Competition Act 1998

Suspected margin squeeze by Vodafone, O2, Orange and T-Mobile

Decision of the Office of Communications

Case: CW/00615/05/03

21 May 2004

This is the non-confidential version of the decision. Confidential information and data have been redacted. Redactions are indicated by “[X]”.
Summary

The Office of Communications (‘Ofcom’) has concluded that Vodafone, O2, Orange and T-Mobile (the ‘mobile operators’) have not infringed Section 18 (‘the Chapter II prohibition’) of the Competition Act 1998 (‘the Act’) or Article 82 of the EC Treaty in relation to their pricing of certain fixed-to-mobile calls to business customers.

Ofcom’s decision follows an own-initiative investigation, which was opened in response to representations made by three fixed operators that the mobile operators were pricing the delivery of certain fixed-to-mobile calls to business customers at levels that constituted a margin squeeze vis-à-vis the wholesale charges that fixed operators pay for mobile call termination.

Ofcom’s investigation covered two types of fixed-to-mobile call: Closed User Group (‘CUG’) calls and Business On-Net calls.

In respect of CUG calls, Ofcom has concluded that the relevant upstream market is the market for the provision of call termination for CUG calls across all the mobile operators’ networks covering the whole of the United Kingdom. Ofcom has concluded that none of the mobile operators is dominant in this market. Accordingly, Ofcom has concluded that none of the mobile operators has infringed the Chapter II prohibition or Article 82 of the EC Treaty in respect of CUG calls.

In respect of Business On-Net calls, Ofcom’s view is that the relevant upstream market is the market for the provision of call termination for Business On-Net calls on each respective mobile operator’s network covering the whole of the United Kingdom. Ofcom considers that each of the mobile operators is dominant in the relevant market(s). Ofcom recognises that there is a possible alternative upstream market for the provision of call termination for Business On-Net calls across all the mobile operators’ networks covering the whole of the United Kingdom, in which none of the mobile operators would be dominant.

Ofcom does not need to reach a conclusion on which of the two market definitions for Business On-Net calls is appropriate. This is because Ofcom does not consider that the mobile operators’ conduct amounts to an abuse, irrespective of the market definition that is adopted. Accordingly, Ofcom has concluded that the mobile operators have not infringed the Chapter II prohibition or Article 82 of the EC Treaty in respect of Business On-Net calls.
Chapter 1

Background

1. The mobile operators provide retail products to certain business customers that enable those customers to benefit from reduced rates for making fixed-to-mobile calls.

2. Three fixed operators made representations to the Director General of Telecommunications (hereafter referred to as ‘Oftel’) that the margin available to them in providing fixed-to-mobile calls to business customers, taking into account the wholesale charge payable by fixed operators to the mobile operators for terminating fixed-to-mobile calls, was insufficient to allow them to compete with the retail prices that the mobile operators were charging for fixed-to-mobile calls to business customers.

3. These fixed operators alleged that the mobile operators were abusing a dominant position in the provision of wholesale mobile call termination for fixed-to-mobile calls with the intention of excluding fixed operators from the downstream retail market for fixed-to-mobile calls made by business customers.

4. On 16 May 2003, Oftel launched an own-initiative investigation into this matter under Section 25 of the Act. Under Section 25 of the Act, Oftel may conduct an investigation where there are reasonable grounds for suspecting that the Chapter II prohibition has been infringed. Oftel stated that the investigation would consider whether the prices charged by mobile operators for the delivery of fixed-to-mobile calls to business customers were set at a level which represented a margin squeeze vis-à-vis the wholesale mobile call termination charge.

5. Oftel considered that in the light of the report from the Competition Commission and Oftel’s preliminary conclusion in the market review consultation on calls to mobile, there were reasonable grounds to suspect that each of the mobile operators may be dominant in the supply of wholesale call termination on its own network. On the basis of the allegations made by the fixed operators, Oftel considered that there were reasonable grounds for suspecting that the mobile operators may be abusing this dominant position and infringing the Chapter II prohibition.

6. Oftel ceased as of 29 December 2003 and its powers under the Act have now been assumed by Ofcom. Ofcom has concurrent powers under the Act in relation to activities connected with communications matters pursuant to section 371 of the Communications Act 2003.

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7. The Act has been amended as of 1 May 2004 in order to implement EC Regulation 1/2003\(^3\) into UK law. Ofcom now has the power under the Act to apply Articles 81 and 82 of the EC Treaty, in addition to section 2 of the Act (the ‘Chapter I prohibition’) and the Chapter II prohibition. As of 1 May 2004, this investigation was carried out under both the Chapter II prohibition and Article 82 of the EC Treaty\(^4\).

\(^3\) OJ [2003] L1/1.

\(^4\) The parties were informed of this fact by letter dated 30 April 2004.
Chapter 2
The facts

A. The Undertakings

8. Vodafone Limited is a wholly-owned subsidiary of Vodafone Group Plc, a UK listed company.

9. O2 (UK) Limited is the UK subsidiary of mmO2 plc, which was established in 2001 following a de-merger of the domestic and international wireless businesses of BT. Until re-branded as O2 in 2002, O2 was called BT Cellnet.

10. Orange plc is the listed holding company for Orange in the UK. The Orange mobile network was launched in the UK in 1994. In 2000 Orange was acquired by France Telecom.

11. T-Mobile (UK) Limited is the UK subsidiary of T-Mobile International AG, owned by Deutsche Telekom. The T-Mobile brand was originally called One2One, which was founded in 1993. It was sold in 1999 by its parent companies, Media One International Incorporated and Cable & Wireless plc, and was re-branded as T-Mobile UK in 2002.

12. Although an own-initiative investigation, this investigation was opened in response to representations made by three fixed operators. These fixed operators wished to remain anonymous, and are hereafter referred to as 'fixed operators A, B and C'. An additional fixed operator, who also wished to remain anonymous, also submitted representations during the investigation.

B. The Investigation

The three retail products under investigation

13. The investigation considered three retail products offered by the mobile operators:

(i) Mobile Virtual Private Networks (‘MVPN’) – a MVPN is created when a mobile operator installs a leased line from a business customer’s office to the mobile network.

(ii) GSM Gateways - a GSM Gateway is a bank of Subscriber Identity Module (‘SIM’) cards mounted in a device which provides connectivity between a business customer’s office to the mobile network.

(iii) Integrated Call Extension (‘IEC’) product – when using an IEC, a business customer sets up its Private Branch Exchange (‘PBX’) to translate a configured range of short codes and prefix [3<]. Fixed-to-mobile calls are then delivered to the mobile operator’s network over the Public Switched Telephone Network (‘PSTN’).

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5 [3<]

6 A PBX is used for connecting calls within an end user's network.
These products have been termed ‘Non-PSTN products’, as in
general the delivery of fixed-to-mobile calls in this
manner does not pass over the PSTN, ie the fixed
network7.

The two fixed-to-mobile call types under investigation

14. There are three different types of fixed-to-mobile call that are offered within the
three retail products covered by the investigation. Only two of these call types
are relevant to the investigation. These are:

(i) Closed User Group (‘CUG’) calls - calls from fixed line extensions
(usually within a business customer’s office) to a set of specially
registered mobile handsets (usually belonging to the business
customer’s employees) on the network of the mobile operator
providing the Non-PSTN product.

(ii) Business On-Net calls - calls from fixed line extensions (usually within
a business customer’s office) to mobile handsets on the network of the
operator providing the Non-PSTN product, but which have not been
registered as part of the CUG.

15. For CUG calls and Business On-Net calls, the mobile operator supplying the
Non-PSTN product is also terminating the calls on its own network. As a result,
there is a possibility that the mobile operator could leverage any dominant
position that it may hold in the upstream market for call termination in respect of
these calls into the downstream market in which these calls are supplied.

The fixed-to-mobile call type not under investigation

16. There is one additional fixed-to-mobile call type that is provided by a mobile
operator under a Non-PSTN product. This call type is a Business Off-Net call.
Business Off-Net calls are calls from fixed line extensions (usually within a
business customer’s office) to mobile handsets on the network of a mobile
operator other than the one providing the Non-PSTN product.

17. For Business Off-Net calls, the mobile operator supplying the Non-PSTN
product is not terminating these calls on its own network. Instead, Business Off-
Net calls are terminated on another mobile operator’s network to whom the
mobile operator supplying the Non-PSTN product has to pay a wholesale call
termination charge. As a result, there is no possibility that the mobile operator
supplying the Non-PSTN product could leverage any dominant position it may
hold in respect of the provision of call termination on its own network into the
downstream market in which Business On-Net calls are supplied. Therefore
Business Off-Net calls were not relevant to the investigation.

7 Although calls delivered by an IEC product pass over the PSTN, IEC has been included
within the definition of a ‘Non PSTN Product’ in this investigation because it both serves the
same purpose as and competes with MVPNs and GSM Gateways. When the investigation
was opened it was confirmed in Ofcom’s published Competition Bulletin that the IEC product
would fall within the scope of the investigation (at
http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_cases/closed_all/cw_615/?a=
87101).
Use of Non-PSTN products

18. Non-PSTN products are used by a small number of business customers. As of 31 March 2003, there were a total of 1,079 business customers that subscribed to one of the Non-PSTN products under investigation.

19. As of 31 March 2003, the business customers who purchased Non-PSTN products had a total of 672,000 handsets, or 623 handsets per customer. The average customer’s spend on mobile services was £297,000 a year. This spend is significantly larger than a medium sized business user’s spend on mobile services, which is £16,740 a year.

20. In the year to 31 March 2003 CUG calls and Business On-Net calls amounted to 4.5% of all business fixed-to-mobile call minutes, and 2% of all fixed-to-mobile call minutes (i.e. including calls made by both residential and business customers).

21. CUG calls made up 67% of the total call minutes for the two call types under investigation. Business On-Net calls made up 33% of the total call minutes for the two call types under investigation.

Service Providers for Non-PSTN products

22. Both O2 and Vodafone offer a wholesale Non-PSTN product. As of 31 March 2003, over service providers purchased wholesale products from these mobile operators to serve a total of business customers. For example, both BT and Kingston Communications currently purchase a wholesale Non-PSTN product.

Mobile operators’ revenues from Non-PSTN products

23. The total revenue that the four mobile operators derive from Non-PSTN Products (comprised of equipment, subscription and call revenue) represented slightly less than £300m in the year to 31 March 2003. The majority of this revenue was accounted for by conventional mobile services, such as outgoing mobile calls.

24. The total revenue that mobile operators derive from the call types under investigation, that is, CUG calls and Business On-Net calls, was £25m.

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8 Mobile operators’ submissions in response to a notice under Section 26 of the Act dated 5 June 2003. Vodafone’s, O2’s and Orange’s data relates to the period to 31 March 2003. T-Mobile’s data relates to the period to 30 June 2003 or 31 July 2003. For ease of reference and consistency, the period to 31 March 2003 has been used throughout.
10 O2’s and Vodafone’s responses to notices issued under Section 26 of the Act dated 5 June 2003 and 30 July 2003.
11 Mobile operators’ submission in response to a notice under Section 26 of the Act dated 5 June 2003.
Wholesale mobile termination and implicit mobile termination

25. For a fixed-to-mobile call conveyed over the PSTN, the call originates on a fixed network and terminates on a mobile network. The fixed operator originating the call has to pay a wholesale termination charge to the mobile operator terminating the call on its network.

26. However, where a Non-PSTN product is used, although the call originates on a fixed network, no wholesale mobile termination charge is paid due to the Non-PSTN product. Nevertheless, the retail price paid by a business customer for CUG calls and Business On-Net calls will include an implicit mobile termination charge for the service of terminating the call on the mobile operator’s network.

27. Figure 1 outlines the difference between wholesale mobile termination and implicit mobile termination in respect of a fixed-to-mobile call:

**Figure 1 : Implicit mobile termination and wholesale mobile termination**

Regulation of wholesale mobile termination charges

28. Each of the mobile operators offers standard wholesale termination charges. These charges apply to all third party operators (both fixed and mobile) who terminate calls on its network.
29. In September 2001, Oftel proposed that the wholesale termination charges of Vodafone, O2, Orange and T-Mobile be reduced by RPI-12% each year for four years until March 2006. The mobile operators rejected the proposed licence modifications to bring into force these controls. As a result, in January 2002 Oftel asked the Competition Commission to investigate whether, in the absence of these controls, the termination charges of the mobile operators would be against the public interest, and, if so, whether this could be remedied by way of a modification to their licences.

30. In its December 2002 report\textsuperscript{12} the Competition Commission recommended that;

- each mobile operator should reduce the level of the wholesale termination charge by 15% in real terms before 25 July 2003;
- O2’s and Vodafone’s charges should be subject to further reductions of RPI-15% between 25 July 2003 and 31 March 2004 and for each of the two subsequent financial years to March 2006; and
- Orange’s and T-Mobile’s charges should be reduced by RPI-14% between 25 July 2003 and 31 March 2004 and in each of the subsequent two time periods.

31. Following the Competition Commission’s report, formal licence modifications to the mobile operators’ licences were made by Oftel on 4 April 2003. The controls have been carried forward by way of Continuation Notices under paragraph 9 of Schedule 18 of the Act, pending completion of the review of wholesale mobile voice call termination markets\textsuperscript{13}.

32. In complying with the charge controls imposed on wholesale mobile termination charges, mobile operators are allowed to vary their termination charges by time of day. Each of the mobile operators has chosen to implement higher wholesale termination charges for weekday daytime calls, and lower wholesale termination charges for weekday evenings and at weekends.

\textbf{The alleged anti-competitive activity under investigation}

33. The investigation has considered whether the retail prices charged by the mobile operators to retail business customers for the delivery of CUG calls and Business On-Net calls are set at a level which represents a margin squeeze vis-à-vis the wholesale mobile termination charge.

34. The concerns about a potential margin squeeze stemmed from the fact that the retail prices for certain fixed-to-mobile calls (particularly CUG calls\textsuperscript{14}) appear to be below wholesale termination charges. Fixed operators A, B and C argued that this pricing meant they would be excluded from providing fixed-to-mobile calls to retail business customers\textsuperscript{15}. An illustrative example of this is set out in Figure 2:

\textsuperscript{12} See footnote 1.
\textsuperscript{13} See footnote 2.
\textsuperscript{14} Fixed operators A, B and C stated [\textgreater] that the “ability to set retail prices for Type 1 (CUG) calls below the termination rate is the key competitive advantage enjoyed by the mobile operator.”
\textsuperscript{15} See paragraphs 179 and 180, below.
35. At the start of the investigation it was confirmed to interested parties that the investigation would be concerned with the issue of a suspected margin squeeze\textsuperscript{16}.

Evidence gathered during the investigation

36. On 5 June 2003, a formal notice under Section 26 of the Act was sent to the mobile operators which, amongst other things, requested information on the Non-PSTN products supplied by the mobile operators and the mobile operators’ customer base for Non-PSTN products.

37. On 30 July 2003, a formal notice under Section 26 of the Act was sent to the mobile operators which, amongst other things, requested data on customer numbers for Non-PSTN products, and data that would enable the average retail price for CUG calls and Business On-Net calls to be calculated.

38. On 3 October 2003, a formal notice under Section 26 of the Act was sent to the mobile operators which required that the mobile operators provide existing documentary evidence that each mobile operator had in its possession regarding the commercial strategy (and the rationale behind that commercial

\textsuperscript{16} See link to competition bulletin entry at footnote 7.
strategy) in respect of the provision of its Non-PSTN products, in particular the pricing arrangements for such products.

39. On 30 April 2004, the mobile operators were advised that information that had been requested under Section 26 of the Act would be relied upon in the context of an investigation under Article 82 of the EC Treaty.

40. Research was also undertaken on large business customers in order to gather information about suppliers used for Non-PSTN products and evidence on, amongst other things, their perceptions and use of Non-PSTN products17.

17 Information on how this research was conducted is set out in Annex 2.
A. Introduction

41. The Chapter II prohibition prohibits conduct by one or more undertakings which amounts to the abuse of a dominant position in a market if it may affect trade within the United Kingdom or part of it.

42. This investigation concerned whether the mobile operators have infringed the Chapter II prohibition by engaging in a margin squeeze between their wholesale termination charge and the retail prices charged to business customers for CUG calls and Business On-Net calls.

43. During the course of the investigation, Ofcom acquired the power under the Act to apply Article 82 of the EC Treaty in addition to the Chapter II prohibition. Accordingly, as of 1 May 2004 the investigation was conducted under both the Chapter II prohibition and Article 82 of the EC Treaty.

44. In order to assess whether each of the mobile operators has infringed the Chapter II prohibition and Article 82 of the EC Treaty in this case, Ofcom has considered the following:

   (i) the relevant markets and whether each of the mobile operators holds a dominant position in a relevant market;

   (ii) whether the conduct of the mobile operators amounts to an abuse, and specifically:

          (a) whether the mobile operators' conduct is part of an anti-competitive strategy to restrict competition in the provision of fixed-to-mobile calls to business customers; and

          (b) whether the mobile operators' conduct has had or is likely to have a material adverse effect on competition.

Market definition and dominance

45. The European Court of Justice has defined a dominant position as:

   “…a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by giving it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of consumers”.

46. For the purposes of the Chapter II prohibition and Article 82 of the EC Treaty, dominance is assessed within a relevant economic market. The relevant
market has two dimensions: the relevant goods or services (the product market) and the geographic extent of the market (the geographic market) \(^{21}\).

47. A relevant product market comprises all those products and/or services which are regarded as interchangeable by any reason of the products’ characteristics, prices and intended use \(^{22}\). A relevant geographic market comprises the area in which the undertakings concerned are involved in the supply and demand of products or services in which the conditions of competition are sufficiently homogeneous and which can be distinguished from the neighbouring areas because the conditions of competition are appreciably different in those areas \(^{23}\).

48. For the purposes of the current investigation, there are two markets of relevance to the alleged breach of the Chapter II prohibition and Article 82 of the EC Treaty, namely:

(i) the upstream market in which each of the mobile operators may hold a dominant position \(^{24}\); and

(ii) the downstream market in which the effect of any conduct carried on by each of the mobile operators is likely to occur.

49. The analysis below is concerned only with the market(s) in which the mobile operators may hold a dominant position. The market(s) in which the effect of the mobile operator’s conduct may be felt is discussed in section E below.

The market(s) in which each of the mobile operators may hold a dominant position

50. In considering market definition, it is necessary to identify constraints on the price setting behaviour of firms. There are two main competitive constraints to consider: how far it is possible for customers to substitute other products or services for those in question (demand-side substitution); and how far suppliers could switch, or increase, production to supply the relevant products or services (supply-side substitution) following a price increase.

51. The concept of the ‘hypothetical monopolist test’ is a useful tool to identify close demand-side and supply-side substitutes. A product (or service) is considered to constitute a separate market if a hypothetical monopoly supplier could impose a small but significant, non-transitory increase in price (‘SSNIP’) above the competitive level without losing sales to such a degree as to make this unprofitable. If such a price rise would be unprofitable, because customers would switch to other products, or because suppliers of other products would begin to compete with the monopolist, then the market definition should be expanded to include the substitute products.

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\(^{21}\) See OFT Guideline 403 *Market Definition*, paragraph 2.10.


\(^{24}\) It was recognised by the Director General of Fair Trading in the *Genzyme* case that, for the purposes of the Chapter II prohibition, in a margin squeeze case, it is necessary to establish dominance in the relevant upstream market. It is not necessary to establish dominance in the downstream market. Decision No. CA98/3/03 of 27 March 2003, at paragraph 369. The part of the decision relating to margin squeeze was upheld on appeal to the CAT ([2003] CAT 4).
52. In relation to this investigation, it is relevant to note the market definitions proposed in two Oftel consultation documents, published in May 2003 and December 2003\textsuperscript{25}. Chapter 3 of the May consultation document set out the view that there is a separate market for wholesale voice call termination on each mobile network. In particular, this document considered that are no adequate demand or supply side substitutes for the termination of calls to customers of a specific mobile operator. However, it also recognised that the existence of ‘closed user groups’ could act as a constraint on mobile voice call termination charges. The analysis set out in that document, as elaborated on in the December consultation document, represents Ofcom’s current view on the relevant markets for the supply of wholesale mobile call termination, and each mobile operator’s position within those markets.

53. This investigation was opened in response to allegations made by fixed operators A, B and C that the mobile operators were abusing their dominant position in relation to the provision of wholesale mobile call termination for specific fixed-to-mobile call types. The two fixed-to-mobile call types that were relevant to this investigation are CUG Calls and Business On-Net calls. As has been set out, no wholesale termination charge is paid for the termination of these calls due to the provision of a Non-PSTN product. However, the retail price paid by a business customer for these calls will include an implicit termination charge for the service of terminating the call on the mobile operator’s network.

B Market definition and dominance assessment for CUG calls

The relevant product market

54. Previous reviews undertaken by both Oftel and the Competition Commission\textsuperscript{26} have found that there is a separate market for wholesale call termination on each mobile operator’s network. The main factor leading to this conclusion is the disconnection caused by the Calling Party Pays (‘CPP’) arrangement.

55. Under the CPP arrangement, the calling party\textsuperscript{27} (and not the called party\textsuperscript{28}) pays the total price of a retail call to a mobile. This means that the voice call termination charge is included in the cost base of the network operator (either fixed or mobile) originating the call, and is reflected in the retail price it sets for calls originating on its network. The CPP arrangement therefore creates a disconnection between the calling party who pays for the termination service and the mobile subscriber (ie the called party) who chooses the provider of that service.

56. The effect of this disconnection between the calling party and the called party is that a 5-10\% increase in the price of a call to a mobile phone would not be rendered unprofitable by the mobile subscriber (ie. the called party) switching to a different mobile network. This is because they do not pay for the incoming call.

\textsuperscript{25} See footnote 2
\textsuperscript{26} See footnote 1 and footnote 2.
\textsuperscript{27} The person making the call, who pays for the call and so indirectly the termination charge.
\textsuperscript{28} The person receiving the call, who makes the choice of terminating network and so could influence the level of the termination charge.
57. Nor would a 5-10% increase in the price of a call to a mobile phone be rendered unprofitable by the calling party switching to other means of communication to reach mobile customers, as the mobile subscriber (i.e., the called party) can usually be contacted only on one mobile network – the one that he or she has chosen as his or her provider of mobile services.

58. Where the CPP arrangement applies in the retail market for calls to mobiles, a mobile operator does not have an incentive to keep the price of calls to mobiles low. This is because those calling a mobile subscriber cannot take their business elsewhere if dissatisfied, as they have no alternatives to terminating the calls on the network to which the called party subscribes.

59. Where the CPP arrangement applies in the wholesale market for calls to mobiles, a mobile operator has little incentive to keep wholesale termination charges to fixed operators low, because the fixed operators need to ensure that all calls made by their subscribers are terminated.

60. Hence, in circumstances where the disconnection caused by CPP arrangement applies, a mobile operator is likely to be able to raise wholesale call termination charges above the competitive level without suffering sufficient adverse effects to make the rise unprofitable.

61. In the review of wholesale mobile voice call termination markets\(^2\), it was stated that the effect of the disconnection caused by the CPP arrangement is crucial to the conclusion that wholesale termination on each mobile operator’s network represents a separate economic market in which each mobile operator is a monopolist.

62. This review considered how the calling party would respond to a price increase in calls to mobiles engendered by a rise in voice call termination charges, and whether their reaction could be a source of competitive pressure on termination charges.

63. The review noted three conditions that needed to be satisfied in order for a SSNIP in the price of termination to be rendered unprofitable due to substitution by the calling party:

- the calling party must be sufficiently aware that they are calling a mobile and that they are calling a specific mobile network;
- the calling party must be sufficiently aware of the price of calling that particular network; and
- the calling party must be sensitive to changes in the prices of calling the network they want to reach (i.e., an increase in the termination charge above the competitive level must cause callers to adapt their behaviour to find an alternative way of contacting the person they want to call).

64. The review considered that for the generality of fixed-to-mobile calls, these conditions are not satisfied\(^3\). For example, as the disconnection caused by the CPP arrangement applies to the generality of fixed-to-mobile calls, in the event of an increase in the termination charge above the competitive level, the calling party will not be able to adapt their behaviour to find an alternative way of contacting the person they want to call.

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\(^2\) See footnote 2.
\(^3\) See footnote 2.
65. For CUG calls, the business customer chooses its supplier for a Non-PSTN product and registers particular mobile handsets to be included within the CUG. This means that the business customer is aware that they are calling a mobile, and that they are calling a specific network.

66. In addition, the business customer is both choosing the network to which it will make CUG calls, and also paying for the CUG calls that are made. The business customer will therefore be aware of the price of calling the network in question.

67. Furthermore, the price of CUG calls is considered by the business customers that purchase Non-PSTN products to be an important factor when identifying which mobile operator is going to supply a Non-PSTN product. Research and evidence gathered during the investigation demonstrates that awareness among these business customers of the price of CUG calls is high31. As the calling party and the called party are effectively one and the same in the case of CUG calls, the calling party can adapt its behaviour in the event of a change in the prices of calling the network that it wants to reach, and can choose a different network for the supply of CUG calls.

68. Accordingly, in contrast to the generality of fixed-to-mobile calls, the disconnection caused by the CPP arrangement does not apply in respect of CUG calls. In the event of a SSNIP in the price of CUG calls, a business customer that purchases the Non-PSTN product is likely to switch to another provider.

69. Therefore Ofcom considers that the relevant product market in which the mobile operators may be dominant is the market for the provision of mobile call termination for CUG calls across all the mobile operators’ networks.

The relevant geographic market

70. Each of the four mobile operators which provides CUG calls offers these calls throughout the whole of its network. These networks together cover the whole of the United Kingdom. As there is a separate product market for the termination of CUG calls across all mobile operators’ networks, it is reasonable to conclude that the geographic extent of the market matches the scope of these mobile networks. Consequently, the relevant geographic market is the whole of the United Kingdom.

Conclusion on the relevant market in which each mobile operator may hold a dominant position in respect of CUG calls

71. Ofcom’s view is that the relevant market in which each mobile operator may hold a dominant position is the market for the provision of call termination for CUG calls across all mobile operators’ networks covering the whole of the United Kingdom.

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31 See Annex 2, and also the evidence set out in section 1.1 and section 2 of Annex 1.
Each mobile operator’s position within the market for the provision of call termination for CUG calls across all mobile operators’ networks

72. In assessing whether an undertaking is in a dominant position, Ofcom considers the extent to which the undertaking faces constraints on its ability to behave independently of its competitors, customers and ultimately consumers. Those constraints might include existing competitors, potential competitors and other factors such as strong buyer power from the undertaking’s customers.

73. A CUG call is provided within a bundle of different types of calls in a Non-PSTN product. However, the evidence collected by Ofcom during its investigation has shown that the price of CUG calls within that bundle is one of the key factors taken into account by business customers when purchasing a Non-PSTN product.

74. The demand for the provision of call termination for CUG calls in the upstream market is a derived demand from the supply of CUG calls in the downstream retail market, i.e. the demand for the input of call termination for CUG calls is dependent on business customers’ demand to make CUG calls at the retail level. In order to assess whether any mobile operator is dominant in the upstream market for the provision of call termination for CUG calls, it is therefore necessary to consider competition in the downstream retail market in which CUG calls are made.

75. Business customers are not able to purchase CUG calls as a separate retail product, but instead as one element of the overall Non-PSTN product. Therefore an analysis of whether any mobile operator is dominant in the upstream market for the provision of call termination for CUG calls depends on the competitive conditions in the downstream retail market for the supply of Non-PSTN products. This is because any constraints on the market power that each mobile operator may have in the market for the provision of call termination for CUG calls derive from the actions of either the customers that purchase Non-PSTN products in the downstream retail market, or the other operators that supply Non-PSTN products in the downstream retail market.

Competitive conditions in the downstream market for the supply of Non-PSTN products

76. Ofcom considers that there is effective competition in the downstream market for the supply of Non-PSTN products, for the reasons set out below.

(i) Shares of supply for the Non-PSTN product in the downstream market

77. In total, 1,079 business customers purchased the non-PSTN product as at 31st March 2003. [X%] has the most customers at [X%] or [X%]% followed by [X%] at [X%] or [X%]% [X%] accounts for around [X%]% of business customers, and [X%] for [X%]% Both Vodafone and O2 supply wholesale Non-PSTN products to independent service providers. In total, these service providers account for a further [X%]% of sales. These shares of supply are shown in Table 1:

32 See paragraph 45 above.
33 OFT Guidelines 415 Assessment of Market Power, paragraph 2.10.
34 Examples of this evidence are set out in section 1.1 and section 2 of Annex 1.
35 Mobile operators’ submissions in response to a notice under Section 26 of the Act dated 5 June 2003.
Table 1: Customer Numbers for the Non-PSTN product, 31 March 2003

<table>
<thead>
<tr>
<th>Operator</th>
<th>Total Customers Numbers</th>
<th>Share by Customer Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vodafone</td>
<td>[лект]</td>
<td>[лект]</td>
</tr>
<tr>
<td>O2</td>
<td>[лект]</td>
<td>[лект]</td>
</tr>
<tr>
<td>Orange</td>
<td>[лект]</td>
<td>[лект]</td>
</tr>
<tr>
<td>T-Mobile</td>
<td>[лект]</td>
<td>[лект]</td>
</tr>
<tr>
<td>O2 service providers</td>
<td>[лект]</td>
<td>[лект]</td>
</tr>
<tr>
<td>Vodafone Service providers</td>
<td>[lectic]</td>
<td>[lectic]</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1079</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

78. Although [lectic]'s share by customer numbers makes it by far the largest supplier, a comparison of shares for Non-PSTN products and revenues associated with the Non-PSTN product provides a more useful insight into the market. For example, if an operator has a disproportionately higher share of the market by revenue than its share by customer numbers might otherwise suggest, this indicates it may target higher value customers, from which it is able to derive greater value. It can be seen from revenue figures associated with Non-PSTN products that despite having a lower market share than [лект], [lectic]'s share of the market by revenue is the highest. Table 2 shows the market shares by revenues for the Non-PSTN product:

Table 2: Total Revenues for the Non-PSTN product as at 31 March 2003

<table>
<thead>
<tr>
<th>Operator</th>
<th>Total revenue £m</th>
<th>Share by Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vodafone</td>
<td>[lectic]</td>
<td>[lectic]</td>
</tr>
<tr>
<td>O2</td>
<td>[lectic]</td>
<td>[lectic]</td>
</tr>
<tr>
<td>Orange</td>
<td>[lectic]</td>
<td>[lectic]</td>
</tr>
<tr>
<td>T-Mobile</td>
<td>[lectic]</td>
<td>[lectic]</td>
</tr>
<tr>
<td>O2 service providers</td>
<td>[lectic]</td>
<td>[lectic]</td>
</tr>
<tr>
<td>Vodafone Service providers</td>
<td>[lectic]</td>
<td>[lectic]</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>294.5</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

79. On the basis of total revenue for the Non-PSTN product, [lectic] and [lectic] have market shares of [lectic] % and [lectic] % respectively.

80. However, Ofcom considers that the market share data needs to be set in the context of the keen competition that exists between mobile operators and service providers for the supply of Non-PSTN products in the downstream market, and the buyer power exerted by the large business customers that purchase Non-PSTN products.

(ii) Competition in the downstream market for the supply of Non-PSTN products

81. Data collected during the investigation demonstrates that there is active competition between the mobile operators in the provision of Non-PSTN products\(^{36}\). For example, in 2003 [lectic] lost [lectic] % of the customers that it had at

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\(^{36}\) Mobile operators’ submissions in response to a notice under Section 26 of the Act dated 30 July 2003.
the start of the previous year. Furthermore, despite having a $[\%]$ share of the total customer base, $[\%]$’s customer base is growing quickly. $[\%]$’s customer numbers for these products grew by approximately $[\%]$ between 2002 and 2003. It is also clear from the evidence gathered during the investigation that $[\%]$ and $[\%]$ consider $[\%]$ to be a threat, particularly on tariff competition$^{37}$.

82. In addition, there is competition between the mobile operators and service providers. Both O2 and Vodafone offer a wholesale Non-PSTN product. As at 31st March 2003, over $[\%]$ service providers (including BT and Kingston Communications) purchased this product to serve a total of $[\%]$ business customers. During the investigation $[\%]$ provided evidence of $[\%]$ business customers (amounting to $[\%]$ mobile subscriptions) that had left $[\%]$ for its mobile service providers between April and May 2003$^{38}$. Documentary email evidence gathered during the investigation from $[\%]$ also supports the view that $[\%]$ lose contracts for the supply of Non-PSTN products to $[\%]$ service providers$^{39}$.

(iii) Existence of countervailing buyer power by the business customers that purchase Non-PSTN products

83. It has been recognised that buyer power can, in certain circumstances, act as a significant constraint on the market power of a seller:

"The main potential constraint on market power of a seller is the strength of buyers and the structure of the buyers' side of the market. The potential market power of a seller is offset by the buying power of a buyer if, in the absence of that buyer, prices would have been higher. Buyer power allows an undertaking (or a group of undertakings acting together) to exert a substantial influence on the price, quality or the terms of supply of a good purchased. It requires that a buyer should be large in relation to the relevant market, well informed about alternative sources of supply and that buyer could readily, and at little cost to itself, switch from one supplier to another, or even commence production of the item himself."$^{40}$

84. Ofcom’s assessment of customer buyer power in this case has been premised on:

(a) the size of the business customers that purchase Non-PSTN products;
(b) other evidence of customer buyer power; and
(c) the existence of the Non-PSTN product itself.

$^{37}$ Examples of this evidence are set out in section 3 of Annex 1.
$^{38}$ $[\%]$.
$^{39}$ Examples of evidence are set out in section 4 of Annex 1.
$^{40}$ OFT’s Guidelines 415 Assessment of Market Power, paragraph 6.1.
(a) The size of the business customers that purchase Non-PSTN products

85. As has been set out, as of 31 March 2003 there were a total of 1,079 business customers that subscribed to one of the Non-PSTN products under investigation. Evidence gathered during the investigation on the size of an average customer for Non-PSTN product is set out in Table 3:

Table 3: Details of the average customer of a Non-PSTN product

<table>
<thead>
<tr>
<th>Average Customer for Non-PSTN Products</th>
<th>Average Annual Expenditure/ Call Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual expenditure on product</td>
<td>£297,000</td>
</tr>
<tr>
<td>Average handsets per customer</td>
<td>623</td>
</tr>
<tr>
<td>Average number of CUG minutes</td>
<td>194,000</td>
</tr>
<tr>
<td>Average number of Business On-Net minutes</td>
<td>114,500</td>
</tr>
<tr>
<td>Average expenditure on CUG calls</td>
<td>£9,700</td>
</tr>
<tr>
<td>Average expenditure on Business On-Net calls</td>
<td>£12,500</td>
</tr>
<tr>
<td>Total Call minutes(^{42})</td>
<td>2,230,000</td>
</tr>
</tbody>
</table>

Table 3: Details of the average customer of a Non-PSTN product

86. Evidence collected from the mobile operators has shown that the business customers that purchase Non-PSTN products have an average spend on mobile services of £297,000 per annum. This spend is significantly larger than a medium sized business user’s spend on mobile services, which is £16,740 a year\(^{43}\). Therefore this evidence demonstrates that these customers are large in relation to the generality of business customers.

(b) Other evidence of customer buyer power

87. Evidence gathered during the investigation also demonstrates that these business customers are able to have a substantial influence on the price of Non-PSTN products, \[^{44}\]. Documentary evidence of particular contracts shows that these customers are putting pressure on the mobile operators to price CUG calls at a certain level, with the mobile operators competing against each other on this basis\(^{45}\).

88. Evidence has also been obtained which shows that these customers are able to exert a significant influence on the quality of the Non-PSTN product. For example, the mobile operators have sought to enhance their Non-PSTN product offerings in order to ensure that customer requirements continue to be met. This evidence also demonstrates that lack of functionality is a factor that would cause business customers to switch to alternative mobile operators for the supply of a Non-PSTN product\(^{46}\).

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\(^{41}\) Mobile operators’ submissions in response to a notice under Section 26 of the Act dated 30 July 2003

\(^{42}\) Fixed-to-mobile calls, outgoing mobile-to-mobile calls, outgoing mobile-to-fixed calls.

\(^{43}\) See footnote 9.

\(^{44}\) Mobile operators’ submissions in response to a notice under Section 26 of the Act dated 3 October 2003.

\(^{45}\) Examples of such evidence are set out in section 1.1 of Annex 1.

\(^{46}\) Examples of this evidence are set out in section 1.2 of Annex 1.
89. The evidence shows that business customers are able to have a substantial influence on the terms on which the Non-PSTN product is supplied. For example, evidence has been provided which shows that mobile operators are under pressure to provide bespoke offerings according to the requirements of a particular customer.

90. Research carried out during the investigation also shows that business customers who have purchased Non-PSTN products have been well informed about alternative sources of supply. For example, this research found that almost two thirds of all contracts for Non-PSTN products had been put out for tender. In addition, documentary evidence was obtained on tender documents issued by individual business customers, which set out in some detail the customers’ specific requirements and which invited responses from all four of the mobile operators. Such evidence demonstrates that the potential purchasers of Non-PSTN products are sophisticated organisations who have the resources in place to assess all the options available to them.

91. Finally, information has been obtained on the standard contract lengths for the supply of the Non-PSTN product. This information demonstrates that the standard contract lengths for the Non-PSTN products supplied by Vodafone, O2, Orange, T-Mobile are between [X] and [Y] months. This data does not indicate that purchasers of Non-PSTN products are required to contract for unreasonably long periods. Although [X]’s standard contract lengths are longer than those of the other mobile operators, [Y] has stated that some customers seek terms of [X] months and that such requests are usually granted. In any case, the business customer can also choose to transact with another supplier if they consider that [X]’s standard contact period is too long. Furthermore, evidence was also obtained which indicates that business customers do switch between suppliers of Non-PSTN products.

(c) The existence of the Non-PSTN product itself

92. Ofcom considers that the very existence of the Non-PSTN product is due in large part to the buyer power of large business customers. These customers have been able to put pressure on the mobile operators to provide CUG calls involving a relatively low implicit charge for call termination.

93. The businesses that purchase Non-PSTN products have been able to exert this pressure as their custom is particularly important to the mobile operators. This view is supported by evidence gathered during the investigation.

Ofcom’s conclusion on the position that each mobile operator holds in the market for the provision of call termination for CUG calls across all mobile operators’ networks

94. For the reasons set out above, Ofcom considers that there is effective competition in the downstream retail market for the supply of Non-PSTN

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47 See Annex 2.
48 Examples of this evidence are set out in section 1.5 of Annex 1.
49 Mobile operators’ submissions in response to a notice under Section 26 of the Act dated 5 June 2003.
51 Examples of this evidence are set out in sections 1.6 and section 3 of Annex 1.
52 An example of this evidence is set out in section 1.1 of Annex 1.
products, of which CUG calls are an element. This is sufficient to constrain any market power that Vodafone, O2, Orange & T-Mobile may hold in the upstream market for the provision of call termination for CUG calls across all mobile operators’ networks.

95. Therefore, as no mobile operator is dominant in the relevant upstream market for the provision of call termination for CUG calls across all mobile operators’ networks, it is not necessary to consider whether the prices of CUG calls constitute a margin squeeze vis-à-vis the wholesale call termination charge. The mobile operators are not infringing the Chapter II prohibition in respect of CUG calls.

The mobile operators’ position within the market for the provision of call termination for CUG calls across all mobile operators’ networks

96. Ofcom has also considered whether the mobile operators hold a position of collective dominance within the market for the provision of call termination for CUG calls across all mobile operators’ networks.

97. In Airtours plc, v Commission of the European Communities53 (‘the Airtours decision’), the European Court of First Instance set out three conditions necessary for a finding of collective dominance to be reached and sustained:

“- first, each member of the dominant oligopoly must have the ability to know how the other members are behaving in order to monitor whether or not they are adopting the common policy…;

- second, …there must be adequate deterrents to ensure that there is a long-term incentive in not departing from the common policy…;

- third, the foreseeable reaction of current and future competitors, as well as of consumers, would not jeopardise the results expected from the common policy.”54

98. For the reasons that have been set out55, in order to consider whether the mobile operators are collectively dominant in the provision of call termination for CUG calls, it is necessary to consider the conditions of competition in the market for the supply of non-PSTN products. This is because any sources of market power for the mobile operators will derive from the actions of either the customers that purchase non-PSTN products, or the other operators that provide non-PSTN products. None of the conditions set out in the Airtours decision are met in this case.

99. First, there is insufficient transparency in the sales of Non-PSTN products to make it possible both for mobile operators to signal and reach a collusive outcome and then to monitor that outcome once it was in place.

100. Although a large proportion of business customers put their requirements for Non-PSTN products out to tender, the prices for the Non-PSTN Products are

53 Case T-342/99, Court of First Instance, Airtours plc, v Commission of the European Communities, 6 June 2002
55 See paragraphs 74 and 75, above.
negotiated individually with each customer. This means that there is no one set of prices around which a collusive outcome could form. These pricing details are also highly confidential so that a losing mobile operator does not know which price a winning mobile operator agreed with the customer. Moreover, customers differ in their requirements for functionality and in their calling patterns. For example, customers will not always place the same emphasis on the charges for international roaming within the Non-PSTN product.

101. In addition, it is also not always clear which supplier has won a particular contract. A mobile operator losing a contract for a Non-PSTN Product may in some cases only know that it has won or lost and not the identity of the winning supplier.

102. Second, even if a collusive outcome were reached, it is difficult to see how it could be sustained. If a firm bid low to take a contract, then the firm punishing it would punish it by undercutting it on the next contract. It is possible that such a punishment would hurt the punisher more than the deviator. It may also not be clear when a firm loses a contract that this is because of its behaviour on the previous contract rather than normal competition.

103. Third, any attempt at collusion is also highly likely to be undermined by the actions of either customers or competitors. The level of customer buyer power in this market has already been demonstrated. A large customer, faced with attempted collusion, could tempt a firm to leave any collusive understanding by offering it a long-term contract for high volumes. Such a contract is likely to prove highly attractive in an industry where fixed costs form a high proportion of total costs.

104. Moreover, the incentives of the different mobile operators mean that any attempt at a collusive outcome is likely to be undermined. [X] is a relatively recent entrant into the market for the supply of Non-PSTN products and has seen its share grow significantly. [X] is unlikely to be happy with any outcome where it stays as a much smaller competitor than its larger rivals. A similar situation holds with the many service providers. Although service providers are dependent on a wholesale product from the mobile operators, at the retail level they could pose a destabilising force by accepting a lower margin on sales.

_Ofcom's conclusion on the mobile operators’ position within the market for the provision of call termination for CUG calls across all mobile operators’ networks_

105. Ofcom has concluded that the conditions of competition in the market for the termination of CUG calls across all mobile networks are not conducive to collective dominance.

106. Therefore, as the mobile operators are not collectively dominant in the relevant market, it is not necessary to consider whether the prices of CUG calls constitute a margin squeeze vis-à-vis the wholesale call termination charge. The mobile operators are not infringing the Chapter II prohibition in respect of CUG calls.
C Market definition and dominance assessment for Business On-Net calls

The relevant product market

107. As set out above, the allegation made by fixed operators A, B and C was that the mobile operators were abusing their dominant position in relation to the provision of wholesale mobile call termination for certain fixed-to-mobile calls.

108. It has already been set out above in the analysis on CUG calls that previous reviews undertaken by both Ofcom and the Competition Commission have concluded that there is a separate market for wholesale call termination on each mobile operator’s network, and the main factor leading to this finding was the disconnection caused by the CPP arrangement.

109. Paragraph 63, above, set out the conditions that need to be satisfied in order for a SSNIP in the price of mobile call termination to be rendered unprofitable due to substitution by the calling party. In particular, it was noted that in the case of CUG calls, the business customer both chooses the network to which it will make these calls (by registering its employees’ mobile handsets within the CUG), and also pays for the calls that are made. As a result, the disconnection caused by the CPP arrangement does not apply to CUG calls.

110. For Business On-Net calls, the calling party which pays for the call does not choose the mobile network of the called party. The business customer does not have a choice in the network called, but has to call the network chosen by the called party. This is in contrast to CUG calls, in respect of which the calling party and the called party are effectively one and the same.

111. Therefore the disconnection caused by the CPP arrangement applies to Business On-Net calls, and not all the conditions set out above in paragraph 63 are satisfied. For example, in the event of an increase in the termination charge above the competitive level, the calling party will not be able to adapt their behaviour to find an alternative way of contacting the person they want to call.

112. The boundary of the relevant market therefore depends on whether a SSNIP in the price of call termination for Business On-Net calls would be unprofitable. In considering the relevant market for Business On-Net calls, Ofcom has taken into account revenues associated with the termination of Business On-Net calls alone, and not revenues associated with the bundle of calls within the Non-PSTN product.

113. Whether a SSNIP in termination would be unprofitable depends on the extent of substitution by the calling party and/or the called party. In order to assess whether this substitution is likely to occur in practice, the following hypothetical scenario will be considered.

114. An employee of a business customer who has purchased a Non-PSTN product wishes to make a call to a particular mobile handset. This handset happens to be on the network of the mobile operator that is supplying the Non-PSTN product. That is, the call is a Business On-Net call.

115. As the disconnection caused by the CPP arrangement applies to Business On-Net calls, the employee making the call has no say in the choice of network
called. The employee decides to call an individual, and the call has to be terminated on the mobile network that the called party has chosen.

116. As the disconnection caused by the CPP arrangement applies, the calling party cannot take any action that would render a SSNIP in termination alone unprofitable. For example, if the business customer chose to switch network in response to a SSNIP in Business On-Net call termination, a call to the specific called party in this example would change from being on-net to being off-net (i.e. the calling party would no longer be on the same network as the called party). As off-net call rates are higher than on-net rates, the business customer would actually pay a higher rate for calling those same individuals than it did previously.

117. Furthermore, the called party would not take any action that would render a SSNIP in termination alone unprofitable. Ofcom’s analysis in this regard is the same as that set out in the review of wholesale mobile voice call termination markets. First, awareness amongst mobile subscribers (i.e. the called party) of the price of calls to mobile phones is low, especially in respect of the price of calls to each specific network. Second, the price of incoming calls is not considered by mobile subscribers (i.e. the called party) to be an important factor in their choice of mobile network, and other factors are more influential. Therefore a rise in the price of termination would not lead the called party to change network.

118. A SSNIP in termination for Business On-Net calls would thus be profitable, when judged on revenues from the termination of these calls alone.

119. Ofcom therefore considers that the relevant product market in respect of Business On-Net calls is the market for the provision of mobile call termination for Business On-Net calls on each mobile operator’s network.

The relevant geographic market

120. Based on the view that the termination of Business On-Net calls to the subscribers of each of the mobile operators is a separate market, it is reasonable to conclude that the geographic extent of each such market matches the scope of each mobile operator’s network.

121. Each of the four mobile operators which provide Business On-Net calls offers these calls throughout the whole of its network, which, in each case, covers the whole of the United Kingdom. Consequently, the relevant geographic market is the whole of the United Kingdom.

Conclusion on the relevant market in which each mobile operator may hold a dominant position in respect of Business On-Net calls

122. Ofcom’s view is that the relevant market in which each mobile operator may hold a dominant position is the market for the provision of call termination for Business On-Net calls on each mobile operator’s network covering the whole of the United Kingdom.

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56 See footnote 2.
Each mobile operator’s position within the relevant market for the provision of call termination for Business On-net calls on each mobile operator’s network

123. Each mobile operator has a 100% market share in respect of the provision of call termination on its own network. Therefore, each mobile operator is a monopolist in the provision of call termination on its own network.

124. Ofcom notes that there is currently no technological means which would make it possible for anyone other than the mobile operator to provide call termination on that mobile operator’s network. In these circumstances, and given the mobile operators’ market shares in respect of call termination on their respective networks, Ofcom considers that each of the mobile operators is individually dominant in the market for the provision of call termination of Business On-Net calls on its own network.

The whole or a substantial part of the Common Market

125. In order for the prohibition in Article 82 of the EC Treaty to apply, the undertaking concerned must be in a dominant position in the whole or a substantial part of the common market. It has been held in a series of cases that a dominant position covering the whole of a Member State can be sufficient to constitute a substantial part of the common market, in particular where the undertaking concerned enjoys a monopoly within the relevant market57.

126. It has been noted above that Ofcom’s view is that each of the mobile operators is individually dominant in the market for the provision of call termination in respect of Business On-Net calls on its own network covering the whole of the United Kingdom and that each of the mobile operators holds a 100% market share in such a market. Ofcom considers that each of the mobile operators therefore enjoys a dominant position covering a substantial part of the common market.

Alternative market definition and dominance assessment for Business On-Net calls

Alternative product market

127. It could be argued that there is a possible alternative upstream market in respect of Business On-Net calls, which is the relevant market for the provision of call termination for Business On-Net calls across all mobile operators’ networks. The market definition which leads to this alternative market has also been considered for completeness.

128. The analysis that there is a market for the provision of call termination for Business On-Net calls across all mobile operators’ networks would take into account revenues from the entire Non-PSTN product, not just revenues from the termination of Business On-Net calls. This is because Business On-Net calls are only available to customers that purchase all elements of the Non-PSTN

product, which includes mobile subscriptions and access, along with outgoing calls.

129. This alternative market definition would be premised on the basis that business customers are sufficiently concerned about the price of Business On-Net calls that an increase in the price of these calls would lead to some customers switching suppliers for the entire non-PSTN product.

130. As set out above, the disconnection caused by the CPP arrangement applies to Business On-Net calls, as the party making the call does not choose the mobile network of the called party. In the event of an increase in the termination charge above the competitive level, the calling party will not be able to adapt their behaviour to find an alternative way of contacting the person they want to call.

131. However, the business customer that purchases Business On-Net calls does so as part of a bundle of calls within the Non-PSTN product. Negotiations on the price of the Non-PSTN product usually involve negotiations on the Business On-Net call price, indicating that the business customer is aware of and sensitive to the cost of making Business On-Net calls.

132. An increase in the cost of termination of the Business On-Net call would raise the price of that element of the Non-PSTN product and so the overall cost to the business customer of using that mobile network. Given the business customer’s awareness of and sensitivity to the cost of making Business On-Net calls, it is possible that this would cause the business customer to switch to a different mobile operator for the provision of the entire Non-PSTN product.

133. While the business customer would be unable to contact any particular called party over a different network, it would, by switching operator, be able to take advantage of on-net call rates offered by other operators to contact a significant number of customers.

134. As each of the mobile operators has a similar share of retail subscriptions, they can expect to have a similar share of on-net calls. None of the mobile operators therefore has a significant advantage or disadvantage in the sale of on-net calls.

135. Whilst the increase in the price of Business On-Net calls would only form a small proportion of the overall bundle price, this has to be set in the context of the profitability of the Non-PSTN product as a whole. It is possible that an increase in the price of Business On-Net calls would result in the mobile operator losing the entire contract for the supply of the Non-PSTN product.

136. The increase in profits from a SSNIP in Business On-Net mobile call termination would therefore have to be offset against the potential loss of profits from the entire sale of the Non-PSTN product. Given the size and importance of Non-PSTN contracts, and the awareness of business customers, this may pose a sufficient constraint on the price of Business On-net calls – as part of the Non-PSTN product – to ensure that they are kept at the competitive level.

137. Therefore it is possible that a SSNIP in termination for Business On-Net calls would not be profitable, when judged on revenues from the entire Non-PSTN product.
138. This would mean that the relevant product market would be the market for the provision of mobile call termination for Business On-Net calls across all the mobile operators’ networks, not on each individual operator’s network.

**Alternative geographic market**

139. On the basis that there is a separate product market for the termination of Business On-Net calls across all mobile operators’ networks, it is reasonable to conclude that the geographic extent of the market matches the scope of these mobile networks. These networks together cover the whole of the United Kingdom. Consequently, the relevant geographic market is the whole of the United Kingdom.

**Conclusion on the alternative market in which each mobile operator may hold a dominant position in respect of Business On-Net calls**

140. The alternative market definition in respect of Business On-Net calls is the market for the provision of termination for Business On-Net calls across all mobile operators’ networks covering the whole of the United Kingdom.

**Each mobile operator’s position within the alternative market for the provision of call termination for business on-net calls across all mobile operators’ networks**

141. The demand for the provision of call termination for Business On-Net calls in the upstream market is a derived demand from the supply of Business On-Net calls in the downstream retail market, for the same reasons that apply in respect of the provision of call termination for CUG calls.  

142. Again, as with CUG calls, business customers are not able to purchase Business On-Net calls as a separate retail product, but instead as one element of the overall Non-PSTN product. This means that an analysis of whether any mobile operator is dominant in the upstream market for the provision of call termination for Business On-Net calls depends on the competitive conditions in the downstream retail market for the supply of Non-PSTN products. Any constraints on the market power that each mobile operator may have in the market for the provision of call termination for Business On-Net calls derive from the actions of either the customers that purchase Non-PSTN products in the downstream retail market, or the other operators that supply Non-PSTN products in the downstream retail market.

143. As noted above in paragraphs 76-93, none of the mobile operators is dominant in the supply of the Non-PSTN product. Therefore, if the alternative approach to market definition for Business On-Net calls were followed, none of the mobile operators would each be dominant in the relevant market, and the mobile operators would not be infringing the Chapter II prohibition or Article 82 of the EC Treaty in respect of Business On-Net calls.

58 See paragraph 74, above.
59 See paragraph 75, above.
Conclusion on market definition and dominance assessment for Business On-Net calls

144. Ofcom’s view of the relevant upstream market in respect of Business On-Net calls, and the position that each of the mobile operators holds in this market, is set out at paragraphs 107-124, above. Ofcom’s view is that the relevant market is for the provision of call termination for Business On-Net calls on each respective mobile operator’s network covering the whole of the United Kingdom. Ofcom considers each of the mobile operators would be dominant in the relevant market covering its own network.

145. Ofcom recognises that there is a possible alternative upstream market definition in respect of Business On-Net calls. This market would be for the provision of call termination for Business On-Net calls across all the mobile operators’ networks covering the whole of the United Kingdom, in which none of the mobile operators would be dominant. Ofcom’s analysis of this market, along with the analysis of the position that each of the mobile operators would hold in this market, is set out in paragraphs 127-143, above.

146. However, for the reasons set out in section E below, Ofcom does not need to reach a conclusion on which of the two market definitions is appropriate. This is because Ofcom does not consider that the mobile operators’ conduct amounts to an abuse, irrespective of the market definition that is adopted.

No collective dominance

147. Ofcom has not found that the competitive conditions for the supply of non-PSTN products are conducive to collective dominance in the alternative market for the provision of call termination for Business On-Net calls across all mobile operators’ networks. The reasons for this conclusion are the same as those that apply in respect of CUG calls. This analysis is set out in paragraphs 96-104, above.

D. Is there a margin squeeze in respect of Business On-Net calls?

Introduction

148. The following analysis is carried out on the basis that each of the mobile operators is individually dominant in the market for the provision of call termination for Business On-Net calls on its own network.

149. Where a vertically integrated undertaking has a dominant position in an upstream market and supplies an important input to undertakings that compete with it in a downstream market, there may be scope for it to abuse its dominance in the upstream wholesale market by adversely affecting competition in the downstream retail market. The vertically integrated undertaking may operate a ‘margin squeeze’ by raising the cost of the upstream input (i.e. the wholesale price it charges its downstream competitors) and/or lowering the prices it charges in the downstream market (i.e. the retail prices it charges final consumers).\(^\text{60}\).

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\(^\text{60}\) That a ‘margin squeeze’ may constitute an abuse of a dominant position has been recognised in a number of cases at both UK and EC level. At the UK level, see for example: CA98/20/2002, BSkyB Investigation: alleged infringement of the Chapter II prohibition, 17
150. The concern with a margin squeeze is that it may harm competition and so the interests of end consumers in the downstream market. If the integrated undertaking chooses a combination of input and downstream prices that is insufficient to cover its downstream costs, this could have the effect that an equally efficient competitor in the downstream market could not earn a normal profit and so may exit the market.

151. In considering whether there is margin squeeze, Ofcom has analysed whether on the basis of the mobile operator’s own retail costs, the mobile operators would be profitable in the downstream market if they had to pay the same upstream input price as they charge to third-party operators in that market.

152. This approach is based on the test set out at paragraph 7.26 of the OFT’s Guidelines on the application of the Act in the telecommunications sector:

“…In considering whether an undertaking is engaging in price squeezing in breach of the Competition Act, the Director General will consider whether the dominant undertaking would be profitable in the relevant downstream market if it had to pay the same input prices as its competitors.”

This test is also set out in the European Commission’s Telecommunications Access Notice and has been applied by the European Commission, the OFT and Oftel in previous cases involving margin squeeze.

**Margin Squeeze analysis**

153. Analysis of the alleged margin squeeze in this case involves comparison of the difference between two prices. The first price is the wholesale termination charge that third party operators pay each of the mobile operators for terminating calls on their respective networks. The second price is the retail price that each of the mobile operators charges business customers for Business On-Net calls.

154. In assessing whether there is a margin squeeze situation in respect of Business On-Net calls, it is necessary to analyse whether the margin between the retail price charged by each mobile operator for Business On-Net calls and the wholesale termination charge is sufficient to cover that mobile operator’s own downstream retail costs.

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61 OFT 417.


The wholesale termination charge

155. The mobile operators’ current wholesale termination charges are set out in Table 4:

Table 4: Wholesale Termination Charges as at August 2003 (pence per minute (‘ppm’))\(^{64}\)

<table>
<thead>
<tr>
<th>Operator</th>
<th>Peak (08:00-18:00 Mon-Fri)</th>
<th>Evening (18:00-08:00 Mon-Fri)</th>
<th>Weekend (Sat &amp; Sun)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vodafone</td>
<td>12.77</td>
<td>2.50</td>
<td>1.25</td>
</tr>
<tr>
<td>O2</td>
<td>10.21</td>
<td>7.42</td>
<td>3.14</td>
</tr>
<tr>
<td>Orange</td>
<td>11.86</td>
<td>8.59</td>
<td>3.52</td>
</tr>
<tr>
<td>T-Mobile</td>
<td>13.41</td>
<td>9.25</td>
<td>2.15</td>
</tr>
</tbody>
</table>

156. Table 4 shows that the wholesale termination charge varies significantly by the time of day. In particular, peak daytime rates are significantly higher than those charged at weekends.

157. Business customers making Business On-Net calls make a disproportionate number of their fixed-to-mobile calls during peak hours. As a result, the retail prices a fixed operator wishes to offer for fixed-to-mobile calls at these times are affected disproportionately by the peak wholesale termination charges.

158. Ofcom has obtained from each of the mobile operators estimates of the proportion of Business On-Net calls carried on their network which fall into each of the appropriate time bands. These estimates are shown in Table 5 below.

Table 5: Distribution of Business On-Net Calls\(^{65}\)

<table>
<thead>
<tr>
<th>Operator</th>
<th>Peak</th>
<th>Evening</th>
<th>Weekend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vodafone</td>
<td>[X]%</td>
<td>[X]%</td>
<td>[X]%</td>
</tr>
<tr>
<td>O2</td>
<td>[X]%</td>
<td>[X]%</td>
<td>[X]%</td>
</tr>
<tr>
<td>Orange</td>
<td>[X]%</td>
<td>[X]%</td>
<td>[X]%</td>
</tr>
<tr>
<td>T-Mobile</td>
<td>[X]%</td>
<td>[X]%</td>
<td>[X]%</td>
</tr>
</tbody>
</table>

159. Using the information on the distribution of calls, Ofcom has calculated the weighted average wholesale termination charges that would apply to a third-party operator wishing to provide fixed-to-mobile calls to business customers during peak times. These are the relevant wholesale charges for the purpose of the margin squeeze calculation, and are set out in Table 6.

\(^{64}\) Mobile operators’ submissions in response to a notice under Section 26 of the Act dated 30 July 2003.

\(^{65}\) Mobile operators’ submissions in response to a notice under Section 26 dated the Act dated 30 July 2003. This data relates to the distribution of both CUG calls and Business On-Net calls. However, Ofcom considers that it reasonable to assume that the call profile for each of these call types is the same. Also, O2 and Vodafone provided estimates only for the proportion of peak calls. The respective proportions of evening and weekend calls are estimated based on the time profile of Orange and T-Mobile CUG calls and Business On-Net calls.
Table 6: Effective Weighted Average Termination Charge (ppm)\(^{66}\)

<table>
<thead>
<tr>
<th>Operator</th>
<th>Weighted Average Termination Rate for Business On-Net calls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vodafone</td>
<td>![ ]</td>
</tr>
<tr>
<td>O2</td>
<td>![ ]</td>
</tr>
<tr>
<td>Orange</td>
<td>![ ]</td>
</tr>
<tr>
<td>T-Mobile</td>
<td>![ ]</td>
</tr>
</tbody>
</table>

The retail price for a Business On-Net call

160. There are three different elements to be taken into account when calculating the price of a Business On-Net call. These are:

(i) the price per minute for the calls themselves;

(ii) any change in mobile subscription fees or outgoing call prices as a result of also purchasing the Non-PSTN product; and

(iii) the cost of the equipment needed to make these calls.

(i) The price per minute for the calls themselves

161. The price that a customer pays for Business On-Net calls is negotiated from a standard price list\(^{67}\). However, as Ofcom’s analysis shows that the standard price is not always the same as the price that is paid in practice\(^{68}\), Ofcom has based its margin squeeze calculation on the actual average retail price paid by these customers. This price was calculated by taking the mobile operators total revenues from Business On-Net calls and dividing it by the total call minutes for Business On-Net calls. This takes full account of any discounts off list price, and also the calling patterns of business customers. This average is calculated across all the packages offered by the mobile operators. The average retail price for Business On-Net calls is set out in Table 7:

Table 7: Actual Average Retail Price (ppm) charged for Business On-Net Calls\(^{69}\)

<table>
<thead>
<tr>
<th>Operator</th>
<th>Business On-Net calls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vodafone</td>
<td>![ ]</td>
</tr>
<tr>
<td>O2</td>
<td>![ ]</td>
</tr>
<tr>
<td>Orange</td>
<td>![ ]</td>
</tr>
<tr>
<td>T-Mobile</td>
<td>![ ](^{70})</td>
</tr>
</tbody>
</table>

\(^{66}\) Mobile operators’ submissions in response to a notice under Section 26 dated the Act dated 30 July 2003.

\(^{67}\) Mobile operators do not always publish a price for each Non-PSTN product.

\(^{68}\) Mobile operators’ submissions in response to a notice under Section 26 of the Act dated 5 June 2003.

\(^{69}\) Mobile operators’ submissions in response to notice under Section 26 of the Act dated 30 July 2003.

\(^{70}\)[!]
Any change in mobile subscription fees or outgoing call prices as a result of purchasing the Non-PSTN product

162. It is possible that changes in other mobile charges paid by the business customer could take place as a result of the business customers purchasing the Non-PSTN product. Ofcom has identified two prices that could change. These are the monthly mobile line rental (access) charges and the charges for other outgoing mobile calls.

163. Business On-Net calls are only offered where the business customer also purchases a minimum number of mobile subscriptions from the same mobile operator. These mobile subscriptions come with a monthly line rental charge per mobile handset. If this rental or access charge is increased as a result of the business customer purchasing the Non-PSTN product, then this increase should also be included in the price of the Business On-Net calls. A similar situation applies to outgoing mobile calls prices.

164. Ofcom has examined the rates the mobile operators charge for line rental and outgoing mobile call charges and compared them, where available, with those generally available to large business customers, or with the list price for access to the Non-PSTN product. Table 8 compares the monthly per handset charges for business customers who purchase the Non-PSTN product, and those who do not purchase the Non-PSTN product:

<table>
<thead>
<tr>
<th>Operator</th>
<th>List price for business tariff per handset (without Non-PSTN product)</th>
<th>Standard large business tariff per handset (with Non-PSTN product)</th>
<th>Actual Monthly subscription revenue per handset (non-PSTN customers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vodafone</td>
<td>[&lt;]</td>
<td>[&gt;]</td>
<td>[&lt;]</td>
</tr>
<tr>
<td>O2</td>
<td>[&lt;]</td>
<td>[&gt;]</td>
<td>[&lt;]</td>
</tr>
<tr>
<td>Orange</td>
<td>[&lt;]</td>
<td>[&gt;]</td>
<td>[&lt;]</td>
</tr>
<tr>
<td>T-Mobile</td>
<td>[&lt;]</td>
<td>[&gt;]</td>
<td>[&lt;]</td>
</tr>
</tbody>
</table>

165. [<].

166. [<]. Ofcom has consequently not included a rise in monthly subscription charges as part of the price of the non-PSTN product.

167. However, [>] offers a [>] for its large business customers. This tariff can be purchased with or without a Non-PSTN product (that is, with or without the ability to make CUG and Business On-Net calls). [<].

168. Therefore, it appears to Ofcom that [>]’s business customers do pay a higher subscription charge for taking the Non-PSTN Product. As a consequence, Ofcom has included an additional [>] per handset as an additional cost of making Business On-Net calls. This is reflected in Table 9.

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71 <.
72 Source: mobile operators’ submissions in response to a Notice under Section 26 of the Act dated 5 June 2003
Table 9: Actual Average Retail Price (ppm) charged for Business On-Net calls, including increase in mobile subscriptions

<table>
<thead>
<tr>
<th>Operator</th>
<th>Business On-Net calls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vodafone</td>
<td>[3]&lt;sup&gt;74&lt;/sup&gt;</td>
</tr>
<tr>
<td>O2</td>
<td>[3]&lt;sup&gt;74&lt;/sup&gt;</td>
</tr>
<tr>
<td>Orange</td>
<td>[3]&lt;sup&gt;74&lt;/sup&gt;</td>
</tr>
<tr>
<td>T-Mobile</td>
<td>[3]&lt;sup&gt;74&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

169. Ofcom has also examined whether there appears to be any increase in outgoing mobile call prices as a consequence of taking the Non-PSTN Product. [3<sup>74</sup>]. As a consequence, Ofcom has not included a rise in outgoing mobile call prices as part of the price of a Business On-Net call.

(iii) Equipment charges

170. The final element in the price to the customer of a non-PSTN call is the charges the customer must pay for the equipment needed to connect its PBX to the mobile network.

171. Although these equipment costs form part of the price of a non-PSTN call, Ofcom has not included them as part of the retail price for the purpose of the margin squeeze analysis. [3<sup>75 76 77 78</sup>].

172. [3<sup>75</sup>]. Therefore the inclusion of equipment charges as part of the margin squeeze analysis would make no difference to the margin squeeze analysis.

Comparison of the wholesale termination charge and the retail price of a Business On-Net call

173. The final stage of the margin squeeze analysis is to consider whether the margin between the retail price charged by Vodafone, O2, Orange and T-Mobile for Business On-Net calls on one hand, and the wholesale mobile termination charge on the other, is sufficient to cover each operator’s own downstream retail costs.

174. Table 10 compares the wholesale termination rates charged to third party operators for mobile call termination with the retail prices charged to business customers for Business On-Net calls.

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<sup>73</sup> Mobile operators’ submissions in response to a notice under Section 26 of the Act dated 30 July 2003.
<sup>74</sup> [3<sup>74</sup>].
<sup>75</sup> [3<sup>75</sup>].
<sup>76</sup> [3<sup>76</sup>].
<sup>77</sup> [3<sup>77</sup>].
<sup>78</sup> [3<sup>78</sup>].
### Table 10: Margin Squeeze Analysis (ppm)\(^79\)

<table>
<thead>
<tr>
<th>Operator</th>
<th>Average retail prices for Business On-Net calls(^80)</th>
<th>Wholesale Termination Charge(^81)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vodafone</td>
<td>[\times]</td>
<td>[\times]</td>
</tr>
<tr>
<td>O2</td>
<td>[\times]</td>
<td>[\times]</td>
</tr>
<tr>
<td>Orange</td>
<td>[\times]</td>
<td>[\times]</td>
</tr>
<tr>
<td>T-Mobile</td>
<td>[\times]</td>
<td>[\times]</td>
</tr>
</tbody>
</table>

**Conclusion on margin squeeze**

175. Table 10 shows that average retail prices for the Business On-Net calls offered by Orange, O2 and T-Mobile are all below the wholesale termination charge. As the retail margin for these calls is negative, by definition this margin is insufficient to cover the downstream costs of each of these mobile operators, and there is a margin squeeze in respect of these calls.

176. Table 10 also shows that Vodafone’s average retail price for Business On-Net calls is higher than the wholesale termination charge. On this basis, there is no margin squeeze in respect of Vodafone’s Business On-Net calls.

177. However, in order to reach a final view on whether a margin squeeze situation exists in respect of Vodafone’s Business On-Net calls, it would be necessary to consider whether the margin between Vodafone’s retail price for Business On-Net calls and the wholesale termination rate covers the costs of call origination and the retail costs associated with supplying those calls.

178. The requirement for Ofcom to reach a final view on this issue is dependent on whether or not an abuse would be found if the average retail price for Vodafone’s Business On-Net calls were insufficient to cover Vodafone’s retail costs. For the reasons set out in section E below, Ofcom does not consider that the mobile operators’ conduct constitutes an abuse. Therefore Ofcom has not reached a final view on Vodafone’s average retail price for Business On-Net calls.

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\(^79\) Mobile operators’ submissions in response to notice under Section 26 of the Act dated 30 July 2003.

\(^80\) The average retail price for a Business On-Net Call is calculated by dividing each mobile operator’s total call revenues for Business On-Net calls by its total call minutes for Business On-Net calls.

\(^81\) Average termination charge is weighted by the time of day that Business On-Net customers make their calls.
179. Ofcom’s investigation was opened in response to representations from fixed operators A, B and C that the mobile operators’ pricing arrangements for CUG calls and Business On-Net calls were designed to exclude fixed operators from the market:

“this anticompetitive practice is part of a strategy aimed at reinforcing the mobile operator’s power in the provision of retail fixed-to-mobile services to business users. Although in the short-term the mobile operator’s action could be seen as producing beneficial effects by driving the price of fixed-to-mobile services down, in the medium/long term it will have the effect of excluding fixed operators from the provision of these services”.  

180. Fixed operators A, B and C also alleged that mobile operators were pursuing strategies designed:

“specifically to persuade customers to switch away from fixed-to-mobile services provided by fixed operators (which bear the excessive cost of call termination) to their own substitute products, which do not”.  

181. Finally, fixed operators A, B and C argued that in the absence of the alleged anti-competitive conduct, there would be benefits to business customers in terms of innovation in Non-PSTN products, and increased efficiencies in the way in which fixed-to-mobile calls are routed from the business customer’s premises to the mobile operator’s network.

182. In considering whether the mobile operators’ conduct amounts to an abuse, it is important to note that this is an unusual margin squeeze investigation, as it concerns four operators who are each allegedly leveraging a dominant position from an upstream market into a downstream market, but who are competing against each other in the downstream market. In this case, the fact that one mobile operator’s retail price for a Business On-Net call may be lower than its wholesale termination charge does not restrict competition from the other mobile operators. This is because the other mobile operators are able to offer an equivalent package, which is unaffected by the wholesale call termination charges of their competitors.

183. In addition, it is important to bear in mind that both O2 and Vodafone offer a wholesale Non-PSTN product. The wholesale Non-PSTN product is available for resale at a discount below the retail prices that O2 and Vodafone charge retail business customers for Non-PSTN products. A customer purchasing the wholesale Non-PSTN product - which could be a fixed operator - becomes a mobile service provider, providing mobile subscriptions and outgoing mobile calls as well as fixed-to-mobile calls. Over [X] service providers (including BT and Kingston Communications), purchase this wholesale Non-PSTN product and subsequently compete with the mobile operators in the provision of Non-PSTN products. The margin squeeze does not restrict competition between the mobile operators and these service providers.

82 [X].
83 [X].
184. The only category of competitors whose ability to compete at the retail level is restricted as a result of the mobile operators’ conduct is the fixed operators that wish to provide fixed-to-mobile calls in competition with the mobile operators and service providers, without offering the rest of the Non-PSTN product. These competitors are restricted in their ability to compete effectively with the mobile operators for customers purchasing Non-PSTN products.

185. The rest of this section assesses whether the fact that the mobile operators’ conduct has the effect of restricting the ability of this category of competitors to compete for the provision of fixed-to-mobile calls to business customers amounts to an abuse on the part of the mobile operators. Given that the mobile operators only hold a dominant position in respect of Business On-Net calls, it is only necessary to consider whether or not there is an abuse for these call types.

186. In assessing whether the margin squeeze constitutes an abuse in this case, Ofcom has broken down its analysis into two stages:

- first, Ofcom has considered whether the margin squeeze is part of an anti-competitive strategy to restrict competition; and

- second, Ofcom has considered whether the margin squeeze has had or is likely to have a material adverse effect on competition.

187. Ofcom has undertaken this analysis in the context of a downstream retail market for the provision of fixed-to-mobile calls to the business customers who purchase the Non-PSTN products. This includes only the subset of business customers that purchase the Non-PSTN products, and so comprises only those customers for whom fixed operators argue they are excluded from competing for. Ofcom considers this to be the narrowest possible relevant downstream retail market in which the effect of the alleged conduct could occur.

188. If the mobile operators’ conduct does not amount to an abuse in this market, Ofcom does not consider that it would amount to an abuse in a broader market, for example encompassing all business fixed-to-mobile calls or even covering all fixed-to-mobile calls. As noted above, fixed-to-mobile calls made using the non-PSTN products amount to only a small proportion of all business fixed-to-mobile call minutes and still less of all fixed-to-mobile call minutes.

**Is there evidence of an anti-competitive strategy to restrict competition?**

189. As set out above, fixed operators A, B and C considered that the mobile operators’ conduct formed part of an anti-competitive strategy by the mobile operators to exclude fixed operators from providing business fixed-to-mobile calls.

190. During the investigation, Ofcom formally required that the mobile operators provide information relating to the development of commercial strategies for Non-PSTN products. Ofcom requested this information in order to ascertain whether the mobile operators had adopted pricing strategies in respect of Non-PSTN products that were designed to respond to a competitive threat posed by fixed operators and, more specifically, to restrict competition from fixed operators.

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85 See paragraph 20 above.
86 Notice under Section 26 of the Act dated 3 October 2003
191. Evidence received in response to this request included corporate strategy documents, competitor analyses, pricing review documents, responses to tender documents issued by large business customers seeking to purchase Non-PSTN products, and documentary evidence from personnel working on Non-PSTN product teams.

192. The evidence collected in response to this request does not indicate that the mobile operators have pursued pricing strategies for Business On-Net calls designed to restrict competition from fixed operators.

193. Moreover, the same evidence provided by the mobile operators also indicates that there are two key factors which have had a significant influence on their pricing policies for Non-PSTN products. The first factor is the competition that exists between the mobile operators themselves and with service providers in the provision of Non-PSTN products. The second factor is the countervailing buyer power of the business customers that purchase Non-PSTN products.

(i) Competition between the mobile operators

194. Corporate Strategy Documents, internal presentations, and emails from members of Non-PSTN product teams demonstrate that the mobile operators view their competitors for the supply of Non-PSTN products as being other mobile operators, not fixed operators.

195. This evidence includes analysis which sets out each of the mobile operator’s competitive position for the supply of Non-PSTN products. This analysis only considers each of the mobile operator’s competitive position vis-à-vis the other mobile operators. In particular, they consider the relative strengths of each of the mobile operator’s Non-PSTN product offerings in terms of price and functionality.

196. In addition, Ofcom has been provided with evidence of invitations to tender which demonstrate that the mobile operators have been competing against each other for the supply of Non-PSTN products, and that contracts have been lost on the basis of price. Documentary email evidence from members of Non-PSTN product teams also refers to the mobile operators losing contracts for the supply of Non-PSTN products to each other on the basis of price.

197. Furthermore, both O2 and Vodafone offer a wholesale Non-PSTN product. This wholesale Non-PSTN product is available to any fixed operator that wishes to become a service provider. Such an operator can then use this package to offer a full service package (including both mobile and fixed services) to the business customer. As at 31st March 2003, over service providers (including BT and Kingston Communications) used this product to serve a total of business customers.

198. provided evidence of business customers (amounting to mobile subscriptions) that had left for mobile service providers in the two months

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87 Examples of this evidence are set out in Annex 1.
88 Examples of this evidence are set out in section 3 of Annex 1.
89 Examples of this evidence are set out in section 3 of Annex 1.
90 O2’s and Vodafone’s response to Notices issued under Section 26 of the Act dated 5 June 2003 and 30 July 2003.
prior to responding to a formal information request\textsuperscript{91}. Documentary email evidence gathered during the investigation from [\textsuperscript{\textls{[X]}}] also supports the view that [\textsuperscript{\textls{[X]}}] lose contracts for the supply of Non-PSTN products to [\textsuperscript{\textls{[X]}}] service providers\textsuperscript{92}.

(ii) Countervailing buyer power

199. Evidence collected from the mobile operators has shown that the business customers that purchase Non-PSTN products have an average spend on mobile services of £297,000 per annum\textsuperscript{93}. This spend is significantly larger than a medium sized business user’s spend on mobile services, which is £16,740 a year\textsuperscript{94}. Therefore this evidence demonstrates that these users are large in relation to the generality of business customers, and suggests that they could have a substantial influence on the prices of Business On-Net calls.

200. Evidence gathered during the investigation also demonstrates that these business customers are able to have a substantial influence on the price of Non-PSTN products, [\textsuperscript{\textls{[X]}}]\textsuperscript{95}. Evidence of particular contracts shows that these customers are putting pressure on the mobile operators to price CUG calls, and to a lesser extent Business On-Net calls, at a certain level, with the mobile operators and service providers competing against each other on this basis\textsuperscript{96}.

201. In addition to the allegation that the mobile operators’ conduct formed part of an anti-competitive strategy to exclude fixed operators from providing business fixed-to-mobile calls, fixed operators A, B and C also made representations that the charging structure for wholesale mobile termination was designed to restrict competition. Fixed operators A, B and C stated that business customers are sensitive to the cost of termination, and that mobile operators have responded to this pressure by offering these customers lower prices for CUG calls and Business On-Net calls. Fixed operators A, B and C were concerned that the effect of offering lower implicit termination charges to business customers was to keep wholesale termination charges payable by fixed operators at a high level. Fixed operators A, B and C stated that the mobile operators:

\textit{“…have satisfied regulatory requirements by reducing evening rates across-the-board to all customers. This has freed the mobile operators to maintain rates that are at least two times cost for customers served by their rivals in the fixed-to-mobile market”}\textsuperscript{97}

202. Ofcom acknowledges that the offering of lower prices for Business On-Net calls to business customers may reduce some of the pressure for lower termination charges for customers as a whole. However, Ofcom currently regulates wholesale mobile termination charges, and considers that any competition

\textsuperscript{91} [\textsuperscript{\textls{[X]}}] Examples of this evidence are set out in section 4 of the Annex.
\textsuperscript{92} Examples of this evidence are set out in section 4 of the Annex.
\textsuperscript{93} Mobile operators’ responses to Notices issued under Section 26 of the Act dated 30 July 2003.
\textsuperscript{94} See footnote 9.
\textsuperscript{95} Mobile operators’ submission in response to Notice under Section 26 of the Act dated 3 October 2003.
\textsuperscript{96} Examples of this evidence are set out in section 3 of Annex 1.
\textsuperscript{97} Letter from fixed operators A, B and C of 12 September 2003
concerns relating to wholesale mobile termination charges are being addressed by the charge controls that have been implemented in this area\textsuperscript{98}.

**Whether the mobile operators’ conduct has had, or is likely to have, a material adverse effect on competition**

203. Ofcom considers that there is evidence to suggest that:

(i) there is keen competition between the mobile operators and mobile service providers in the provision of Non-PSTN products; and

(ii) there is countervailing buyer power on the part of the business customers that purchase Non-PSTN products.

Accordingly, Ofcom believes that the mobile operators’ conduct has not had, nor is likely to have, a material adverse effect on competition in the downstream market in which Business On-Net calls are supplied.

(i) Competition between the mobile operators and mobile service providers in the provision of Non-PSTN products

204. Evidence gathered during the investigation shows that business customers are well informed about the possible sources for the supply of the Non-PSTN product\textsuperscript{99}.

205. Furthermore, there is evidence that mobile operators are losing contracts to one another on the basis of price, functionality and the terms of supply of the Non-PSTN product\textsuperscript{100}.

206. Therefore Ofcom considers that there is effective competition in the supply of Non-PSTN products between the four mobile operators and over [\<\> service providers. Research carried out on the business customers during the investigation supports the view that the business customers that purchase the Non-PSTN products consider that they are getting a good deal. This research found that 75% of those customers who had purchased a Non-PSTN product consider they are paying a competitive price for CUG calls and Business On-Net calls.

207. Also, in the unlikely event that there was an increase in the price of Business On-Net calls at some point in the future, Ofcom considers that barriers to entry for fixed operators are low, and fixed operators could enter the market. A business customer using a non-PSTN product will invariably also have a connection with a fixed operator to deliver other outgoing fixed calls. Accordingly, if it is advantageous to the business customer, it could switch to a fixed operator by simply ceasing to divert fixed-to-mobile calls over the Non-PSTN product.

208. Therefore Ofcom considers that the prices for Business On-Net calls are currently low, and, in the unlikely event that there was an increase in the price of Business On-Net calls at some point in the future, they would remain low due to entry from fixed operators.

\textsuperscript{98} See paragraphs 28-32, above.
\textsuperscript{99} Examples of this evidence are set out in section 1.5 of Annex 1.
\textsuperscript{100} Examples of this evidence are set out in sections 2 and 3 of Annex 1.
(ii) Countervailing buyer power of the business customers that purchase Non-PSTN products

209. Research carried out during the investigation shows that business customers who have purchased Non-PSTN products have been well informed about alternative sources of supply.

210. This research found that almost two thirds of all contracts for Non-PSTN products had been put out for tender\textsuperscript{101}. Ofcom received evidence of such invitation to tender documents during the investigation, which had requested responses from Vodafone, O2, Orange and T-Mobile. This evidence demonstrates that the potential purchasers of Non-PSTN products are sophisticated organisations who have the resources in place to assess all the options available to them\textsuperscript{102}.

211. Evidence gathered during the investigation also demonstrates that these business customers are able to have a substantial influence on the price of Non-PSTN products, \textsuperscript{[\times]}\textsuperscript{103}. Evidence collected during the investigation shows that these customers are putting pressure on the mobile operators to price CUG calls, and to a lesser extent Business On-Net calls, at a certain level, with the mobile operators and mobile service providers competing against each other on this basis\textsuperscript{104}.

212. Evidence has also been obtained which shows that the mobile operators have sought to enhance their Non-PSTN product offerings, and offer more innovative functionality, in order to ensure that customer requirements continue to be met. Such evidence would tend to undermine fixed operators A, B and C’s argument that innovation is being restricted as a result of their foreclosure from the market. This evidence also demonstrates that lack of functionality is a factor that would lead customers switching to alternative mobile operators for the supply of a Non-PSTN product\textsuperscript{105}.

213. The evidence also shows that business customers are able to have a substantial influence on the terms on which the Non-PSTN product is supplied. For example, evidence has been provided which shows that the mobile operators are under pressure to provide bespoke offerings according to the requirements of a particular customer\textsuperscript{106}.

214. Finally, and as set out above in paragraph 181, fixed operators A, B and C argued that in the absence of the alleged anti-competitive conduct, customers of Non-PSTN products would benefit from increased efficiencies in the way in which fixed-to-mobile calls are routed from the business customer’s premises to the mobile operator’s network. Ofcom has considered this argument in the context of research and evidence gathered during the investigation, which demonstrates that the business customers that purchase Non-PSTN products have not been disadvantaged as a result of the margin squeeze (and

\textsuperscript{101} See Annex 2.
\textsuperscript{102} Examples of this evidence are set out in section 1.5 of Annex 1.
\textsuperscript{103} Mobile operators’ submissions in response to notices under Section 26 of the Act of 3 October 2003
\textsuperscript{104} Examples of this evidence are set out in Annex 1.
\textsuperscript{105} Examples of this evidence are set out in section 1.2 of Annex 1.
\textsuperscript{106} Examples of this evidence are set out in section 1.3 of Annex 1.
themselves consider that they are getting a good deal). Given such a finding, Ofcom considers that fixed operators A, B and C’s arguments in relation to the efficiency of their routing arrangements do not alter the conclusions that have been reached in this case.

**Conclusion on whether the margin squeeze has had, or is likely to have, a material adverse effect on competition**

215. Ofcom considers that there could be circumstances in communications markets where a margin squeeze in respect of on-net calls could have a material adverse effect on competition.

216. However, in the circumstances of this case, given the keen competition that exists between mobile operators and mobile service providers in the provision of Non-PSTN products and the countervailing buyer power of the business customers that purchase Non-PSTN products, Ofcom considers that the conduct in question does not amount to an abuse. Accordingly, there has been no infringement of the Chapter II prohibition or Article 82 of the EC Treaty.

**Effect on trade within the UK and/or between member states**

217. The Chapter II prohibition only applies if the conduct of the dominant undertaking is capable of having an effect on trade within the UK. Article 82 of the EC Treaty only applies if the conduct of the dominant undertaking is capable of having an effect on trade between Member States.

218. The European Commission has published guidelines on the effect on trade concept contained in Articles 81 and 82 of the Treaty. At paragraph 93 of these guidelines, the European Commission states that where an undertaking, which holds a dominant position covering the whole of a Member State, engages in exclusionary abuses, trade between Member States is normally capable of being affected.

219. Ofcom considers that the alleged anti-competitive conduct in this case was, by its nature, capable of having an effect on trade between Member States. Given that the mobile operators’ conduct was capable of having a potential effect on trade between Member States, it was also capable of having a potential effect on trade within the UK.

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Annex 1

Evidence in support of arguments set out in this decision

1. Documentary evidence of customer buyer power

1.1 Purchasers of Non-PSTN products have a substantial influence on the price of Non-PSTN products.

- [X<] Strategy document “[X<][108]” recognises the influence that customers have on the price of both CUG calls and Business On-Net calls, stating that:

  “The published tariffs are rarely the tariffs used in practice as corporate customers enjoy various levels of discounts”.

- [X<] Strategy document “[X<]” states that:

  “[X<] discount their mobile extension prices for large customers. For higher numbers of handsets, [X<] p seems to be a frequent price. For a recent [X<] contract, a price of [X<] p was quoted [10,000+ handsets]”

- [X<] document “[X<]” confirms the important role that negotiations over price plays in the purchase of these Non-PSTN products by large business customers, confirming that:

  “functionality seen as the way of opening a sale...in contrast, current users of [X<] say that it was costs that closed the sale[109]”

- Internal [X<] emails confirms that business customers are able to exert influence on the price of CUG calls and Business On-Net calls, and that the mobile operator’s response to this pressure needs to be carefully considered:

  “[X<] are looking to have a considerable number of fixed lines being given on-net status. Just want to be sure that finance approved this before we build[110] and

  “Can you please confirm that finance has agreed that the pricing provided to [X<] has accounted for the discounted calls to such a large number of DDI ranges[111]”

- [X<][112]

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108 10/01/02.
109 As set out in email of 18/01/02 from [X<].
110 Email from [X<] of 16/12/02.
111 Email from [X<] of 3/12/02.
112 [X<].
• [X] internal emails also confirm the influence that the business customers purchasing Non-PSTN products have on price, stating that:

“The main idea behind the pricing initiative is to offer flat charges regardless of call direction (f-m, m-n, m-f), along the lines of current corp pricing ([X] p / [X] p). Obviously this has an impact on f-m revenues, but we believe it is necessary to offer a product the market will accept”\textsuperscript{113} and

“The problem we have here is one of rate; [X],[X] and [X] all offer OnVPNnet calls at a flat rate regardless of direction. Obviously there are other service charges around this product and I believe we will be entirely reasonable to price it similarly, but with the current low rates in Corporate’s price there’s not much room\textsuperscript{114}”

• The [X] presentation “[X]”\textsuperscript{115} outlined [X]’s proposal for introducing a “dedicated circuit between business customer and [X]”. Under the heading of “Risks, Issues and Dependencies”, one identified risk was that the product would:

“Jeopardise inbound interconnect revenue”

however it was further stated that

“only making it available to a targeted market reduces the risk”

1.2 Purchasers of Non-PSTN products have a substantial influence on the quality of Non-PSTN product.

• Evidence collected demonstrates that customers are proactive in ensuring that the mobile operators meet their specific requirements in terms of features and functionality, and that the mobile operators are under pressure to continually evolve their product offerings.

• For example, the [X] strategy document “[X]”\textsuperscript{116} states one of the two key messages for the launch of additional elements of functionality as being:

“[X] have enhanced their MVPN offering in line with the demands of the customer base and are therefore continuing their strategy of providing meaningful voice products for the Corporate Market place”

• The [X] strategy document “[X]”\textsuperscript{117} also confirms the objective behind launching the second phase of the product:

“The launch of phase 2 [X] will provide functional parity with competitors market offerings and will differentiate the service by

\textsuperscript{113} Email from [X] to [X], 30/03/00.
\textsuperscript{114} Email from [X] to [X], 14/04/00.
\textsuperscript{115} 30/12/00.
\textsuperscript{116} August 2001.
\textsuperscript{117} 27/01/03.
developing a USP, specifically the flexibility within the Private Number to include a selection of DDI, NNG and frequently dialled numbers to best suit customer requirements”

- The [X] strategy document “[X]118” confirms that
  “If [X] is to maintain its lead within this lucrative segment of the mobile market then it needs to continue to develop its existing propositions,[X]”

- Internal [X] emails also demonstrate the pressure on [X] to develop their product offerings in line with customer demands:
  “In terms of business cases, [X]119 is the priority and appreciate any early views on where [X] in particular are. We have a number of customers including [X] and [X] requesting this feature and do need to respond quickly if not to risk losing this business120”

1.3 Purchasers of Non-PSTN products have a substantial influence on the terms of supply of Non-PSTN products.

- An internal [X] email121 regarding a contract with [X] demonstrates that business customers are able to exert a significant influence on the terms of supply of a Non-PSTN product, stating that:
  “We have signed [X] for [X] connections - one of the issues is the number of DDI ranges – if we cannot accommodate this then [X] say that they will have to reconsider the contract as their decision was made on getting all of the ranges captured”

- Evidence has also been obtained which demonstrates that mobile operators are under pressure to provide bespoke product offerings. For example, an internal [X] email at the time of a response to an invitation to tender document issued by [X] shows the commercial pressure that [X] was under when submitting a bid:
  “We are up against the other three networks so we need to be innovative in our response,”122
  “….we also have an opportunity for a voice VPN [X] and [X] for all those employees who prefer to dictate reports of visits instead of writing them up on a PDA or a laptop- of course as ever – this is a classical case of horses for courses.”123

- [X] presentation, slide headed ‘competitive summary’, states:
  “[X]: approach flexible, we will tailor the product to suit the customer needs”

118 April 2002.
119 [X]
120 Email from [X] to [X], 18/12/02.
121 Email from [X], 13/12/02.
122 Email from [X], 28/02/03.
123 Email [X], 30/3/03.
1.4 Purchasers of Non-PSTN products are large in relation to the relevant market.

- Evidence gathered during the investigation demonstrates that the business customers that purchase Non-PSTN products are large, with their average spend on mobile services being £297,000 a year. This figure is significantly larger than a medium sized business user’s spend on mobile services, which is £16,740 a year.124

1.5 Purchasers of Non-PSTN products are well informed about alternative sources of supply.

- Research carried out on large business customers confirmed that business customers are well informed about alternative source of supply. This research confirmed that approximately 67% of business customers that had an arrangement for a Non-PSTN product had asked more than one company to tender for this service.

- Evidence gathered during the investigation provides an insight into the how business customers tender for these products.

- [X] provided evidence of documents issued by [X] inviting suppliers to participate in an on-line bid in response to a tender that explicitly set out [X] requirements125:

  “[X] will require dedicated tie line access between its internal PBX, or [X] fixed line VPN provider, and the mobile provider, for some or all of the following call types: [X] mobile to [X] mobile, [X] mobile to [X] fixed, [X] fixed to [X] mobile, [X] fixed to non [X] mobile”

- [X] also provided evidence on one contract with [X] which demonstrated that well informed business customers are able to negotiate between different mobile operators on the prices offered for Non-PSTN products, and differentiate between them on this basis. Although [X] previously held this contract, it was lost to [X]. [X] submitted three tariff proposals to [X], however price was a key factor in losing the contract.

  “[X] did not start the process well, with the bid asking for best price in the initial phases, they were far from competitive within the first price proposal. The costs submitted in the initial phase almost resulted in an exclusion from the short list. It was not until the third attempt that the proposed tariffs became competitive126”

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124 See footnote 6.
125 “UK Mobile Telephony: Pre-Bid supporting documentation for suppliers participating in the [X] On-Line Bid. Wednesday 5th February 2003”.
126 Letter titled ‘[X] – Feedback following evaluation phase” form [X] purchasing consultant to [X], 21/10/03.
1.6 Purchasers of Non-PSTN products can switch readily, and at little cost, from one supplier to another.

- An [X] internal email\(^{127}\) demonstrates that business customers can switch from one supplier to another if they are not satisfied with the particular terms of supply:

  “[X] are causing us a high number of ceases this month, they are moving back to [X] due to porting and coverage details”

- In the [X] presentation\(^{128}\) “[X]”, a number of [X] ceases are listed, for example:

  “[X] - Ported out to [X] – part of a large contract”

2. Purchasers of Non-PSTN products are aware of the Cost of CUG calls and Business On-Net calls, and are sensitive to changes in the cost of these calls

- Research carried out on business customers during the investigation shows that the major reason for purchasing a Non-PSTN product is to reduce costs, mentioned by 78% of respondents.

- The [X] document “[X]” recognises that customers view price as a key feature of the proposition:

  “Major perceived benefit to customer of standard [X] is lower cost vs PSTN”.

- [X] document “[X]” confirms the importance of price to business customers, confirming that:

  “[X] customers attracted mainly to the proposition on the basis of price”.

- [X] document “[X]”\(^{129}\) demonstrates the awareness and importance of price in respect of two of [X] Non-PSTN products:

  “Price/competitiveness features highly” (listed as a [X] key purchase driver) and

  “Price means total package/bottom line” (listed as a [X] key purchase driver).

- In the [X] presentation\(^{130}\) “[X]”, a number of [X] ceases are listed, for example:

\(^{127}\) Email from [X] to [X].
\(^{128}\) August 2002.
\(^{129}\) Prepared by [X], December 2001.
\(^{130}\) August 2002.
“[X] – Ported to [Y] on Price”

- [X] presentation [X][131] states that
  
  “Current fixed to mobile rates make [X] bids highly uncompetitive taken in context of total contract costs (Business Pricing Analysis)”

This presentation also outlines the key proposition to be communicated to business customers in the marketing mix for this product:

“communicate more easily and significantly reduce your costs”

3. Competition between the mobile operators providing Non-PSTN products

- [X] document “[X]”, which confirms that the competitors for these products are [X] and [X], stating that:

“[X] and [X] match on price but in different ways…[X] cheapest network but lowest network in functionality, they compete on tariff alone”.

- Internal [X] email132 states that:

“The market position for mobile VPN is becoming increasingly competitive and in some areas we are now falling behind [X]”

- The [X] strategy document “[X]” states that changes in relation to:

  (a) mobility;
  (b) cost savings;
  (c) PBX integration;
  (d) virtual solutions; and
  (e) PBX functionality

  have been implemented to meet the competitive threat from [X] and [X].

- The [X] strategy presentation “[X]” sets out [X]’s perceived competitors in a slide headed “Competitive Activity and offerings”, which states that:

  “[X] offer private wire and MVPN as standard element of corporate proposition, MVPN feature set better than [X]”

  “[X] offer private wire service – mobile VPN offered on a tailored basis only”

  “[X] have no standard product offering – some bespoke contracts eg. Airports and local authorities”

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131 Presented by [X], 12/07/02.
132 From [Y] to [X], 18/12/02.
• The [ispiel] Strategy document “[ispiel]” sets out [ispiel]’s perceived competitive position in the market, and does this in relation to [ispiel] and [usercontent]. This document states that:

“[usercontent] are seen as the key competitor in this market…[usercontent] has a flexible pricing structure and are able to offer significantly reduced rates that are tailored to different customers.

[usercontent] are not seen as the key competitor in this market…their solution is only tailored to the large corporate rather than to the medium/large market”

• The [usercontent] Strategy document “[usercontent]” states that [usercontent]’s pricing strategy in the business market is to:

“Position [usercontent] as less expensive than [usercontent] on headline components and as broadly competitive on other components”.

“Position [usercontent] as broadly competitive on price relative to [usercontent]”.

“Do not compete with [usercontent] on price alone”.

• The [usercontent] presentation “[usercontent]133” states that [usercontent]’s pricing strategy in the business market is to:

“[usercontent] is more expensive to call than any other network during the day:

(a) [usercontent] % more than [usercontent];
(b) [usercontent] % more than [usercontent]; and
(c) [usercontent] % more than [usercontent].”

• [usercontent] documents also set out its considered competitive position. For example, the T-Mobile presentation “[usercontent]134” lists its competitors as being [usercontent].

4. Competition between mobile operators and service providers providing Non-PSTN products

• Over [usercontent] Mobile service providers purchase a wholesale Non-PSTN product and subsequently compete with the mobile operators in the provision of Non-PSTN products.

• As at 31 March 2003, these service providers used the wholesale product to serve [usercontent] business customers.


• Internal [usercontent] Emails also refer to the loss of business to Service Providers:

“We didn’t lose out to a competitor, but to one of our own service providers. The service provider was [usercontent]. The company was [usercontent].

133 30/12/00.
134 Presented by [usercontent], 12/07/02.
They had 900 handsets on [X] with [X]. We quoted on [X], £ [X] Line Rental and on net peak call charge of [X] p. [X] came in on [X] at £ [X] line rental and an on net peak call of approx [X] p.\(^{135}\) and

“[X] resellers are big competitors….please see background on [X] loss to an [X] reseller in the emails below…they are selling [X] and undercutting us”\(^{136}\)

\(^{135}\) Email from [X], 19/06/02.
\(^{136}\) Email from [X], 21/06/02
Annex 2

Large business research

1. This annex has been prepared by Ofcom\(^{137}\) based on data provided by Enteleca Research (survey of UK large businesses and panel recruitment) and Continental Research (Large Business Panel first wave and second wave). All findings in this report are based on weighted data from each of the three surveys.

2. A survey of UK large businesses was conducted for OfTEL by Enteleca Research among 1,364 UK businesses with over 250 employees during June 2003. Weighting was applied during analysis to ensure that the data was representative of businesses with 250+ employees in the UK in terms of business size and industry sector.\(^ {138}\)

3. Participants in the initial survey of UK large businesses were invited to join a panel to take part in further research: 599 expressed an interest in doing so.

4. In order to make participation as convenient as possible for panellists it was decided that all Large Business Panel surveys should be administered online. In September, therefore, all 599 businesses which had expressed an interest in joining the panel were sent an email containing a link to the website hosting the first survey and a unique passcode to access the questionnaire. Of these, 220\(^ {139}\) completed the first questionnaire electronically online. Weighting was applied during analysis to ensure that the data was representative of businesses with 250+ employees in the UK in terms of business size and industry sector.

5. The first survey with the Large Business Panel was conducted for OfTEL by Continental Research. The survey was live from 11 September to 6 October 2003.

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\(^{137}\) Ofcom has conducted its own checks on the data in this annex and whilst Ofcom considers it to be correct, Ofcom accepts no liability in respect of any of the data provided to it by Enteleca and Continental Research or any decisions taken by any person in reliance on the report.

\(^{138}\) UK large businesses are defined as those with over 250 employees, of which there are around 7,780. As businesses with over 500 employees account for a high proportion of total telecoms spend in the UK, businesses of this size were deliberately over-sampled to provide a robust sample for analysis purposes. The total sample was weighted during analysis to be representative of UK large businesses as a whole. Weighting was based on data provided by the office for National Statistics in their 2003 Size Analysis of United Kingdom Businesses publication.

\(^{139}\) The total sample was weighted during analysis to be representative of UK large businesses (those with 250 or more employees) as a whole. Weighting was based on data provided by the office for National Statistics in their 2003 Size Analysis of United Kingdom Businesses publication. The error margin for the total first survey sample of 220 businesses is about 2-7% and is higher among smaller sub-groups.