CHAPTER 3

Market power

Market power determinations

3.1 Section 45 of the Act details the various conditions that may be set under the new regime. Section 46 explains upon whom those conditions may be imposed. In relation to SMP services conditions, section 46(7) provides that they may be imposed on a particular person who is a communications provider or a person who makes associated facilities available and, inter alia, who has been determined to have SMP in a “services market” (i.e. a specific market for electronic communications networks, electronic communications services or associated facilities). Accordingly, having identified the relevant markets as discussed in Chapter 2, the Director is required to analyse the markets in order to assess whether any person or persons have SMP as defined in section 78 of the Act (which implements Article 14 of the Framework Directive).

Approach used to assess Significant Market Power

3.2 Under the new Directives and section 78 of the Act, SMP has been newly defined so that it is equivalent to the competition law concept of dominance. Article 14(2) of the Framework Directive states that:

“An undertaking shall be deemed to have significant market power if, either individually or jointly with others, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers."

3.3 Further, Article 14(3) of the Framework Directive states that:

“Where an undertaking has significant market power on a specific market, it may also be deemed to have significant market power on a closely related market, where the links between the two markets are such as to allow the market power held in one market to be leveraged into the other market, thereby strengthening the market power of the undertaking”.

3.4 Therefore, in the relevant market, one or more undertakings may be designated as having SMP where any undertaking, or undertakings, enjoys a position of dominance. Also, an undertaking may be designated as having SMP where it could leverage its market power from a closely related market into the relevant market, thereby strengthening its market power in the relevant market.

3.5 In assessing whether an undertaking has SMP, this review takes the utmost account of the SMP Guidelines as well as Oftel’s equivalent guidelines, as referred to in Chapter 1.

Criteria used in assessing SMP in the markets for wholesale voice call termination

3.6 As explained in Chapter 2, the Director considers that the market definition relevant to this review is wholesale voice call termination provided by each MNO. This is the same definition that was identified by the Director in the May consultation and used in all cases other than '3'. Following the receipt of further information by '3', the Director has brought the market definition applied to '3' in line with that used for the other MNOs.

3.7 In his assessment of SMP, the Director's main focus is on single firm dominance. In the Director's view, the main criteria to be considered in reaching a provisional conclusion on SMP in the markets for voice call termination are market share, ease of market entry, excessive prices and profitability, and countervailing buyer power. The Director has also considered the CPP arrangements – in his view a key factor in shaping the competitive conditions prevailing in the wholesale voice call termination markets. The Director has employed statistics and figures collected by Oftel and comparative tables contained in the EU 8^{th} Implementation Report, as well as internal advice (particularly on technical aspects). This is consistent with the approach taken in the May consultation. The Director has also considered the views raised by respondents to the first consultation.

3.8 As explained in Chapter 2, it is only the terminating MNO that can terminate calls on its own network, and each MNO must therefore have 100% market share in the market for termination on their own network/s. Additionally, the CPP arrangement and current technologies do not allow any other provider to offer termination on a specific network, other than the MNO providing that network. This combination of high market share and absolute barriers to entry provides a strong presumption of market power. It is therefore necessary for the Director to consider the possibility of other factors that may affect the extent to which MNOs can act independently of their customers. In particular, the possible existence of countervailing buyer power, when fixed and mobile operators are confronted with the terminating MNO's monopoly in the provision of voice call termination, is essential in the assessment of SMP.

Assessment of SMP against relevant criteria

CPP

3.9 The CPP arrangement plays a fundamental role in shaping the boundaries, as well as the competitive conditions, of this market. CPP implies that the demand for termination is generated and the charges for it are borne by the calling party, but that the level of these charges is determined by the action of the called party who chooses the terminating network.

3.10 Hence, the CPP arrangement is crucial to Oftel's preliminary conclusion that voice call termination on each MNO's networks represents a separate economic market in which each MNO is a monopolist.

Market Shares

3.11 Each MNO has (since launch of its services) a 100% share of terminating voice calls on its own respective 2G network, both when measured by volume of calls and by revenues. As services on 3G networks are launched (as have been by '3'), each MNO running a 3G network will also have a 100% share of terminating voice calls on that network. This means that each MNO is, in effect, a monopolist in the supply of termination for voice calls to its own network.

3.12 As mentioned in Chapter 2, until it has rolled out its national network, '3' uses the 2G network of another operator to terminate some voice calls to its subscribers. Since calling parties and originating operators have no choice but to use '3' to terminate those calls (even if '3' uses another MNO's network to support its termination services), '3' has 100% share of the market for wholesale mobile voice call termination on its network.

3.13 Market shares do not represent a conclusive criterion on their own in determining whether a firm has SMP in the relevant market. However, according to Community case law, there is a presumption that firms with market shares persistently above 50% are dominant (*AKZO Chemie v Commission* - Case C-62/86 [1993] 5 CLMR 215), unless contrary evidence is provided (see also paragraph 75 of the SMP Guidelines).

3.14 In its response, and as noted in Chapter 2, T-Mobile has advised the Director that substantial changes in the share of minutes terminated supports its view that termination traffic is fully subject to competition and that it does not hold SMP. The Director acknowledges that, over time, the proportion of all calls to mobiles that are terminated on a given 2G network can change, and indeed, is likely to change further with the entry of '3'. However, this itself does not alter the Director's assessment of SMP because in his view T-Mobile uses an erroneous market definition: The Director's view is that each MNO still has a 100% share of terminating voice calls on its own respective 2G network.

Ease of market entry

3.15 The threat of potential entry can prevent incumbent firms from raising prices above competitive levels. However, this threat becomes weak when there are barriers to entry.

3.16 In this market, the CPP arrangement and the current level of technological development, which does not allow any other provider to provide termination on a specific network apart from the provider of that network, generate an absolute barrier to entry. No technological means of terminating a call elsewhere seems likely to become available and commercially viable in the near future. As discussed in Annex A, a number of significant technological developments and/or changes in consumers' behaviour would have to occur before competition could arise in the market for mobile voice call termination (see, in particular, the reasons for the absence of supply-side substitution).

Excessive prices and profitability

3.17 The ability to keep prices persistently and profitably above the competitive level is an important indicator of market power. In a competitive market, individual firms should not be able to raise prices above costs and sustain excess profits for prolonged periods of time.

3.18 The Director has examined the MNOs' behaviour in setting 2G voice termination charges to verify whether this is constrained by competitive forces. If the market for 2G voice termination were competitive, charges would be expected to reflect costs. However, voice call termination charges appear to have been substantially above a reasonable estimate of each MNO's costs for a number of years (despite formal and informal regulation).

3.19 The Director's view is that the most appropriate basis for assessing whether charges are cost reflective is forward looking long run incremental costs (LRIC) plus a mark-up for common costs. LRIC-based charges most accurately reflect the resources consumed by the provision of services and correspond most closely to the level that would occur in a fully competitive market. Hence, the Director has carried out a detailed modelling of the LRIC of UK 2G mobile networks and has estimated the LRIC of voice call termination for a 2G operator, also taking into account cost data from the MNOs. The Director has then added a mark-up for common costs. More details about how the LRIC and the mark-up have been arrived at can be found in Annex F on LRIC.

3.20 The total costs of terminating calls on a 2G network identified by the above exercise are well below the actual charges levied by each of the MNOs. Even in the case of O_2 and Vodafone, whose charges have been subject to a price cap of RPI-9% since 1998 (following the 1998 MMC investigation, O2 and Vodafone were required to reduce their weighted average termination charge from 14.8 to 11.7 ppm in 1999/2000 and by RPI-9% in the following two years), this regulatory intervention has not been sufficient to drive charges down to costs. Oftel's estimate of LRIC and the MNOs' average termination charges in the last four years are shown below in Table 3.1.

Table 3.1: Mobile termination charges – weighted average over time (nominal pence per minute)

		02	Vodafone	Orange[1]	T-Mobile[2]
1999/00	Weighted average	11.7	11.7	()	()
2000/01	Weighted average	10.86	10.86	()	()
2001/02	Weighted average	10.2	10.2	()	()
	Oftel's figure[3]	6. 14	6. 14	7. 38	7. 38
2002/03	Weighted average	9.35	9.35	()	()
	Oftel's figure	5. 75	5. 75	6. 84	7. 84

Source: Oftel
1) The relevant figure cannot be published because it is commercially confidential
2) The relevant figure cannot be published because it is commercially confidential
3) Oftel's assessment of the LRIC of 2G voice termination plus a mark-up for common costs.

3.21 The comparison made above was undertaken within the regulated environment up to 24 July 2003 and extended by means of the Director's Continuation Notices (see http://www.oftel.gov.uk/publications/eu_directives/cont_notices/index.htm). Between 1998 and March 2003 there was direct regulation of Vodafone's and O2's charges, and informal regulatory pressure on Orange and T-Mobile's charges. Following the recommendations in the CC report, in April 2003 Oftel required the four MNOs to cut their charges by 15 per cent by 25 July 2003.

3.22 In the absence of any ex-ante regulation (or threat of ex-post regulation), the Director believes that MNOs would have an incentive to set termination charges at the profit-maximising level. The Director has estimated that unregulated charges may thus be at 20 pence per minute or even higher (details of the calculation of the profit-maximising termination charges can be found in Oftel's paper *Termination Charges in the Absence of Regulation* available at: www.oftel.gov.uk/publications/mobile/ctm_2002/termination0402.pdf).

3.23 In its response to the May consultation, Vodafone has argued that competitive pressures prevent it from lowering termination rates, as to lower these would only serve to lower the costs incurred by other MNOs (leaving them more funds to compete for subscribers, such as through lower call origination rates). Vodafone argues that it therefore does not have the freedom of action characterised by European case law and competition in fact forces it to maintain termination rates at 'excessive' levels.

3.24 In the Director's view, Vodafone's analysis of the cause of excessive charges is incorrect. It is not competition in the retail market that leads to excessive termination charges – it is clear that MNOs would set excessive charges regardless of the degree of retail competition, i.e. whether the retail market was perfectly competitive or perfectly collusive. This can be seen by assuming Vodafone was a monopoly supplier of both retail services and termination services. In this circumstance, Vodafone clearly would not set termination charges at competitive levels. This result was more formally derived by Dr Armstrong in his paper *Call Termination on Mobile Networks, 11 April 2002*, and submitted to the CC in the context of that inquiry.

3.25 Rather than being the "cause" of excessive termination charges, competition in the retail market merely determines the extent to which the profits earned in the market for termination services are competed away through lower retail prices. It does not take away from an MNO's ability to earn excessive profits in the supply of wholesale termination services, which derives from its SMP. To the extent that competition does force an MNO to lower retail prices, it will be a relevant consideration in the analysis of consumer detriment and in the determination of proportionate remedies.

3.26 T-Mobile's view was that there is a lack of evidence to demonstrate monopoly pricing prior to regulation, and that Oftel had not been able to show that prices were not cost-reflective. T-Mobile supported this first contention by suggesting that its increases in termination charges implemented in 1996-97 were related to the removal of “entry discounts” and that charges were in fact tending towards a competitive level. The Director notes that T-Mobile’s evidence on price changes is ambiguous; that is, it could point towards either a competitive market or that prices converging are towards monopoly levels, with each operator setting a monopoly price for termination.

3.27 T-Mobile supports its second contention by citing an IRG paper on forward looking long run incremental cost modelling, which suggested the use of a ‘floor and ceiling’ test[13] to assess whether charges were ‘cost-oriented’. This was proposed rather than the comparison made previously by Oftel, which was termination charges to a cost estimate of LRIC plus equiproportionate common cost mark-up as discussed in paragraph 3.19. In the IRG paper, the recommended floor is long-run incremental cost while the ceiling is proposed as stand-alone cost (which could be calculated by attributing all the existing common costs of access, origination and termination services to termination alone). T-Mobile suggests that Oftel has not shown that termination charges are above the stand-alone cost of providing termination services.

3.28 While a useful theoretical construct, in the case of mobile operators it is difficult to conceive of how an operator would provide a ‘stand alone’ voice termination service, and hence decide what the relevant incremental and common costs would be. The Director’s approach to modelling the LRIC of termination services (estimated as the additional cost the firm incurs in the long run by producing the termination service) suggests that there are few common costs between origination and termination services.[14] The Competition Commission (see paragraphs 2.265-2.268 of its report) shared this view. The stand-alone cost, therefore, is not likely to be significantly higher than LRIC.

3.29 While T-Mobile seeks to draw a comparison between stand-alone cost and current charges, the far more relevant benchmark for assessing excessive charging is the likely level of charges in the absence of regulation (including the removal of the threat of regulation). This is very likely to be above the existing level of charges – one obvious illustration of this is that the current price control on Vodafone and O2 has been a binding constraint in every period of the control’s operation.

3.30 The current stand-alone cost (i.e. for 2003/04) could be estimated by taking the LRIC of voice termination estimated from the LRIC model and allocating all network and non-network common costs solely to termination services (common costs divided by inbound and on net minutes). With the inclusion of all network common costs the appropriate cost is between 5.8-6.7ppm and with all relevant non-network common costs this rises to 7.0-8.0ppm. Given the likely level of charges in the absence of regulation (see Chapter 4), the Director believes it is clear that unregulated termination charges would be well in excess of the stand-alone cost of providing these services, even allowing for the impact of network externalities. Indeed, even current (regulated) termination charges are above the long run stand-

[13] Independent Regulators Group Principles of implementation and best practice regarding FL-LRIC cost modelling, 24 November 2000, p.5.
[14] see Oftel, http://www.oftel.gov.uk/publications/mobile/ctm_2002/slides190402.ppt

alone cost of providing voice termination services. This result is also consistent with the Director's view that MNOs are unlikely, in the absence of regulation, to price mobile services on the basis of Ramsey cost-recovery rules, which would imply all prices between LRIC and stand-alone cost.

3.31 Orange suggested that the focus of this review should be on the supply of wholesale termination services for the supply of fixed-to-mobile calls. This was due to the increasing competitiveness of the access and outgoing calls retail market, which was leading to the lower effective charges for wholesale termination services used in the retail supply of off-net mobile to mobile calls. The Director further considers these arguments in the context of bilateral agreements (Chapter 5).

Countervailing buyer power

3.32 Countervailing buyer power exists when a particular purchaser (or group of purchasers) of a good or service is sufficiently important to its supplier to influence the price charged for that good or service. In order to constrain the price effectively, the purchaser must be able to bring some pressure to bear on the supplier to prevent a price rise by exerting a credible threat, for example not to purchase or to self-provide.

3.33 In this case, the question of whether each MNO providing voice call termination has SMP depends on the extent to which its monopolistic position may be off-set by the buyer power of purchasers.

3.34 BT is the major buyer of voice call termination on mobile networks (see table 3.2 below). In theory, BT might credibly threaten not to purchase termination from an MNO and this would deprive that MNO of the pricing freedom that it derives from its monopoly over termination. In practice, this issue is irrelevant since BT, even if it did have buyer power, has not been able to exert it because of its obligation to complete all calls whatever the terminating network[15]. The reasons for this obligation were set out in Oftel's guidance document *End to End Connectivity* (published in May 2003). That requirement curbs any buyer power that BT may have and leaves the MNOs free to set terminating charges above the competitive level.

Table 3.2: Share of minutes terminated on mobile networks by originating operators

Originating Operator	Share
BT	26.4%
Other Fixed MNOs	14.8%
Total Fixed	**41.3%**
Off-net	18.6%
On-net	40.2%
Total Mobile	**58.7%**

Source: Oftel Market Information

3.35 In its response to the first consultation, '3' claimed that even with the existence of the end-to-end connectivity obligation conferred on BT, '3' does not have the

[15] As a designate USO provider, BT must ensure that its customers can call any network.

ability to raise termination rates. Orange raised a similar concern in its response. The Director does not accept this claim. BT must ensure that its customers can call customers and services, irrespective of terminating network, i.e. it must provide end-to-end connectivity. It is therefore incorrect to assert that BT could properly exert countervailing buyer power to force an MNO to set lower termination rates with the threat of refusal to interconnect.

3.36 ‘3’ and Orange further argue that BT can use regulation to prevent MNOs from setting ‘excessive’ rates, as BT could always refer a dispute to Oftel on the basis that the terms and conditions offered for interconnection were unreasonable. However, it would be not be sensible for the Director to accept the argument that there is no SMP and to forbear from ex-ante regulation strictly on the basis that dispute resolution is available. Rather, a decision first needs to be made on the likelihood and magnitude of the problem in the absence of an ex-ante regulatory constraint on an MNOs charges, and then consideration should be given to how best to use regulatory instruments to overcome the problem. A finding of no SMP on the basis that existing dispute resolution procedures were sufficient to deal with excessive charging would in fact limit the Director in considering the level of charges in a dispute, because the ex ante ‘no SMP’ finding would imply that the MNO had no ability to excessively charge. Therefore, the Director maintains that, in the absence of an ex ante regulatory constraint on MNOs, and with the constraint on BT that it must ensure end-to-end connectivity, MNOs will have the ability to set termination charges independently from their competitors and customers.

3.37 With regard to other fixed MNO providers, it is unclear whether any of them has a level of buyer power sufficient to off-set each MNO’s monopoly in providing termination and constrain their charges to a cost-reflective level. To understand fully if voice call termination charges would be constrained, the Director would need to compare the market power of each MNO against the countervailing buyer power of each of the fixed network providers.

3.38 The Director takes the view that this analysis would be very extensive and not very informative. He is of the view that it would be the exception rather than the rule that the level of countervailing buyer power in these negotiations would be of the precise magnitude to ensure that voice call termination charges were constrained to the competitive level. Furthermore, the level of the charges set by MNOs suggests that other fixed MNO providers do not have countervailing buyer power. In any event, the Director has not been provided with any evidence to show anything to suggest that the position is otherwise.

3.39 The Director asserted in the May consultation that the same would also be true for all the bilateral relationships between the six MNOs. It is difficult to say what would be the outcome of bilateral negotiations between them in the absence of any regulatory intervention. It is unclear if any one MNO has the level of buyer power necessary to off-set the other’s monopoly and ensure that voice call termination charges were set at the competitive level. It is likely that the MNO with the balance of inbound traffic in its favour (the volume of calls sent and received by each operator is not equal (CC report, table 6.14) would have the incentive to keep the termination charge high and it is hard to predict which MNO’s interest would prevail in the negotiations (more details on the outcome of bilateral negotiations between the MNOs can be found in Chapter 5).

3.40 Therefore, the Director believes that it is unclear whether any purchaser of termination would possess sufficient countervailing buyer power to prevent MNOs from setting termination charges above the competitive level.

Position of ‘3’ as a new entrant

3.41 In addition to the points discussed above, in its response to the May consultation, ‘3’ argued that the Director lacked a theoretical basis and the empirical evidence to support a view that it would set excessive termination charges, as evidence only referred to the charges of other MNOs. Further, concerns have been raised with the Director that significant proportions of customers of some MNOs have switched, or will switch, from other MNOs and retain their existing phone numbers. For these ‘ported’ numbers, MNOs are unable to set the termination rate as current industry arrangements dictate that the termination rate paid is that associated with the number range and not the terminating MNO (e.g. if a customer originally subscribed to MNO x but later switched and ported his number to MNO y, the termination rate paid to MNO y is kept at the level set by MNO x).

3.42 In relation to calls originated by BT, the Director sets out in paragraph 3.34 why he believes ‘3’ will have the ability to set excessive termination charges in the absence of an ex-ante regulatory constraint.

3.43 Other MNOs do not have a requirement to ensure that their subscribers can complete calls to ‘3’ subscribers. ‘3’ argues that this, and the imbalance in subscriber numbers between ‘3’ and other MNOs, means that ‘3’ has less ability to act independently in setting its termination charges. The Director also notes the supporting evidence provided in confidence by ‘3’ on this point.

3.44 Against this, there are incentives on MNOs to complete their subscribers’ calls to ‘3’ customers, particularly as ‘3’ attracts further subscribers. For example, the subscribers of an MNO might be annoyed if they could not complete calls to all mobile subscribers (including those of ‘3’) and, if other MNOs did reach agreement with ‘3’, it would expose that MNO to commercial disadvantage. Further, any attempt to block calls to ‘3’s subscribers could be the subject of an investigation or dispute by the Director or Ofcom. The Director therefore maintains that, despite a level of countervailing buyer, ‘3’ holds a position of SMP in the relevant market. The mitigating factors outlined by ‘3’ – such as its size, its roaming agreements and the mobile number portability (‘MNP’) arrangements – are considered further in the chapters on the detrimental effects of SMP and in the regulatory option appraisal.

3.45 ‘3’ also suggested that the Director had been inconsistent by recognising in one part of the document that ‘3’ could suffer from an imbalance of market power versus the incumbent MNOs, but he had not taken this into account in the SMP designation. This suggestion is incorrect. The reference in the May consultation concerned the possibility of discrimination by MNOs in their setting of termination charges to ‘3’, not ‘3’s own ability to set high termination charges.

Likelihood of competition developing in the future

3.46 In the May consultation, the Director took the view that, at present, he does not believe that competition is likely to increase in the provision of mobile voice call termination services because no one other than the terminating MNO can terminate calls to its own subscribers. Currently, there is an absolute barrier to entry that impedes the development of competition in the market. Hence, the Director considers that MNOs are likely to continue to have SMP until 2005/06. The Director has had, and will continue to have, discussions with the MNOs on how technology and consumers' behaviour can be used in order for competition to develop in the future and thus, reduce the level of ex-ante regulation placed on MNOs. However, the Director currently considers it unlikely that the necessary developments will take place in the next three years.