UK except Hull, where for historical reasons the network was run by Kingston Communications. The 1981 Act introduced the possibility of competition, but up to 1991 under the Government's duopoly policy only one additional non-mobile operator (Mercury) was licensed. Mercury² provided private circuits from 1983 and began operating a switched service in 1986. It has its own network between major cities and it also has international links. Following the 1991 White Paper (the duopoly review), licensing policy was liberalized.³ In particular, the cable companies could obtain licences to provide voice telephony as well as television (see paragraph 3.14). In some cases the cable companies, which are described in Appendix 4.1, have also obtained licences to link cable territories which are geographically separated from one another. They now compete with BT and Mercury within and between cable companies' respective franchise areas. The DTI has also issued a further 14 PTO licences which empower the licensees to install their systems in other people's land, dig up the streets etc. These companies include:

- Energis (owned by the National Grid), which is building a network using the Grid's ducts and pylons to carry the cables and which started providing direct and indirect services to business customers in 1994;
- MFS, which began to provide direct services to large business customers in the City and certain other parts of London in 1994 and has plans to expand into other urban centres;
- COLT, which began operating in 1993 and targets similar customers to MFS;
- AT&T, which is the largest carrier of switched telecommunication traffic in the world, handling a high proportion of long-distance and international calls in the USA and which is expected to launch a UK service in late 1995 or 1996 targeted mainly at large multinational companies; and
- Ionica, a business start-up enterprise which intends to provide direct fixed connections using new radio technology (thus avoiding the expense involved in installing telephone lines to each of its subscribers) and which plans to start operating in East Anglia in March 1996, moving on to other regions thereafter.

Ionica is, however, the only one of these companies to offer direct access to homes and smaller business sites in competition with BT and the cable companies. Mercury and the other companies listed offer direct access only to larger business sites where the cost of additional dedicated lines can be justified by the high volume of telecommunication traffic. Mercury and the other companies do, however, also provide indirect access over BT's lines: calls from customers with indirect access to Mercury are routed over BT's network until they reach Mercury's network. BT is required to provide interconnection so that other operators can offer indirect access.

¹Source: MMC estimates based on BT and OFTEL information.

²Mercury is currently owned by Cable & Wireless (80 per cent) and Bell Canada (20 per cent).

³BT and Mercury remained the only operators licensed to provide international links.

Access network

4.7. As shown in Table 4.1, BT remains much the largest operator in the access network market with 95 per cent of direct fixed connections at the end of March 1995. The access network, like other aspects of telecommunications, is, however, experiencing rapid change following the implementation of the 1991 licence liberalization policy. BT's share of direct fixed connections can be expected to decrease as the cable companies expand and as Ionica (and possibly other companies) start operations. Since the market is growing, this need not imply a reduction in the number of BT's connections (although BT did report a fall of 0.2 per cent in the number of its residential connections during the 12 months to the end of September 1995).

TABLE 4.1 Number of connections at end March 1995

	<i>million lines</i>				
	1992	1993	1994	1995	1995
				<i>(estimated)</i>	<i>share</i>
					<i>%</i>
<i>Fixed links: residential customers</i>					
BT	19.73	20.11	20.47	20.6	96
Mercury†	0.0	0.0	0.0	0.0	0
Kingston Communications	0.13	0.13	0.14	0.1	1
Cable companies	0.02	0.12	0.34	0.8	4
Total*	19.88	20.37	20.94	21.5	100
<i>Fixed links: business customers</i>					
BT	5.87	5.97	6.17	6.5	95
Mercury	0.13	0.17	0.19	0.2	3
Kingston Communications	0.03	0.03	0.03	0.0	1
Cable companies	0.01	0.02	0.04	0.1	1
Total (incl others)*	6.04	6.19	6.43	6.8	100
<i>Fixed links: all customers</i>					
BT	25.60	26.08	26.64	27.1	95
Mercury	0.13	0.17	0.19	0.2	1
Kingston Communications	0.16	0.17	0.17	0.2	1
Cable companies	0.03	0.13	0.38	0.9	3
Total (incl others)*	25.92	26.56	27.38	28.4	100
Mobile: all customers	1.3	1.5	2.3	4.1	

Source: MMC based on information supplied by OFTEL and BT.

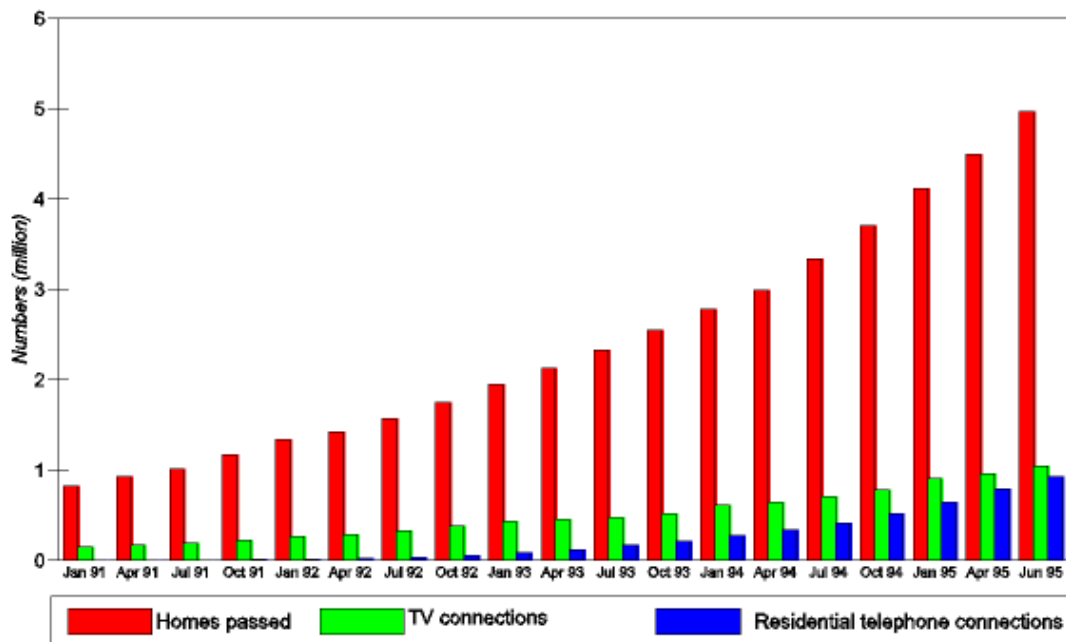
*Totals may not correspond to the sum of constituent figures shown, due to rounding.

†The figures for Mercury exclude indirect connections, using lines already connected to the customer by other operators. Mercury has no directly connected residential customers.

4.8. Figure 4.1 shows recent performance achieved by the cable companies. Until 1991 the growth of their networks was slow: their cables had passed fewer than 1 million homes compared with a total of 15 million homes in their franchised areas. Most of the cable companies had experienced financing difficulties and a number of companies were in breach of their licence obligations to build their networks to a timetable. Since the 1991 duopoly review which permitted the cable companies to offer telephony, their build progress has greatly accelerated and their financing prospects have improved. By July 1995 about 5 million homes had been passed by their cables and had cable TV services marketed to them, over 20 per cent of the total number of homes (about 23 million) in the UK. The number of connections to cable TV and to the cable companies' telephone service has increased rapidly (see Figure 4.1), reflecting the increase in the number of homes passed and marketed. By July 1995 there were over 1 million homes connected to cable TV, and 935,000 residential connections and 99,000 business connections to the cable

FIGURE 4.1

Cable companies: homes passed and number of TV and telephone connections

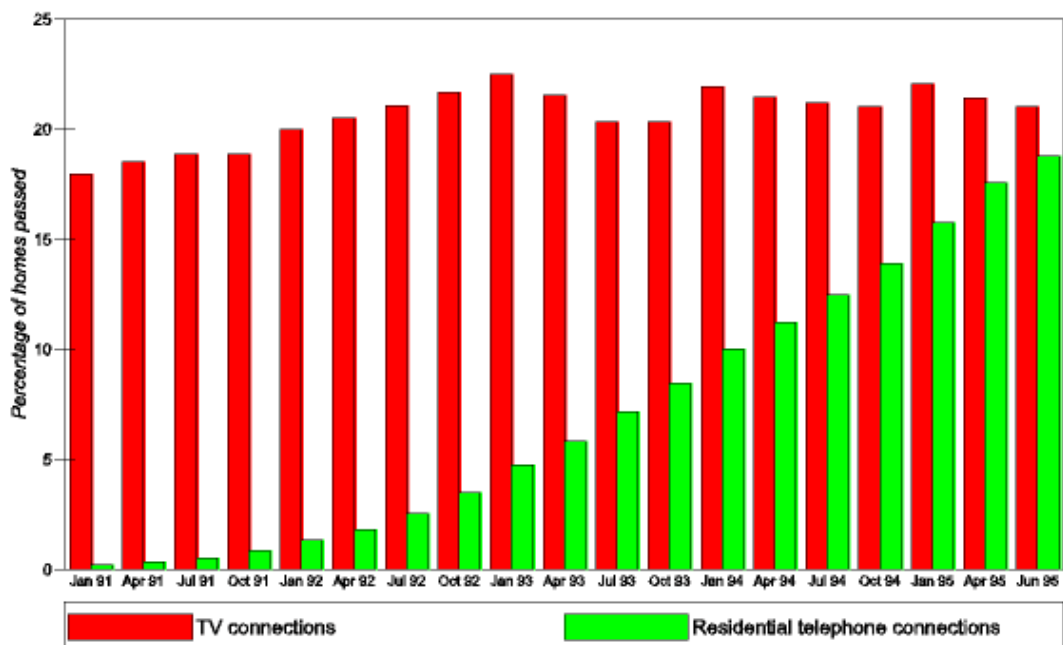


Source: MMC, based on Independent Television Commission (ITC) information.

Note: Business telephone connections are excluded. Residential telephone connections for January 1991 to July 1992 partially estimated.

FIGURE 4.2

Cable companies: TV and telephone connections as percentage of homes passed



Source: MMC, based on ITC information.

Note: See note to Figure 4.1.

companies' telephone services. As shown in Figure 4.2, the number of cable TV subscribers as a percentage of homes passed and marketed increased slowly during 1991 and 1992 and since then has fluctuated between 20 and 22.5 per cent, while the number of telephone subscribers as a percentage of homes passed and marketed has expanded at a fast rate to 19 per cent.¹ This reflects the delayed introduction of telephony compared with TV.

4.9. Allowing for areas where telephony is not available, the cable companies' average penetration rate for telephony is now about 24 per cent, compared with 21 per cent for cable TV (see Table 4.2), and most companies had higher residential telephony penetration than cable TV penetration. There is considerable variation between cable companies in penetration rates for cable TV and especially telephony. Table 4.3 shows that residential penetration of cable telephony has tended to increase steadily over time (the apparent levelling off in the first half of 1995 is likely to reflect seasonal factors).

TABLE 4.2 Cable companies' penetration rates at the beginning of July 1995

Company*	Penetration† (subscribers as % of homes passed & marketed)			Lines per subscriber business
	TV residential %	Telephony residential %	Telephony business‡ %	
TeleWest	21.2	22.8	17.0	3.11
NYNEX	18.8	22.5	15.6	2.30
Comcast	27.3	24.8	15.8	3.28
SBC CableComms	20.8	28.1	22.5	1.70
Videotron§	21.5	18.3	14.6	3.17
Bell Cablemedia	21.3	23.8	7.6	4.60
General Cable	19.9	25.4	12.7	6.19
CableTel	19.5	29.2	N/A	N/A
Diamond¶	24.4	38.4	20.2	4.15
Total: companies with data available	21.5	24.1	15.6	3.23

Source: Goldman Sachs (see also Appendix 4.1, Table 2).

*Telephony information not available for Telecental, Eurobell and IVS. BT's cable subsidiary and Caledonian do not offer telephony. TeleWest and SBC have now merged.

†Penetration is the number of premises connected as a percentage of premises passed and marketed (for locations where telephony is available). Figures for individual franchises aggregated by management operator. Goldman Sachs' TV figures are slightly different from the ITC data (see Appendix 4.1, Table 2) but are shown for comparability with the telephony figures.

‡Figures for businesses marketed (and hence business penetration rates) may be affected by differences in definition between companies.

§Telephony figures are based on premises passed (penetration would be higher if based on premises passed and marketed).

¶Including LCL (acquired September 1995).

TABLE 4.3 Cable companies' telephony penetration rates over time

Operator	Residential penetration					per cent
	31/12/91	31/12/92	31/12/93	31/12/94	1/7/95	
TeleWest	15.5	16.7	19.3	22.1	22.8	
NYNEX	-	16.0	18.5	19.8	22.5	
Comcast	-	16.2	18.8	25.0	24.8	
SBC CableComms	-	19.9	20.7	26.9	28.1	
Videotron	-	13.0	14.3	18.0	18.3	
Bell Cablemedia	-	-	22.6	25.8	23.8	
General Cable	-	18.3	20.9	26.8	25.4	
CableTel	-	-	-	27.8	29.2	
Diamond*	-	30.4	36.3	45.2	38.4	
Total	15.5	16.7	19.2	23.3	24.1	

Source: Goldman Sachs.

Note: See notes to Table 4.2.

*The end June 1995 figures include LCL's franchises; the other figures are for Diamond's original franchises only.

¹Telephony service is not yet available to all homes where cable TV is available.

4.10. As shown in Table 4.2, the cable companies' penetration of business connections appears to have lagged behind their residential penetration. Business connections represent only about 10 per cent of the cable companies' total compared with 24 per cent for BT. Moreover, up to March 1995 their business connections had grown less rapidly than their residential connections. Most of the cable companies now obtain about 50 per cent of revenue from telephony (residential and business) and the remainder from cable TV, but in two cases, Diamond (81 per cent) and General Cable (72 per cent), the telephony percentage is materially higher, largely reflecting these companies' greater success in business telecommunications.¹

4.11. The cable companies' networks are expected to continue to expand and this will result in their gaining an increased share of the telephone access market. The number of homes in areas franchised for cable TV is now about 17 million with further franchises likely to be awarded (see Appendix 4.1); of these about 14 million are expected to be passed by 2000. It is expected that telephony will soon be available in all areas where cable TV is provided except Westminster (where a subsidiary of BT is the cable operator), and Aberdeen and Coventry (where the cable operator, Caledonian, leases the cable network from BT²). As far as uptake of services is concerned, the historic evidence in Table 4.3 suggests that the cable companies' telephone penetration may continue to increase. One reason for the rise in the cable companies' telephone penetration compared with TV penetration is that the proportionate loss of customers (churn rate) each year is much lower. This is not surprising as cable TV is an additional service, costing typically at least £10 per month, whereas the cable companies' telephone service would usually replace the BT service and, it has been suggested, in many cases offer savings on the alternative BT service.³ In general the rate of increase in cable telephony penetration will evidently depend on the price and quality of service offered by the cable companies in comparison with BT, as well as on how rapidly and on what terms NP is introduced.

National and local links

4.12. Table 4.4 shows two measures of total traffic on the UK network: call revenues (£m) and million minutes. BT's 1993/94 share of traffic, at 87 per cent based on revenue and 91 per cent based on call minutes, is lower than its share of connections. This is for four main reasons: first, Mercury and other operators have direct access to some of the largest customers who have the highest traffic and call spend per connection; secondly, Mercury has indirect access (via the 'blue button' or 132 short dialling code) to some smaller business and residential customers; thirdly, Table 4.4 reflects outgoing traffic only and multi-line customers often send most or all of their outgoing traffic on non-BT lines while retaining BT lines (with BT numbers) for incoming traffic; and fourthly, low users who make few outgoing calls tend to be served by BT. BT's share is lower in national and international calls than local calls, reflecting the fact that Mercury's network covers national and international rather than local links. Table 4.4 does not take account of interconnection traffic: BT's share of national call traffic would be higher if it did so.

¹Source: Goldman Sachs.

²However, Caledonian said that it would during 1995 be examining the technical and commercial feasibility of providing telephony.

³Source: *Which?* (June 1995) survey of call patterns of 28 telephone users. This found that the average of the bills for all 28 users was lower for all 13 cable companies considered than for BT (for 6 of the 13 companies the cable bill was lower for each of the 28 users).

TABLE 4.4 Measures of traffic on UK public switched telecommunications network

	Retail call revenues		Retail call minutes	
	1992/93 £m	1993/94 £m	1992/93 m	1993/94 m
<i>All companies</i>				
Local calls	2,147	2,232	64,189	67,922
National calls	2,335	2,371	28,729	31,217
International calls	<u>1,239</u>	<u>1,287</u>	<u>2,920</u>	<u>3,221</u>
All calls	5,721	5,890	95,838	102,360
of which:				
- Business	2,802	2,832	N/A	N/A
- Residential	2,919	3,059	N/A	N/A
<i>BT as % of total</i>				
Local calls	96	95	96	95
National calls	89	86	89	85
International calls	79	73	77	74
All calls	89	87	93	91
of which:				
- Business	82	79	N/A	N/A
- Residential	96	94	N/A	N/A

Source: MMC based on information supplied by OFTEL and BT.

Note: Excludes calls to mobile numbers and other premium rate services. Business/residential split of revenue not available for Kingston Communications; figures for Kingston Communications were obtained by pro-rating for BT business/residential split.

4.13. BT stated that it could be misleading to concentrate only on BT's share of the national market. In particular more emphasis should be placed on BT's share of market segments which its competitors had chosen to target. Such segments included:

- areas where cable telephony was available and where cable companies had gained a 24 per cent market share;
- business long-distance calls, where BT's competitors enjoyed a 22 per cent market share;
- business voice revenue in the City of London where BT's competitors had gained 43 per cent of the market; and
- business international calls in the City of London where as much as 61 per cent of the market was now served by operators other than BT.

Clearly there are other segments of the market where BT's share is greater than the overall levels shown in Table 4.4. BT pointed out that it alone is obliged to provide service to any customer due to its USO and this had inevitably resulted in BT being left to serve those customers that other operators had chosen not to compete for.

4.14. Development following the 1991 duopoly review can be expected to lead to a further reduction in BT's share of traffic. The extent of the reduction will depend on how successfully the cable companies and the newly licensed companies compete with BT. Since the market is growing, a reduction in BT's market share need not result in a decline in the real value of BT's revenue. BT's results for the financial year 1994/95 do, however, show a real fall (after allowing for 2.4 per cent inflation¹) of 7 per cent over a year earlier in inland call revenues and 4 per cent in international call revenues despite volume growth of 7 per cent in inland and 5 per cent in international calls. This reflects the requirement to reduce real prices in the tariff basket by 7.5 per cent a year and tariff rebalancing (which has involved increasing domestic exchange line rentals by 2 per cent and reducing call prices by more than 7.5 per cent). BT's revenue for its network as a whole² showed a real reduction of 3 per cent. The comparable figures for the first quarter of 1995/96 indicate real reductions of 5 per cent in inland call revenue; 1 per cent in international call revenue and 1 per cent in network revenue as a

¹Based on RPI excluding mortgage interest payments.

²Defined as revenue from calls, line rental, private circuits plus net interconnection receipts.

whole. It should be noted that declining real revenues in BT's fixed network were offset to some extent by increasing receipts from mobile phones and some other areas, such as directories.

Obstacles to effective competition

4.15. Both the Government and OFTEL have sought to encourage competition in telecommunications as the best way of promoting economic efficiency and the interests of consumers. It was suggested to us by OFTEL and others that certain features of the telecommunication market, combined with the large market share of BT and its former role as a statutory monopolist, might act as a barrier to achieving the benefits of effective competition. Such features include:

- sunk costs, especially in the access network;
- vertical integration of BT; and
- factors deterring consumers from switching between telecommunication suppliers, including the need to change numbers.

4.16. In general, wire-based telecommunication systems require substantial investments, especially in trenches and ducts, which cannot be salvaged if the firm leaves the industry (unless another company is prepared to buy them). The existence of such sunk investments may deter entry since the established suppliers (which have already made their sunk investments) could in principle respond to entry by cutting prices, with the result that the entrant would not earn an adequate return on its investment. There may also be indivisibilities; in that event there is either already excess capacity, or excess capacity could emerge as a result of entry. Barriers to entry could be increased by indivisibilities: the entrant would either have to accept low capacity utilization or would itself have to cut prices and the established supplier(s) could then respond leading to further price cutting. Excess capacity in this sense is not a significant feature of the main national links¹ where traffic volume is large and growing and there is therefore the prospect that both entrants and established suppliers can obtain acceptable utilization of their capacity.² Excess capacity is, however, an inevitable feature of the access network, especially the local loop serving residential and small business customers, with lines typically being used only 15 to 20 minutes a day. A potential entrant would have to duplicate the network of the established supplier and could obtain only half the pre-entry revenue of the established supplier even if it gained half the customers and offered no reduction on pre-entry prices.

4.17. The entry that has occurred in the access market has been in market sectors (or has used technologies) where sunk costs and excess capacity are less significant:

- First, BT's competitors have targeted bigger business sites. These require a large number of lines and users at such sites probably make proportionately more use of higher-priced services (such as international calls); such sites would thus tend to have a higher ratio of revenue earned to initial connection costs. This sector of the market was initially entered by Mercury and subsequently by others including Energis, MFS and COLT (see paragraph 4.6).
- Secondly, there is the radio technology option. Sunk costs are much lower and the excess capacity problem associated with wire-based systems is avoided as the radio spectrum is shared by all customers. Entry into the fixed-link access network using new radio technology is likely in the near future (see paragraph 4.6).
- Thirdly, there has been entry by cable companies each of which currently has a franchise for the provision of cable TV within its defined area (see Appendix 4.1) and is able to use the revenue from this franchise (as well as the revenue from its telecommunication services) to finance the sunk costs of its wire-based network.

¹Capacity limitations of optical fibres tend to arise in the switching and electronics. National links need to be sized for peak traffic; spare capacity will therefore exist outside the peak.

²Unless the established supplier(s) respond to the prospect of entry with predatory behaviour.

Despite the entry that has occurred, sunk costs and excess capacity are features of the access network that potentially limit the strength of competition.

4.18. As shown earlier, up to now entry has been on a small scale compared with the market as a whole. Since BT still accounts for some 95 per cent of connections, the great majority of calls are still made to BT lines. Any existing or future entrant to the access network will require interconnection with BT to complete calls. Entrants into national links may well need both indirect connection to BT customers (eg through the Mercury 'blue button' or similar facilities) and interconnection to complete calls. In addition to access to BT's customers, entrants are also likely to require interconnection with BT to use BT's local or national links since BT's network is currently more extensive than those of all other fixed operators put together.¹ The terms on which interconnection is available (including timing as well as quality) are evidently significant for the commercial prospects of any newcomer.

4.19. Similar issues arise where one company provides some important services to others, eg 999 services.

4.20. A further feature that could restrict competition in the access network is that customers may encounter costs (monetary and non-monetary) in moving from one supplier to another: these are described as switching costs. The costs associated with changing telephone numbers are discussed in Chapter 7. Other factors that might deter customers from changing supplier, in particular moving from BT to another supplier, include the high awareness and profile of BT; lack of information about suppliers other than BT; perceived risk in dealing with new suppliers, especially if previously unknown; nuisance and potential damage to property arising from new installations; and extra time spent dealing with correspondence or administration costs. Switching costs may act as a barrier to competition as they make it more difficult for entrants to attract customers, although switching costs may also assist entrants by making it easier for them to retain customers, once gained, against attempts by established suppliers to win them back.

4.21. It is worth noting that BT could have disadvantages as well as advantages arising from its former statutory monopoly. BT's network is, in part, older than that of other companies, all of which entered the market within the last ten years, and hence BT may incur extra costs in upgrading its network to offer new services. When updating its assets and technology, BT must ensure that there is minimal disruption to existing traffic; this is not a constraint on entrants building a new network. BT must also provide telecommunication services to all customers willing and able to pay for them within its licensed area (the USO). In addition, the DGT has up to now placed constraints on the speed with which BT can increase line rentals to domestic customers which, under public ownership, had been held down for social reasons. Consequently, BT's revenue from domestic line rentals has been well below fully allocated cost, while its revenue from calls has been above fully allocated cost. Although interconnection agreements have provided for BT's competitors to pay ADCs to offset this, the DGT has in most cases waived ADCs, thus putting BT at a disadvantage compared with those competitors which do not offer direct access to domestic customers (all except the cable companies²). In a recent policy statement,³ the DGT announced his intention to lift the constraint on BT's line rentals and to abolish ADCs, so this disadvantage may not apply in future. To the extent that BT continues to experience disadvantages from its historical position, this may to some extent offset the barriers to competition discussed above.

4.22. BT also pointed out that many of its competitors in the UK were subsidiaries of large international companies, with substantial assets and a wealth of experience in the telecommunication industry, and were not therefore in need of support. On the other hand, the DGT suggested that even large international companies would only remain in the UK if there was the prospect of competing on fair terms and making a reasonable return on their investments.

Regulation to encourage competition

4.23. Regulation to promote competition in the telecommunication network takes two main forms:

¹OFTTEL told us that this is likely to continue to be the case for the foreseeable future.

²Cable companies benefit from BT's call prices being above cost but suffer from BT's rental being below cost. Other competitors gain the benefit but do not suffer the cost since they do not provide domestic access.

³*Effective Competition: Framework for Action* (July 1995).

- specific assistance to entrants; and
- prevention of potential anti-competitive behaviour by BT.

4.24. One significant example under the first heading is the prohibition placed on BT and Mercury providing or conveying broadcast entertainment services nationally to homes. Newer licensees have similarly not been allowed to provide entertainment on a national basis. In November 1994 the Government confirmed that the ban on BT and Mercury conveying entertainment would continue until at least 1998.¹ In the absence of such restrictions, BT could have expanded its range of services to include the delivery of cable TV over its existing national network. The risks facing the cable companies in financing their investment would then have been much greater and, given the importance of sunk costs in wire-based communication systems, it is likely that the number of homes passed by cable companies would be much lower than is currently projected. Competition to BT in telecommunications would correspondingly be much less in the absence of the restrictions. There is, however, a trade-off between the benefits of more competition and the extra costs associated with duplication of wire-based communication systems.² The Government has consistently made clear that it believes the benefits of competition exceed the costs.

4.25. Another way in which entrants (to the access market) are assisted is that they do not have a USO for telecommunications. Unlike BT, entrants do not have to provide access to all homes within their licensed area. Consequently they do not have to connect properties where the costs of connection exceed the revenue earned. The significance of this depends on the cost of the USO: a recent study for OFTEL estimated the net costs at between £4 million and £40 million³ a year although this is disputed by BT. In his July 1995 policy statement,⁴ the DGT suggested that, in future, companies not themselves accepting a USO should have to contribute to the costs of other companies' USO: 'pay or play'. The European Commission has proposed a similar 'pay or play' approach.

4.26. A number of conditions in BT's licence may be regarded as designed to prevent BT from acting so as to limit the development of competition:

- BT is obliged to trade from published national price lists, which may include volume discounts based on spending at individual customer sites but not on a customer's total expenditure (Conditions 16 and 17).
- Discounted prices on the main network services must be at or above fully allocated cost unless the DGT specifically agrees otherwise (Condition 17A).
- BT must provide interconnection on a basis that does not discriminate between itself and other operators (if the parties cannot agree, the terms are subject to determination by the DGT on the basis of fully allocated cost plus a reasonable return on capital employed) (Conditions 13 and 17).
- Interconnection includes services such as access to 999 operators, and BT is also required to co-operate with other suppliers in the provision of directory information (Condition 3).
- BT must produce separate accounts for each of its businesses (see Appendix 6.3) and must not unfairly cross-subsidize any business (Condition 20B).

¹The Government also confirmed that the ban on all PTOs *providing* entertainment nationally would continue until at least 2001. BT has always been able to own cable franchises but it now retains only the franchise for Westminster.

²Some of these costs could be avoided by using BT's ducts. Contractual arrangements for this proved difficult and ducts are only used in a few cable franchise areas where the franchises had at one time been in BT ownership and BT retains ownership of the network franchise.

³In addition there were other possible elements to the USO, such as public payphones and services for people with disabilities. The extra cost of these was estimated by OFTEL at between zero and £22 million.

⁴*Effective Competition: Framework for Action.*

- BT must provide private circuits (at retail prices) to other operators. According to BT this has the effect of enabling the other operators to extend their networks without incurring the sunk costs of new ducts and cables, albeit with the disadvantage of additional dependence on BT (Condition 46).
- BT is also required to provide NP (Condition 34B), amendment to the relevant licence condition being the subject of this inquiry.

Some of these conditions are also included in the licences of other PTOs, including the cable companies.

4.27. The combined effect of these conditions is, in principle, far-reaching since BT is required to provide interconnection to other operators at a price not above fully allocated cost¹ while for regulated services it may not discount its list price to specific customers below fully allocated cost.² While cost allocation procedures may be to some extent subjective, giving BT some apparent freedom, BT is required to offer the same prices in all parts of its licensed area, preventing it from cross-subsidizing low prices, in the areas where it faces competition, with high prices in non-competitive areas. If BT faced competition in all parts of its business, including the access network, a policy of disproportionately allocating costs to and raising prices for one part of the network would benefit its market share in the rest of the network only at the expense of market share in that part of the network where costs had been loaded. In practice the strength of competition varies between market segments and therefore it could still be in BT's interests to allocate costs disproportionately to those parts of the business where competition is weakest. The provisions for accounting separation (see Appendix 6.3) help to provide OFTEL with the information needed to administer the system.

4.28. BT is also subject to the general provisions of the competition legislation (Fair Trading Act 1973 and Competition Act 1980) under which the DGT and the Director General of Fair Trading may make references to the MMC.

4.29. A number of parties argued that the regulatory system was slow to resolve problems and that it served BT to adopt a protracted and unyielding negotiating approach. OFTEL told us that, in carrying out its determination functions, it had experienced extensive delays on BT's part in responding to requests for information. Many of those providing evidence argued that this was a further brake on effective competition.

¹Including a reasonable profit, currently defined by OFTEL as 15 per cent return on historical cost capital employed.

²BT line rentals are currently below fully allocated cost (see paragraph 4.21) but call prices are above fully allocated cost.