Commission for
Communications Regulation

Consultation Paper

Market Analysis - Wholesale Mobile Access and Call Origination

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All responses to this consultation should be clearly marked:- "Reference: Submission re ComReg 04/05" as indicated above, and sent by post, facsimile, e-mail or on-line at www.comreg.ie (current consultations), to arrive on or before 5.30pm, 9th March 2004, to:

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Please note ComReg will publish all submissions with the Response to Consultation, subject to the standard confidentiality procedure.

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1 Executive Summary

1.1 The new communications regulatory framework requires that ComReg define relevant markets appropriate to national circumstances, in particular relevant geographic markets within its territory, in accordance with the market definition procedure outlined in the *Framework Regulations*.[1]

1.2 The *Framework Regulations* further require that a market analysis procedure under Regulation 27 be carried out as soon as possible after ComReg defines a relevant market. This process is scheduled to take place as soon as possible after the adoption, or subsequent revision, of the Recommendation on relevant product and service markets ("the *Relevant Markets Recommendation*"[2]) by the Commission.[3] In carrying out market definition and market analysis, ComReg must take the utmost account of the *Relevant Market Recommendation* and the Commission's *Guidelines on Market Analysis and Significant Market Power ("The SMP Guidelines"*[4]*).*

1.3 The EU Commission recommends, in its *Relevant Markets Recommendation*, that NRAs should analyse the relevant market for "wholesale access and call origination on public mobile telephone networks".[5] It is ComReg's preliminary view that a relevant product market for mobile wholesale access and call origination can be identified, while the geographical market is the territory of Ireland. For the purpose of analysing the relevant market for mobile wholesale access and call origination, ComReg has preliminary defined a market for a cluster of retail mobile services.

1.4 Having first identified a relevant market relating to wholesale access and call origination on public mobile telephone networks in Ireland, ComReg is required to conduct an analysis of whether that market is effectively competitive by reference to whether any given undertaking or undertakings is/are deemed to hold Significant Market Power ("SMP") in that market. ComReg is obliged under the *Framework Regulations* to assess the existence of SMP, whether with respect to an individual undertaking or joint undertakings, in accordance with European Community law and the *SMP Guidelines*.[6]

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1 S.I. No. 307 of 2003

2 Commission Recommendation and Explanatory Memorandum on Relevant Product or Service Markets within the Electronic Communications sector susceptible to ex ante regulation in accordance with directive 2002/21/EC of the European Parliament and of the Council on a Common Regulatory framework for electronic communication network and services.

3 Regulations 26 and 27.

4 Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic networks and services, OJ 2002 C 165/3, ("the SMP Guidelines").

5 This market corresponds to that referred to in Annex I (2) of the Framework Directive.

6 Regulation 25(2).

1.5 Having conducted a market analysis on the relevant market, it is ComReg's preliminary view that Vodafone and O_2 hold a collectively dominant position in the wholesale mobile access and call origination market. ComReg is also of the preliminary opinion that there are strong indications of a lack of effective competition at the retail level.

1.6 In the period between now and the next market review, ComReg is of the preliminary view that the SMP enjoyed by these Mobile Network Operators ("MNOs"), with respect to the provision of wholesale access and call origination, will not be diluted in any meaningful way in the absence of appropriate and proportionate *ex ante* regulatory measures being taken.

1.7 Therefore, ComReg's preliminary view is that Vodafone should be designated as having SMP on the wholesale market for access and call origination and that O_2 should be designated as having SMP on the wholesale market for access and call origination.

1.8 ComReg is mindful of the fact that the remedies most appropriate to address the market failure identified in the relevant market are remedies aimed both at increasing competition via existing mobile network operators, and remedies aimed at increasing competition via service provider access. These remedies aim to remove any distortions that are occurring in the relevant market, such as the collective ability to exclude alternative access and call origination operators, resulting in prices to end users which are above the competitive level.

1.9 In designing such remedies, ComReg has focused on remedies at the wholesale level rather than remedies at the retail level.

1.10 ComReg would welcome comments from all interested parties on the questions posed in this market review and will accept written comments on or before 5.30pm 9th March 2004.

2 Introduction

Objectives under the Communications Regulations Act 2002

2.1 Section 12 of the *Communications Regulation Act 2002* outlines the objectives of ComReg in exercising its functions. These are, in relation to the provision of electronic communications networks, electronic communications services and associated facilities:

(i) to promote competition
(ii) to contribute to the development of the internal market, and
(iii) to promote the interests of users within the European Union.

2.2 These objectives are identical to those set out in Article 8 of the *Framework Directive.*

2.3 This review is in line with the objectives set out in the Communications Regulation Act 2002, which also forms part of the EU directives and Irish regulations.

Regulatory Framework

2.4 Four sets of Regulations, which transpose into Irish law four European Community directives on electronic communications and services, entered into force in Ireland on 25 July 2003. The final element of the EU electronic communications regulatory package, the *Privacy Directive*, was transposed into Irish law on 6th November 2003.[7]

2.5 The new communications regulatory framework requires that ComReg define relevant markets appropriate to national circumstances, in particular relevant geographic markets within its territory, in accordance with the market definition procedure outlined in the *Framework Regulations*. In addition, ComReg is required to conduct an analysis of the effective competitiveness of the relevant markets. Where it concludes that the relevant market is not effectively competitive (i.e., where there are one or more undertakings with Significant Market Power ("SMP")), the *Framework Regulations* provide that it must identify the undertakings with SMP on that market and impose on such undertakings such specific regulatory obligations as it considers appropriate. Alternatively, where it concludes that the relevant market is effectively competitive, the Framework Regulations oblige ComReg not to impose any new regulatory obligations on any undertaking in that relevant market, and to withdraw any such obligations it may have imposed at an earlier stage.[8]

2.6 In carrying out market definition and market analysis, ComReg has taken the utmost account of the *Relevant Market Recommendation (the "Relevant Markets*

[7] S.I. No 535

[8] Regulation 27(3).

Recommendation" or "*Recommendation*") and the Commission's *Guidelines on Market Analysis and Significant Market Power ("The SMP Guidelines").*

2.7 The *Framework Regulations* also anticipates that ComReg will define relevant markets in accordance with national circumstances. Where appropriate, there might therefore be a need for ComReg to define markets that differ from those listed in the Recommendation.[9] ComReg is therefore permitted to examine all relevant markets for the purpose of market analysis, whether or not they are listed in the *Recommendation*.

ComReg Procedure

2.8 ComReg has collected market data from a variety of internal and external sources, including users and the relevant providers of electronic communications networks and services ("ECNS"), in order to carry out as thoroughly as possible its respective market definition and market analysis procedures based on established economic and legal principles, and taking the utmost account of the *Relevant Markets Recommendation* and the SMP *Guidelines*.

2.9 ComReg published an information notice on the market analysis process on December 19th, 2002. The first of the industry workshops held by ComReg took place on January 23rd, 2003 and questionnaires were sent to all mobile operators on February 18th. ComReg held its second workshop on the 25th February to discuss the questionnaire. A subsequent market analysis data request was sent to the mobile operators on July 22nd, 2003. Final responses to the data request were received by ComReg in November 2003.

Liaison with Competition Authority

2.10 There is a requirement on NRAs to co-operate with National Competition Authorities (NCAs) throughout the processes of market definition and analysis. In December 2002, ComReg signed a co-operation agreement with the Competition Authority for a period of three years.[10] To facilitate market review decision-making, a Steering Group including a representative from the Competition Authority was established by ComReg. Through this forum, the Competition Authority has been informed and involved throughout the market review decision-making process.

Structure of the Document

2.11 The remainder of this consultation document is structured as follows:

- Section 3 presents ComReg's preliminary conclusions on the definition of the wholesale mobile access and call origination market. This section consists of a

[9] As Recognised by recital 19 of the Recommendation.

[10] ComReg Document No. 03/06.

review of the market definition procedure and its scope, as well as assessments of demand- and supply-side substitution at the wholesale and retail levels;

- Section 4 presents ComReg's market analysis of the wholesale mobile access and call origination market and presents ComReg's preliminary view on whether this market is effectively competitive;

- Section 5 outlines ComReg’s preliminary view on the undertakings that should be designated as having Significant Market Power in the relevant market(s);

- Section 6 provides a discussion of the general principles associated with remedies and outlines a range of possible remedies under the new regulatory framework

- Section 7 outlines the detail of how a national roaming obligation could be implemented;

- Section 8 provides details with regard to the submission of comments on this consultation document; and

- Finally, the appendices provide a summary of the consultation questions (Appendix A), a series of empirical pricing charts (Appendix B), the proposed draft decision (Appendix C) and the relevant legislation in relation to the remedies (Appendix D).

3 Relevant Market Definition

Background

3.1 The *Framework Regulations* require ComReg to define relevant markets in accordance with national circumstances, in particular the relevant geographic markets within Ireland, in accordance with the market definition procedure outlined in the *Framework Regulations*. This obligation applies to both the relevant markets identified in the *Relevant Markets Recommendation* and to additional relevant markets that ComReg considers merit investigation.[11] In accordance with the *Framework Regulations*, the market definition exercise must be carried out in accordance with the principles of competition law and must take "utmost account" of the *Relevant Markets Recommendation*, as well as the *SMP Guidelines*.[12] [13]

3.2 The definition of the relevant market concentrates on identifying constraints on the price-setting behaviour of operators. These constraints comprise demand substitution and supply substitution. For the purpose of defining the relevant market, ComReg will take into account a range of measures in assessing demand and supply substitution, including the SSNIP test where practicable.[14] The market definition exercise is concerned with the likely competitive response of a body of customers, which is not necessarily the majority of customers.[15]

3.3 A relevant geographic market comprises the area in which the undertakings concerned are involved in the supply and demand of products and/or services, in which the conditions of competition are sufficiently homogeneous and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different to those areas.

3.4 The European Commission recommends, in its *Relevant Markets Recommendation*, that ComReg should analyse the relevant market for "access and call origination on public mobile telephone networks".[16] The Commission notes that network access and call origination are typically supplied together by a

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[11] Article 7 of the Framework Directive outlines a process for the Commission to review the definition of relevant markets that differ from those defined in the Relevant Markets Recommendation. Regulation 20 of the Framework Regulations transposes this provision into Irish legislation.

[12] Regulation 27.

[13] Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic networks and services, OJ 2002 C 165/3.

[14] See the Commission Notice on Market Definition, the SMP Guidelines and ComReg's Market Data Information Notice for additional guidance. Applying the SSNIP test, one tries to ascertain whether customers purchasing a particular product or service would switch to readily available substitutes or to suppliers located elsewhere if a hypothetical monopoly supplier were to impose a small (in the range of 5% to 10%) but significant, non-transitory price increase above the competitive level, thereby rendering such a rise in prices as being unprofitable.

[15] See, for example, Case 85/76, Hoffman-La Roche & Co. A. G. v. Commission, [1979] ECR 461, as well as Case 66/ 86, Ahmed Saeed Flugreisen v. Zentrale zur Bekämpfung unlauteren Weltbewerbs, [1989] ECR 803.

[16] This market corresponds to that referred to in Annex I (2) of the Framework Directive.

network operator so that both services can be considered as part of the same market at the wholesale level.[17] These services might not be provided together in the future, however, if call selection is introduced for mobile networks similar to that which occurs with respect to fixed incumbent operators. The European Commission further notes that entry barriers to the provision of such services need to be absolute, especially where the possibilities exist for the development of national roaming or indirect access relationships.

Scope of Review

3.5 The wholesale services under examination in this review embrace the full range of services that potentially could be provided by Mobile Network Operators ("MNOs") to other undertakings or themselves, including:

3.6 Wholesale call origination – this enables indirect access operators to supply mobile originated calls via, for example, carrier selection or pre-selection or other means e.g. Number Translation Codes[18] ("NTCs"). Indirect access allows mobile subscribers to use an operator for mobile calls other than the one with which they have subscribed.

3.7 Wholesale call origination bundled with access - this enables Mobile Virtual Network Operators ("MVNOs") to provide the full set of retail mobile communications services. There is a great diversity in the potential forms which MVNO arrangements might take. In their more extensive form, MVNOs provide access and origination and termination, but also buy the interconnection which allows their customers to make complete calls. This service can be characterised as a form of access to unbundled network access elements (in particular, the radio access network).

3.8 Wholesale airtime bundled with access – this enables service providers to resell mobile communications services. Service providers may either purchase minutes or capacity.

3.9 National roaming – a particular form of access which is relied upon on a transitional basis by an entrant, normally for the purposes of offering service over a wider geographic area while they are completing their full network rollout.

3.10 Self-supply – the supply of access and call origination services from the wholesale to the retail arm of an integrated MNO.

[17] Explanatory Memorandum to the Relevant Markets Recommendation.

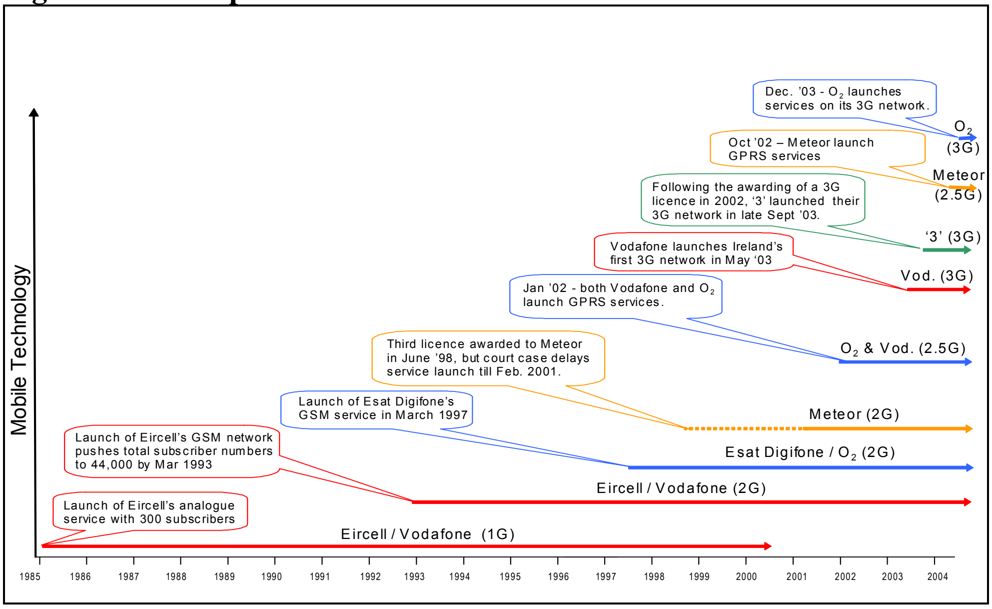
[18] Non-geographic numbers - these are numbers which are used to identify a type of service rather than a geographical location. These services are sometimes referred to as Specially Tariffed Services and include freephone (1800), local rate, national rate and premium rate numbers. These numbers generally require number translation codes ("NTCs") to allow network termination, thus enabling the service (e.g. 1800, 1850, 1890) to be provided.

Q. 1. Do you agree with the scope of ComReg's review of wholesale mobile access and call origination services? Please elaborate your response.

Market Structure

3.11 There are four mobile network operators ("MNOs") in the mobile market in Ireland, namely; Vodafone (previously Eircell) which launched in 1985; O_2 , which launched in 1997 (previously Esat Digifone); Meteor, which launched in 2001; and, most recently, '3', which launched 3G services in Ireland on September 30th 2003. Figure 1 below illustrates the development of the mobile market in Ireland.

Figure 1: Development of Irish Mobile Market



Source: ComReg

3.12 Since the introduction of Irish mobile services, the penetration rate has maintained a strong upward trend – stabilising over the last two years – and now stands at 83%. Mobile penetration exceeds fixed line penetration, with 3.2 million mobile lines compared to 1.6 million PSTN lines, as at December 2003.[19]

3.13 Apart from indirect access via NTCs, none of the wholesale services listed as falling under the "Scope of Review", are currently provided by MNOs to third parties in Ireland.

19 ComReg Document No. 03/144b – Irish Communications Market Quarterly Key Data Report.

The Relevant Product Market

General

3.14 The purpose of the market definition procedure is to identify in a systematic way the competitive constraints that operators encounter, thereby facilitating the subsequent market analysis procedure. According to the European Court of Justice,[20] a relevant product market comprises all products or services that are sufficiently interchangeable or substitutable, not only in terms of their objective characteristics, their prices or their intended use, but also in terms of the conditions of competition, common pricing constraints and/or the structure of supply and demand for the product in question.

3.15 The communications sector is characterised by two or more functional levels of competition, namely, the level for the provision of communications services to end users (*i.e.,* the retail market) and an upstream market for the provision of access to facilities necessary to provide such communications services (*i.e.,* a wholesale market).[21] The objective characteristics, intended use and pricing arrangements, reflected at each of these levels, are generally distinct, as are the parties involved in the transaction. While the levels are clearly related, the competitive dynamics and other characteristics are not necessarily the same.

3.16 Although it is critical to distinguish between wholesale and retail markets on the basis of the functional level at which products and services are traded, it is also important to take into account the possibility that these markets might interact so as to competitively constrain each other. For example, there may be instances where a competitive retail environment prompts price sensitivity which has an effect on upstream wholesale inputs. In addition, the competitive structure of the wholesale market dictates to a large extent the competitive dynamics of the retail market.

3.17 Because the demand for wholesale access and call origination principally derives from the equivalent retail service, competitive conditions at the retail level are highly relevant in determining the scope for which types of "access" and "call origination" services are required at the wholesale level. Therefore prior to defining the relevant market at the wholesale level, ComReg is examining the scope of the associated mobile retail market. Furthermore, as the Commission has noted, if the level of competition at the retail level is sufficiently high, *ex ante*

[20] See, for example, Case 322/81, Michelin v. Commission [1983] ECR 3461, as well as the Commission Recommendation and Explanatory Memorandum on Relevant Product or Service Markets within the Electronic Communications sector susceptible to ex ante regulation in accordance with directive 2002/21/EC of the European Parliament and of the Council on a Common Regulatory framework for electronic communication network and services and the SMP guidelines paragraph 44 of section 2.2.1.

[21] Such an approach is widely acknowledged in competition law. See, for example, the Michelin judgment, Case Nos IV/31.533 and IV/34.072 – Schöller Lebensmittel GmbH & Co. KG, OJ 1993 L 183/1).

regulatory intervention at the wholesale level might not be warranted.[22]

Retail Market Definition

3.18 The definition of the mobile retail market is particularly important in the context of any review of wholesale mobile access and call origination services, as there is likely to be a strong correlation between the number of competitive alternatives at the wholesale level and the degree of price competition at the retail level. In determining the scope of the services included in relevant retail market which can be provided where access and call origination is made available at the wholesale level, ComReg has examined whether there exists at the retail level:

- a "*communications*" services market, encompassing both fixed and mobile services; or
- a "*mobile communications"* services market, based on aggregated services (*i.e. "cluster"* of services), or individual services.

In exploring the latter option, ComReg has needed to determine whether those clustered services can be further disaggregated in terms of:

- pre-pay and post-pay services;
- advanced data services;
- 3G services;
- Wireless Local Area Network ("WLAN") services.

In considering the above ComReg has also taken into account relevant case precedents.

<u>Does a "communications" market encompassing both fixed and mobile services exist at the retail level?</u>

3.19 The Commission has, in a number of decisions, found that there is a market for mobile communications services that cannot be seen as being substitutable to fixed communications services. The Commission notes that the key difference between mobile and fixed services is the mobility inherent in all mobile services (*i.e.*, mobile numbers are associated with individuals on the move, rather than a fixed location). Thus, even though technological advances may mean that similar services could be offered over both fixed and mobile networks, fixed services do not offer this mobility.[23]

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22 Relevant Markets Recommendation, para. 4.3.1.

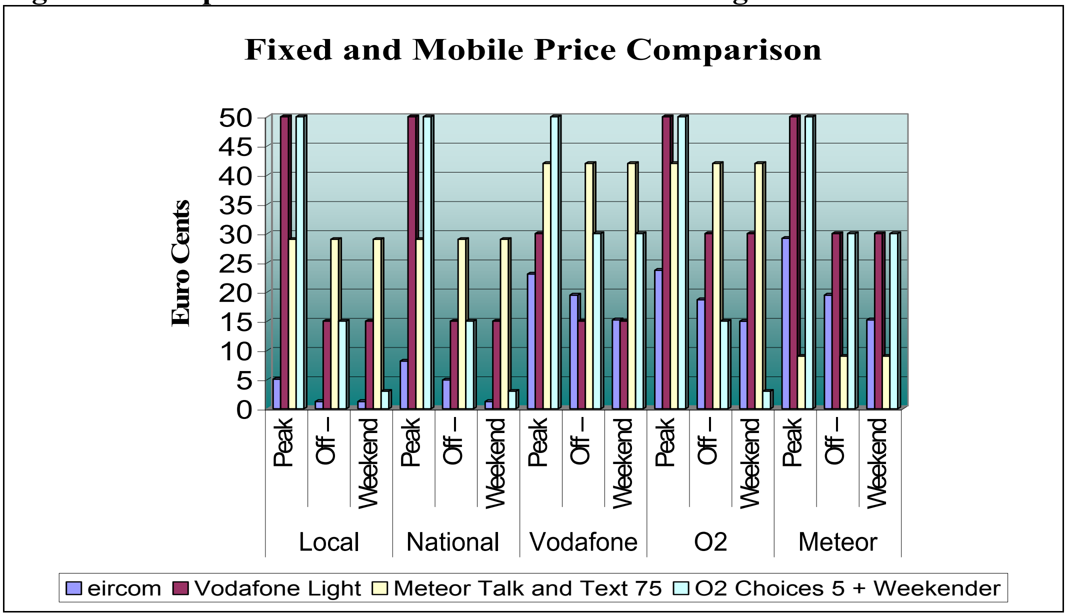
23 See, for example, Commission Decision of 10 July 2002, Case No. COMP/M.2803 – TeliaSonera, Commission Decision of 20 September 2001, Case No. COMP/M.2574 – Pirelli/Edizone/Olivetti/Telecom Italia, Commission Decision of 20 September 2001, Case No. COMP/M.1439 – Telia/Telenor and Commission Decision of 12 April 2000, Case No. COMP/M.1795 – Vodafone Airtouch/Mannesmann.

3.20 ComReg has considered whether an unregulated monopoly supplier of retail mobile services would be able to profitably raise its prices above the competitive level by, say, 5-10% for a period of about a year.

3.21 Although fixed and mobile access services provide many of the same basic functions, important differences between the two remain, with mobile service being distinguished by its mobility, while fixed service boasts superior transmission quality and bandwidth. Technically speaking, mobile can be a substitute at least for voice services because users can place and receive calls just as they do with fixed service. The relevant question is whether an increase in mobile prices would cause customers to switch to fixed services.

3.22 Figure 2 below illustrates a comparison of fixed and mobile call charges. The chart illustrates the cost of a one minute call from *eircom* and the three MNOs for local and national calls and calls to each mobile network. Comparing *eircom's* call charges to the basic post-pay tariffs offered by Vodafone, O_2 and Meteor illustrates that, with the exception of on-net calls at weekend and off-peak periods for Vodafone and O_2, and all on-net calls for Meteor, calls from the fixed network are considerably less expensive than calls from a mobile network.[24] There is a significant difference in price for local and national calls from a fixed line and a mobile phone. The difference in price between fixed and mobile calls would suggest that fixed and mobile calls are in separate markets.

Figure 2: Comparison of Fixed and Mobile Call Charges



Source: ComReg, January 2004

3.23 The difference in price between fixed and mobile retail services combined with the inability of other firms such as fixed operators to switch to providing mobile services preliminarily indicate that mobile services are in a separate market from

[24] Calls are for a period of one minute and inclusive of Vat. The call charges for the mobile operators are after the inclusive bundled minutes are included. Mobile operators call charges vary depending on the tariff package chosen, and the comparison is for illustrative purposes only. *eircom* has a minimum call charge of 5.244c which is excluded from the comparison.

fixed services.

Q. 2. Do you agree with the preliminary conclusion that fixed communication services and access, on the one hand, and mobile communications services and access, on the other, represent distinct relevant markets? Please provide a reasoned response and support your view with empirical evidence, as appropriate.

Does a "mobile communications" services market exist based upon a cluster of services at the retail level?

3.24 In considering this issue, ComReg first assesses whether there is a separate market for access at the retail level. Access to the network is generally incorporated in retail charges. In the case of post-pay customers, charging for mobile communications services is based on tariff plans that generally consist of two parts, namely, a fixed charge and an additional call charge that varies relative to the tariff plan selected (a fixed charge may also include "free" minutes or budget). Table 1 below illustrates some of the post-pay tariff plans. In the pre-pay environment, the equivalent of the post-pay fixed charge is reflected in the overall call charges and is not separately identified. ComReg is therefore of the preliminary view that access does not appear at present to be sufficiently unbundled from other mobile retail services so as to constitute a separate product market.

Table 1: Post-pay Tariff Plans

Operator	Package	Monthly Cost	Bundled Offering
Vodafone	Light	€20	1. 10 Minutes Peak Calls: On-net and Landline calls 2. 50 Minutes Off Peak Calls: On-net and Landline calls 3. 50 Minutes to a nominated Vodafone subscriber: Off-peak calls
O_2	Choices 5 +	€15	1. €5 call value 2. One add on from: All Ireland – Flat all Ireland Rate when roaming in Northern Ireland Friends and Family – 12c minute to two chosen O_2 or national numbers Weekender – Weekend calls for 3c minute to O_2 subscribers and landline Text 100 – 100 text messages per month Mobile Web – 1Mb of mobile web usage Media Messaging – 20 media messages every month International Caller – 25 international call minutes and 50% off other international calls. Free Voicemail
Meteor	75 Talk and Text	€25	1. 75 Minutes 2. 75 SMS

Source: Mobile operator's websites, January 2004

3.25 A narrow interpretation of the principles of demand-side substitution from the perspective of mobile end users could lead to the conclusion that each, or many, of the above individual mobile services presents different physical characteristics, prices and end uses. Thus, each service might not be considered as an effective substitute for the other. For example, an outgoing voice call would not be substitutable in all cases for SMS from a demand-side perspective.

3.26 As acknowledged by the Commission in similar circumstances,[25] however, such a narrow approach would not facilitate a comprehensive analysis of the competitive conditions that prevail in this market. It is therefore proposed that a broader view of the relevant market be adopted which takes into account both the commercial offerings of the component services and the consumer response thereto.

3.27 As regards demand-side characteristics, consumers purchase a cluster of services from mobile operators. Consumers have the ability to make and receive calls and SMS once they subscribe to a mobile network. Consumers can choose between the cluster of services and may place greater significance on the availability of one service above another.

3.28 As regards supply-side substitutability, provided that capacity is available on the network, it is clear that mobile operators could in theory easily supply services within the cluster of retail services in response to a hypothetical price increase for a particular service. This results from the fact that the majority, if not all, of the individual services within the cluster are provided over the same mobile network and use more or less the same network elements (*i.e.,* the same radio access network, similar elements in the core network, the same access and core transmission networks and generally the same operation and maintenance layer). However, mobile operators offer such services on a bundled basis, and have done so for a number of years, thus reducing the likelihood of potential supply-side substitutability for individual services in practice, as mobile operators generally compete on a bundle of services.

3.29 ComReg is mindful of the fact that several mobile communications services within the above cluster may be provided individually by service providers, thereby potentially providing mobile users with a choice of service providers for all their mobile service requirements, be that for such individual services and/or on a call-by-call basis. Accordingly, it is arguable that such services might fall outside the scope of a cluster market. However, ComReg is of the initial view that the provision of a mobile communications service on an individual basis should not materially affect the identification of the cluster market indicated above, at least where it can be demonstrated that the provision of such a service on an individual basis has an insignificant impact on the degree of competition between the provider of the individual service and the provider of the range of mobile

[25] See, for example, Commission Decision of 29 October 1993, Case No. IV/M.330 – McCormick/CPC/Rabobank/Ostmann, Commission Decision of 13 January 1999, Case No. IV/M.1355 – Newell/Rubbermaid and Commission Decision of 3 June 1997, Case No. IV/M.906 – Mannesmann/Vallourec.

services.[26] ComReg is also of the preliminary view that the impact of the provision of several mobile communications services on an individual basis may be left open for the purposes of this review, as their inclusion or exclusion is unlikely to have a significant impact on the market definition process at this point in time.

3.30 ComReg is of the preliminary view that a relevant product market is likely to exist at the retail level for the provision of the following cluster of services currently provided by MNOs, including:

- mobile access;
- basic voice services, including international roaming calls;[27]
- supplementary and value-added voice services;[28] and
- basic and value-added SMS.

Q. 3. Do you agree that a combined relevant service market exists for the retail provision of the above identified mobile communications services? Should any or all of the individual services identified in the cluster be excluded from that cluster? If so, why? Please provide a reasoned response and, as appropriate, supporting data.

3.31 As part of its consideration of whether outbound mobile communications services constitute a relevant product market, ComReg has also needed to address the following additional issues:

- Customer segmentation: Pre-pay and post-pay mobile;

[26] This approach draws from the concept of interchangeability under Community competition rules, whereby products and/or services which are only to a limited extent interchangeable with other products, and which are characterised by an insignificant degree of competition between each other, are excluded for the purposes of the market definition exercise.

[27] Basic voice services provide the conveyance and switching necessary to access a called party. These services are generally categorised according to whether the call is of a national, international or international roaming nature. They may be further broken down into pre-pay and post-paid services, with the latter category further sub-divided according to various subscription packages. These services may be also divided between on-net (i.e., a call originated and terminated on the same mobile network), fixed off-net (i.e., a mobile call terminated on a fixed network) and mobile off-net calls (i.e., a mobile call terminated on a mobile network other than the one on which it originated).

[28] Supplementary voice services are provided in addition to basic voice services and generally at an additional cost. Such services are accessed to a large extent via short-codes and include premium-rate services (e.g., horoscopes), directory services, voicemail, conference calls, etc.

- Advanced mobile data services at the retail level;
- 3G services in Ireland at the retail level;
- WLAN; and
- Case Precedents

(a) Customer segmentation: Pre-pay and post-pay mobile

3.32 ComReg has considered the switching behaviour of end-users in relation to retail services. ComReg is of the preliminary view that pre-pay and post-pay users fall within the same relevant product market. The number of pre-pay customers (which account for the majority of users – 72%[29]) switching to post-pay contractual services in response to an increase in the price of pre-pay services by a monopoly supplier of pre-pay services is likely to render the price increase unprofitable. This is equally true from a supply-side perspective. While there are greater costs associated with switching from post-pay to pre-pay services, ComReg considers there is sufficient interchangeability between these services from a demand and supply-side perspective and is of the preliminary view that pre-pay and post-pay are in the same market. This is consistent with the Commission Recommendation where it is stated that "Pre- and post- pay mobile services can also be considered to be part of the same market. Supply substitutability is relatively easy as is demand substitutability (in particular from pre-pay to contractual terms)".

Q. 4. Do you agree that pre-pay and post-pay mobile communications services are part of the same relevant services market at this time? Please elaborate on your response.

(b) Advanced mobile data services at the retail level

3.33 Unlike SMS services, which ComReg considers to form part of the "cluster" that customers expect to receive from MNOs, ComReg's preliminary view is to omit current data-based services supplied via WAP-enabled Internet access, GPRS and 3G from its consideration of the existing cluster market for retail mobile communications services, because there is insufficient market information to assess whether these services are likely to form part of this package of services and because the provision of these more advanced data-based services is generally in its infancy, though the marketplace is witnessing greater consumer uptake of these data services. Thus, ComReg intends to leave open its conclusions as regards whether there exists an aggregated or cluster market which also includes or excludes these more advanced mobile data communications services, since a definitive conclusion on this issue would not affect its final conclusions under this

[29] ComReg Quarterly Key Data Report, December 2003.

current market definition procedure.

(c) 3G services in Ireland at the retail level

3.34 As regards the issue of whether 3G services should, or could, be included in the identified cluster market at the retail level, ComReg has considered whether the delivery of 3G services falls within the same cluster as 2G services, consistent with the principle of technology neutrality. ComReg's preliminary view is that the market definition should be technology neutral, *i.e.*, based on the nature of the product and services provided, not on the technological platform used to provide them. 3G telephony services, from a demand-side functionality perspective, are not distinguishable from their 2G equivalents, and appear to be part of the same relevant product market. ComReg notes that this is consistent with the views expressed by the Commission in its response, of the 29th August 2003, to Oftel's notification of the wholesale access and call origination market.

"In general, the Commission considers that market definition should be technology-neutral, i.e. based on the nature of the products or services provided, not on the technological platform used to provide them. 3G voice and SMS services offered at present or in the near future are, from a demand-side perspective, not distinguishable from their 2G equivalents, and appear to be part of the same relevant product market. However, given the current state of this market, the explicit inclusion of 3G telephony would not have a material effect on the results of the analysis at issue. In any event, the inclusion, within the market for mobile network access and call origination of the 3G services currently offered, is without prejudice to any subsequent determination of market definition regarding new "enriched" 3G services that may develop".

(d) WLAN

3.35 ComReg is of the view that WLAN services are not an effective substitute for mobile services at this time. WLAN services represent both an opportunity and a threat for mobile operators. By embracing the technology and enabling seamless roaming between their mobile network and their WLAN networks, operators could use the technology to enhance significantly their data offerings, by combining high speed WLAN access in areas of particularly high density with ubiquitous wide area connectivity via mobile network coverage. WLAN may provide a competitive alternative in certain hotspots, but it does not offer mobility. ComReg is therefore of the preliminary view that WLAN services are unlikely to be part of this market.

Q. 5. Do you believe that ComReg should include or exclude the services discussed above from the definition of the relevant market? Please detail your reasons for so responding and, as appropriate, provide supporting data.

(e) Case precedents

3.36 Regulatory and competition authorities in other jurisdictions have also defined a relevant product market for the provision of mobile communications services. In its Explanatory Memorandum to the *Relevant Markets Recommendation*, the Commission states that it is possible to define a mobile outbound calls market at the retail level that includes national, international and roaming calls.

3.37 Concerning mobile voice telephony markets, the Commission has so far generally not distinguished between different technologies. Most decisions have determined that both analogue and digital GSM 900 and 1800 are part of the same mobile voice telephony market, while testing narrower market definitions to ensure that no dominant positions arose on any market definition. [30]

3.38 As regards customer segmentation, the Commission has identified an emerging market for the provision of advanced seamless pan-European mobile communications services to internationally mobile customers.[31] Based on the distinguishing factor of mobility, the Commission has so far considered that mobile and fixed data services are in separate markets.[32]

3.39 Given the fact that retail pricing and service offers of digital mobile telephony are currently national, markets remain national in scope, with the exception of the emerging market for the provision of seamless pan-European mobile telecommunications services to internationally mobile customers, as first identified by the Commission in the *Vodafone/Mannesmann* Decision.[33] International roaming services are not considered to be a substitute given the high

30 Cf. Commission Decision of 21 May 1999 in Case IV/M.1430 —Vodafone/Airtouch (OJ C 295, 15.10.1999, p. 2); Commission Decision of 21 May 1999 in Case COMP/JV.17 —Mannesmann/ Bell Atlantic/Omnitel (OJ C 11, 14.1.2000, p. 4); Commission Decision 98/2001/EC in Case COMP/M.1439 — Telia/Telenor (OJ L 40, 9.2.2001, p. 1); Commission Decision of 20 December 1999in Case COMP/M.1760—Mannesmann/Orange (OJ C 139, 18.5.2000, p. 15); Commission Decision of 12 April 2000 in Case COMP/M.1795 — Vodafone Airtouch/Mannesmann (OJ C 141, 19.5.2000, p. 19); Commission Decision of 4 August 2000 in Case COMP/M.2053—Telenor/BellSouth/Sonofon (OJ C 295, 18.10.2000, p. 11); Commission Decision of 11 August 2000 in Case COMP/M.2016 — France Telecom/Orange (OJ C 261, 12.9.2000, p. 6); Commission Decision of 25 September 2000 in Case COMP/M.2130 — Belgacom/Tele Danmark/ T-Mobile International/Ben Nederland Holding (OJ C 362, 18.12.2001, p. 6).

31 Commission Decision of 12 April 2000 in Case COMP/M.1795 — Vodafone Airtouch/Mannesmann (OJ C 141, 19.5.2000, p. 19).

32 In relation to dial-up access to Internet via mobile handsets and via fixed means. Cf. Commission Decision of 20 July2000 in Case COMP/JV 48 — Vodafone/Vivendi/Canal+, http://europa.eu.int/ comm/competition/mergers/cases/.

33 Cf. Commission Decision of 12 April 2000 in Case COMP/ M.1795 — Vodafone Airtouch/Mannesmann (OJ C 141, 19.5.2000, p. 19); Commission Decision of 11 August 2000 in Case COMP/M.2016 — France Telecom/Orange, (OJ C 261, 12.9.2000, p. 6).

prices and limited functionality of international roaming.[34]

Preliminary Conclusion on Retail Market Definition

3.40 The evidence above suggests that there is a retail "*mobile communications*" services market, based on a cluster of services.

Q. 6. Do you agree with the above preliminary conclusions on the definition of the market for mobile communications services at the retail level? Please provide a reasoned response.

Wholesale Market Definition

3.41 ComReg is required, under the terms of the *Relevant Markets Recommendation*, to assess the scope of the mobile wholesale access and call origination market. The scope of the market definition at the wholesale level is conditioned by the extent to which operators require access and call origination services to be able to provide the range of retail mobile services described above.

3.42 In defining a relevant product market for wholesale access and call origination services on the basis of a range of hypothetically substitutable services, ComReg has addressed the following issues:

(i) whether call origination, MVNO access and other wholesale services provided over a mobile network belong to the same relevant product market;

(ii) whether wholesale services provided over different mobile networks belong to the same relevant product market; and

(iii) whether self-supply should be included in the relevant product market, together with wholesale services provided to third parties.

Each of these issues is discussed below:

Do call origination, MVNO access and other wholesale services provided over a mobile network belong to the same relevant product market?

3.43 A variety of business models used by operators in other parts of the EU depend on the availability of wholesale access and call origination services being provided by MNOs. For example, indirect access operators require call origination; MVNOs require access to the radio access network, while independent service providers require access to airtime (either minutes or capacity). In the case of

34 Cf. Commission Decision of 22 June 1998 in Case IV/JV.2 — ENEL/FT/DT (OJ C 178, 23.6.1999, p. 15); Commission Decision of 21 May 1999 in Case IV/M.1430 — Vodafone/Airtouch (OJ C 295, 15.10.1999, p. 2); Commission Decision 98/2001/EC in Case COMP/M.1439— Telia/Telenor (OJ L 40, 9.2.2001, p. 1).

national roaming, however, this form of access would be available only to a licensed MNO, usually on a transitional basis. The mobile wholesale services required to support those business models do not appear to be *prima facie* substitutable, since they are based on different economic assumptions and usually reflect qualitatively different entry strategies. However, these various wholesale access and call origination services are a means of satisfying retail customer's needs, thus supporting the argument for demand-side substitutability.

3.44 From a supply-side perspective any operator providing a call origination service to indirect access operators could in theory, where capacity is available, switch with relative ease to providing access to an MVNO within a relatively short timeframe, and *vice versa*. Given the relative importance of supply-side substitutability analysis in connection with the range of potential wholesale services that could be provided, and the probability of demand-side substitutability, ComReg is of the preliminary view that the relevant product market will, therefore, consist of all wholesale access and call origination services that could be offered over an MNO's network.

<u>Do wholesale services provided over different mobile networks belong to the same relevant product market?</u>

3.45 Unlike call termination services, it is arguable that an indirect access operator does not necessarily require access to all mobile subscribers in Ireland. It might be sufficient for such an operator to have access to a single MNO, based on the assumption that this operator has a sufficient number of subscribers, given the target audience contained in the business plan of the particular indirect access operator. From an indirect access operator's perspective, therefore Vodafone is likely to be substitutable by O_2, and *vice versa*. It is, however, debatable whether Meteor currently has a sufficient subscriber base to be a full substitute for the networks of Vodafone or O_2 from an indirect access operator's point of view.

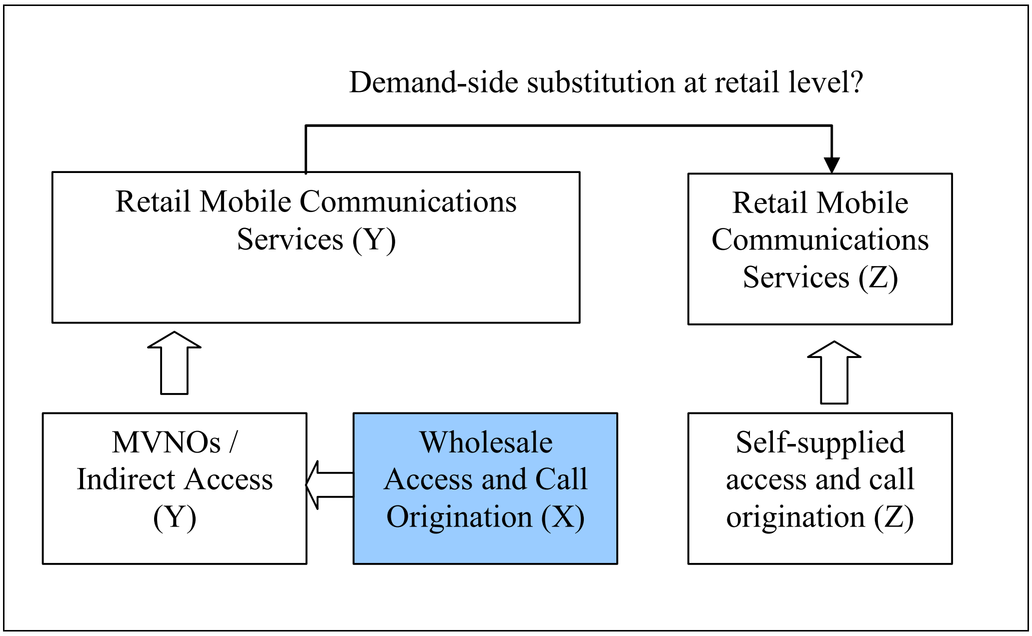
3.46 From an MVNO's perspective, the number of mobile subscribers on any given network is of less relevance, since an MVNO does not sell its services to the MNO's customers, but rather acquires its own subscribers. In order to render mobile networks substitutable other characteristics including coverage levels must be comparable. Seen in this light, Vodafone and O_2 appear to be readily substitutable from an MVNO's perspective, while Meteor, given its more restricted geographic coverage, might only represent a relatively imperfect substitute. Overall, ComReg's preliminary conclusion is that there is a single relevant market that includes all MNOs.

<u>Should self-supply be included in the relevant product market?</u>

3.47 In the context of this market review the issue of substitutability will need to be assessed on the basis of potential market transactions for the wholesale provision of mobile access and call origination services, as no wholesale services are currently provided, except in the form of self-supply by vertically integrated operators and indirect access via NTCs, in Ireland. The possibility for the review of potential markets, especially for the purposes of imposing sector-specific regulation, has long been foreseen under Community administrative practice.[35]

3.48 MNOs in Ireland currently do not offer wholesale access and call origination services to other service providers, apart from indirect access via NTCs. However, it is possible to construct a hypothetical market on the basis of notional self-supplied access and call origination. This is illustrated under the following scenario:

Figure 3: Access and call origination scenario



Source: ComReg

3.49 The above diagram suggests that hypothetical monopolist (X) supplying wholesale access and call origination services to indirect access operators or MVNOs (Y) would face a competitive constraint from integrated mobile network operators (Z) on the retail level. An increase in the price for wholesale access and call origination would, in turn, translate into an increase in the retail price of mobile communications services that incorporate the wholesale product, assuming that the increase at the wholesale level is passed on to the retail level. As a result, indirect access operators or MVNOs (Y) is likely to lose customers to the integrated provider of mobile communications services (Z). Accordingly, the hypothetical monopolist supplier of wholesale access and call origination services (X) would lose sales, while the self-supplied access and call origination of the integrated firm (Z) would increase sales. The competitive constraint on the hypothetical monopoly supplier, should it be found to exist, would come from demand substitution at the retail level. As demand substitution at the retail level is likely to be strong, the self-supplied access and call origination of MNOs should be included in the relevant wholesale market.

35 Paragraph 33, Notice on the application of the competition rules to access agreements in the telecommunications sector – framework, relevant markets and principles. O.J. 1998 C 265/2.

3.50 A final issue is whether indirect access operators, independent resellers of airtime or MVNOs could potentially self-supply access and call origination. This is unlikely to occur given the existence of limited spectrum availability and economies of scale and scope which provide an effective barrier to further mobile market entry.

3.51 The balance of historical administrative practice of the European Commission has been to exclude self-supply for the purposes of determining market definition,[36] but to take it into account at the level of market analysis.[37] Over the years, however, this general principle has been derogated from where the Commission has determined that the characteristics of particular markets are such that self-supply could exert competitive pressure on sales to independent third parties.[38]

3.52 In considering whether or not the self-supply of access by vertically integrated MNOs should be treated in the same way as the provision of such services to a third party, one needs to take into account the fact that, in the absence of some form of historical regulatory intervention, there would be few if any "access" markets. This constitutes a clear departure from other non-network based industries. One also needs to take into account whether or not there are any physical or technological limitations on the provision of access.[39] Finally, administrative practice is much more inclined to take into account "captive sales" at the level of market definition where there are no sales being made whatsoever to independent third parties, as opposed to a situation where the market dynamics are sufficiently clear from the existing arm's length transactions (even if these transactions do not constitute the full range of possible transactions).

3.53 Therefore, ComReg's preliminary view is that the taking into account of self-supply at the level of market definition for the purposes of determining the scope of the wholesale mobile access and call origination market is not only appropriate as a matter of economic principle, but is also consistent with emerging Community jurisprudence[40] and Commission administrative practice.[41]

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[36] See, for example, BASF/Eurodiol/Pantochim, Case No. COMP/M.2314 of 11 July 2001.

[37] In the context of distribution agreements, for example, this has been confirmed recently at point 98 of the Commission Guidelines on Vertical restraints, OJ 2000 C291, p.1.

[38] See, for example, the compromise position reflected in the "net" merchant market rule: Shell/DEA, Case No. COMP/M. 2389 of 20 December 2001.

[39] As is the case, for example, with many cable TV networks around the EU, which have yet to be upgraded.

[40] See European Court of First Instance judgment in Schneider Electric SA v. Commission, where the Court rejected the Commission's view that vertically integrated channel sales were not 'sold' in the wholesale market (and would therefore not constrain the conduct of the merged entity).

[41] Refer to Draft Commission Notice – Guidelines on the application of Article 81 of the EC Treaty technology transfer agreements, at point 2.1 (see also Article 3(3) of the draft revised Technology Transfer Block Exemption Regulation).

Preliminary Conclusion on Wholesale Market Definition

3.54 ComReg's review of the commercial and economic evidence suggests that a relevant market can be identified for the wholesale provision of access and call origination. For the reasons explained above, ComReg's preliminary view is that the relevant product market consists of:

- all wholesale access and origination services provided by an MNO;[42]
- constitutes a single relevant market that includes all MNOs; and
- includes self-supplied access and call origination by vertically integrated MNOs.

Q. 7. Do you agree with ComReg's preliminary conclusion on the definition of the wholesale market for access and call origination? Please explain with relevant technical and / or economic reasons.

The Relevant Geographic Market

3.55 A relevant geographic market comprises the area in which the undertakings concerned are involved in the supply and demand of products and/or services, in relation to which the conditions of competition are sufficiently homogeneous and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different to those areas.[43]

3.56 On the basis of the above definition, ComReg takes the preliminary view that the relevant geographical markets for the provision of mobile communications services at the retail level, as well as of any potential access and call origination services at the wholesale level are national in scope. In particular, the pricing and service offers at the retail and wholesale levels are currently national, as are the relevant pricing procedures. Mobile operators' licences are also national in scope.

Q. 8. Do you agree that the relevant geographic markets for the provision of mobile communications services at the retail level, as well as access and call origination services at the wholesale level are national in scope? Please expand in your response.

42 For the avoidance of doubt, termination and international roaming services are excluded from this relevant product market.

43 See, for example, United Brands v. Commission, [1978] ECR 207, the Market Definition Notice, the SMP Guidelines and ComReg's Information Notice on Market Analysis and Data Collection for market reviews of electronic communications networks, ComReg Document No. 02/117, for additional guidance.

Preliminary Conclusions on Market Definition

3.57 The communications sector is characterised by two or more functional levels of competition, namely, the provision of communications services to end users (*i.e.,* the retail market) and an upstream market for the provision of access to facilities necessary to provide such communications services (*i.e.,* a wholesale market).

3.58 ComReg's review of the commercial and economic evidence suggests that a relevant market can be identified for the wholesale provision of access and call origination. For the reasons explained above, ComReg's preliminary view is that this relevant product market consists of:

- all wholesale access and origination services provided by an MNO;[44]
- constitutes a single relevant market that includes all MNOs; and
- includes self-supplied access and call origination by vertically integrated MNOs.

3.59 ComReg acknowledges that emerging access services might result in a variation of this wholesale market definition over time, but ComReg believes these will not be material during the period of this review. Consequently, these conclusions are without prejudice to the future existence of multiple separate markets for call origination and various forms of access to mobile networks, particularly if the mobile value chain becomes increasingly fragmented over time. Access could take a number of forms, including independent service provision (*e.g.,* (un)branded airtime), national roaming, access by so-called mobile virtual network operators ("MVNOs") and indirect access (*i.e*., carrier pre-selection).

3.60 Of the wholesale access alternatives available in theory, only self-supply and indirect access via NTCs are currently available.

3.61 The broad scope of the relevant wholesale market reflects the ability of Electronic Communication Network ("ECN") providers to address the retail market for mobile communications services, which includes all mobile services sold to end users as a "cluster" of services. Accordingly, ComReg's preliminary is that there exists a services market for the retail provision of mobile communications services, which is comprised of mobile access, basic voice services, including national, international and international roaming calls, supplementary and value-added voice services, and basic and value-added SMS. Pre-pay and post-pay mobile communications services form part of the same relevant services market.

3.62 ComReg has left open its conclusions as regards the impact of current data based services provided over WAP-enabled Internet access, GPRS, and 3G on the basis of its cluster definition of retail mobile communications services, as their inclusion or exclusion from the relevant market, at least at this stage of their development in Ireland, is not material to the conclusions of this market review

[44] For the avoidance of doubt, termination and international roaming services are excluded from this relevant product market.

for the purposes of determining SMP on any relevant market.

3.63 ComReg's preliminary view is that the geographical scope of the markets for the provision of mobile communications services at the retail level, as well as for access and call origination services at the wholesale level, is limited at this point in time to the national territory of Ireland.

Q. 9. Do you agree with the above preliminary conclusions regarding the market definition exercise? Please provide a reasoned response.

4 Relevant Market Analysis

Background

4.1 Having first identified a relevant market relating to wholesale access and call origination on public mobile telephone networks, ComReg is required to conduct an analysis of the effective competitiveness of that market by reference to whether any given undertaking or undertakings are deemed to hold SMP in that market. Because of the interrelationship between the wholesale and retail levels of the market, the question of whether SMP can be found to exist will address both functional levels of the market. Recital 27 of the *Framework Directive* states that a relevant market will not be effectively competitive "*where there are one or more undertakings with significant market power*". Regulation 25(1) of the *Framework Regulations* states that:

> *"A reference in these Regulations ... to an undertaking with significant market power is to an ... undertaking (whether individually or jointly with others) [that] enjoys a position which is equivalent to dominance of that market, that is to say a position of economic strength affording it the power to behave to an appreciable extent, independently of competitors, customers, and, ultimately, consumers".*

4.2 Accordingly, an undertaking may be deemed to have SMP either individually (single dominance) or jointly (joint or collective dominance) with other undertakings in a relevant market. In addition, where an undertaking has SMP on a relevant market, it may also be deemed to have SMP on a closely related market, where the links between the two markets are such as to allow the market power held in one market to be leveraged into the other market, thereby strengthening the market power of the undertaking.[45] ComReg is obliged under the *Framework Regulations* to assess SMP in accordance with European Community law and, in doing so, to take "utmost account" of the *SMP Guidelines*.[46]

Single dominance

Community Law

4.3 The concept of SMP is synonymous with the concept of dominance under Article 82 EC.[47] The classic legal formulation for single dominance can be found in the case of *United Brands v. Commission*,[48] where the European Court of Justice held that a dominant position:

"... relates to a position of economic strength enjoyed by a undertaking which enables it to prevent effective competition being maintained on the relevant

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45 Framework Regulations, Regulation 25(3).

46 Regulation 25(2).

47 Refer to the SMP Guidelines, para. 70.

48 Case 27/76, [1978] ECR 207.

market by affording it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of its consumers."[49]

Under this formulation, the ability to act independently and the ability to prevent competition appear to be interrelated.

4.4 In any finding of single dominance, it is true that the larger the market share enjoyed by an individual undertaking, the greater the likelihood of a finding of SMP. This is because, at least in the case where they are very high, market shares serve as a proxy for market power. Thus, the Court of Justice in *Hoffman-La Roche v. Commission*[50] held that:

> *"... very large market shares are in themselves, and save in exceptional circumstances, evidence of the existence of a dominant position. An undertaking which has a very large market share and holds it for some time ... is by virtue of that share in a position of strength..."*

4.5 An undertaking will be subject to the rebuttable presumption that it is in a position of single dominance if it holds in excess of a 50% market share.[51] Even a market share as low as 40% might, given the existence of other relevant factors, be supportive of a finding of single dominance.[52]

4.6 Despite its relative importance, market share cannot be relied upon, to the exclusion of other factors, as being indicative of dominance. Thus, any finding of single dominance would need to take into account, especially in the context of this review, a number of additional factors, including:

- the existence of entry barriers and barriers to expansion (beyond more strategic advantages which amount to a 'first mover' advantage);
- economies of scale and/or scope;
- the existence of "*deep pockets*" and access to capital;
- significant advantages in terms of advertising spend and other issues relevant to brand image;
- ability to leverage key aspects of overall size or economic strength in the relevant market;
- historical conduct suggestive of the existence of market power;
- economic performance relative to other market operators, taking into account efficiencies; and

49 At para. 65. See also SMP Guidelines, at paras. 72-74.

50 Case 85/76, [1979] ECR 461, at para. 41.

51 See AKZO v. Commission, Case C-62/86, [1991] ECRI-3359; approved in Hilti AG v. Commission, Case T-30/89, [1991] ECR II-1439.

52 Op. cit., United Brands v. Commission; cf. Commission's Xth Report on Competition Policy (1980), at para. 50. See also SMP Guidelines, at paras. 75-76.

- the extent of vertical integration, or the monopolisation of routes to market.[53]

These factors, to the extent that they are relevant, are discussed in greater detail in the discussion on collective dominance.

Irish Precedent

4.7 The Irish Courts have, to date, been asked only on one occasion to take a position on the existence of single dominance in the Irish mobile sector. In its Meridian Communications judgment of April 2001,[54] the High Court was not convinced at that time by the available evidence that Eircell (now Vodafone) occupied a position of single dominance in the market for mobile telephony services in Ireland; at the time, Eircell was said to hold 60% of that market. The court rejected the plaintiff's contention that the structural aspects of the market resulted in Eircell being in a single dominant position. In particular, he found that the significance of the large market share of Eircell was greatly diminished in light of the dramatic decline of that share over a relatively short period of time, namely, a fall of approximately 40% from the time when Esat Digifone (now O_2) entered the market. The court added that the significance of the low number of competitors to Eircell (now Vodafone) was diminished by the fact that Esat Digifone was a strong company, which was well placed to exploit any laxity on the part of Eircell. In his view, the strategic and cost implications associated with the arrival of Meteor at the time, further supported this view. In the circumstances, the Court considered that the significance of high barriers to entry was "*vastly reduced*" by the fact that barriers to expansion appeared to be low, which in turn greatly reduced Eircell's capacity to act to an appreciable extent independently of its rivals. The level of vertical integration of Eircell and its considerable influence over the routes to market did not alter the Court's view in this respect.

4.8 The court also rejected the plaintiff's contention on the particular facts of the case that Eircell was in a dominant position as a result of evidence that it charged high prices. First, he judged the evidence of high prices as being *"quite unsatisfactory and unreliable"*, particularly given the flaws in several comparative price reports. Second, he observed that high prices would not necessarily prove that Eircell was dominant in any event, particularly as it was not proven that its prices were excessively high. Even if the Court were to accept that prices were comparatively and excessively high, it was of the view that "*this might indicate that the true level of competition had yet to be attained, but it would not necessarily show that Eircell was acting to an appreciable extent independently of its competitors*".

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53 For discussions on the relevance of such factors, see for example: United Brands v. Commission, op. cit.; Continental Can, OJ [1972] L7/25; Hoffman-La Roche, op. cit.; Michelin v. Commission, Case 322/81, [1983] ECR 3461; see also Napier Brown-British Super, OJ [1988] L284/41. Refer also to the SMP Guidelines, at paras. 78-79.

54 Meridian Communications and Cellular Three Limited v. Eircell Limited, High Court, 5 April 2001.

4.9 Finally, the court relied to a large extent on behavioural evidence, which suggested that Eircell was not then in a dominant position. A fall in prices, its dramatic (at the time) decline in market share, the evidence of so-called "*leap-frogging*" in tariff reductions, the large new and independent subscriber base, and the number and scale of innovations, were among the most important matters cited by Eircell as indicators of competition. This body of evidence, the Court concluded, supported the contention that Eircell's pricing behaviour was strongly constrained by competition from Esat Digifone.

Preliminary View on Single Dominance

4.10 In assessing the current situation in light of single dominance ComReg notes the following.

4.11 First, Vodafone's current retail market share of 56 % reflects a market share which appears to have stabilised since the beginning of 2001. Moreover, when assessing the market share of Vodafone, one needs to compare that market share relative to the size of its nearest competitor, O_2, which has also remained relatively stable over the past few years.[55] Given that the differential between Vodafone and O_2 at the retail level is only 17 percentage points (56% and 39% market share respectively), with the difference between those undertakings having narrowed over the past three years, it would not appear to follow that Vodafone could act in the relevant market in a way that is significantly independent of O_2. The difference in market share between Vodafone and O_2 on the one hand, and its next competitor, Meteor, on the other, is more significant (*i.e.*, Meteor currently holds a 5% market share, a differential of 34 percentage points compared to O_2 and 51 percentage points to Vodafone)

4.12 Second, as regards all other factors which might otherwise be considered to be indicative or supportive of a single dominance finding, Vodafone may no longer be unique in the relevant market in possessing those characteristics listed in Section 4.6, above. On the contrary, each of the listed characteristics in Section 4.6 may equally be considered in relation to O_2.

4.13 Although there have been a number of important changes in the market, whether of an economic, commercial or regulatory nature, since the court delivered its judgment in *Meridian Communications*, these are now highly relevant to whether or not the relevant market in Ireland is characterised by a situation of collective dominance.

4.14 Since the judgment in *Meridian Communications*, the position on the Irish market is significantly different to that examined by the court, insofar as:

- no new entry has occurred in the delivery of mobile services other than through the introduction of ‘3’, via the 3G licensing process, with one 3G licence remaining unassigned;
- there continues to exist spare capacity on the networks of the major MNOs;

55 Refer to Case 322/81, Michelin v. Commission [1983] ECR 3461

- market shares have displayed relative stability for a number of years;
- no commercial arrangements have been struck between the major MNOs and Meteor, or other operators, regarding any form of access to the networks of MNOs;
- retail pricing patterns have stabilised, and 'leap-frogging' between the major MNOs are more infrequent;
- Meteor has had an insufficient impact on the market positions of Vodafone and O_2; and
- the Irish market is now significantly more mature (both in terms of levels of penetration and call volumes).

These factors, while not undermining the views of the court then, in connection with the appraisal of single dominance, are highly relevant to the appraisal of joint dominance on the Irish market now.

4.15 On balance, the above factors warrant an investigation of whether Vodafone and O_2 are likely to occupy a position of joint dominance in the market, as discussed in the remainder of this chapter.

Q. 10. Do you agree with ComReg's preliminary view that joint dominance should be investigated? If not, please reason your response.

Joint (or Collective) dominance

Introduction

4.16 In addition to the definition of SMP at Community level, Regulation 25 of the *Framework Regulations* provides guidance on the assessment of joint dominance. Regulation 25(2) requires that the assessment of joint dominance be carried out "*in accordance with European Community law and take utmost account of the [SMP Guidelines*]", while the criteria to be used in making such an assessment are outlined in a Schedule to the *Framework Regulations*. This Schedule states that:

> *"Two or more undertakings can be found to be in a joint dominant position within the meaning of Regulation 25 if, even in the absence of structural or other links between them, they operate in a market the structure of which is considered to be conducive to coordinated effects. Without prejudice to the case law of the Court of Justice on joint dominance, this is likely to be the case where the market satisfies a number of appropriate characteristics, in particular in terms of market concentration, transparency and other characteristics …"*[56]

[56] The "other characteristics" mentioned are: a mature market; stagnant or moderate growth on the demand side; low elasticity of demand; an homogeneous product; similar cost structures; similar market shares; a lack of technical innovation, mature technology; an absence of excess capacity; high barriers to entry; a lack of countervailing buying power; a lack of potential competition; various kinds of informal or other links between the undertakings concerned; retaliatory mechanisms; and a lack or reduced scope for price competition.

4.17 Similarly, Annex II of the *Framework Directive* also provides for a test of joint or collective dominance which is focussed on whether the structural characteristics of the relevant market encourage parallel or aligned anti-competitive behaviour.[57] It does so by including those economic factors developed under the administrative practice of the Commission in its application of Article 82 of the EC Treaty and under its review of mergers under Regulation 4064/89. The factors listed are those reflected in the schedule of the Framework Regulations, and are expressed to be neither exhaustive nor cumulative, and said to be merely illustrative of the "sorts of evidence that that could be used to support assertions concerning the existence of joint dominance". They are also without prejudice to the judgments of the European Court of First Instance or Court of Justice, which are the final arbiters of Community law.

4.18 The list of factors listed in Annex II and the schedule in the *Framework Regulations* is further repeated and elaborated upon in the *SMP Guidelines*. This list reflects a broad range of factors that have been considered in the developing case-law. Much of this case-law was also reviewed by the court in its 4 October 2000 Judgment in the *Meridian Communications* case. The jurisprudence on collective dominance continues to develop. In particular, the Court of First Instance has pronounced, at some length in its *AirTours* judgment, on the elements necessary to meet the legal standard for collective dominance.

4.19In accordance with EC jurisprudence and, taking utmost account of the *SMP Guidelines*, ComReg's investigation of collective dominance focuses on whether the market structure is such that each member of the alleged dominant oligopoly, in becoming aware of a range of common economic interests, could consider it possible, economically rational, and hence preferable, to adopt on a lasting basis a common policy on the market aimed at selling at above competitive prices, without having to enter into an agreement or resort to a concerted practice and without any actual or potential competitors, let alone customers or consumers, being able to react effectively.[58]

4.20In this regard, ComReg's analysis is based primarily on a review of the elements outlined below, which bring together the essential elements of economic analysis, EC law jurisprudence and Commission administrative practice, as reflected in the *SMP Guidelines*:

A. The degree of market concentration: whether a small number of undertakings account for a large share of the relevant market without any single undertaking being in an individual dominant position.

B. The incentive and ability to co-ordinate: whether the undertakings concerned have an incentive to align their conduct in the market in particular, in such a way

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57 Recital 26 of the Framework Directive considers that a relevant market whose structure is conducive to coordinated effects means a relevant market that "encourages parallel or aligned anti-competitive behaviour on the market". refer also to footnote 106 of the SMP Guidelines.

58 This language reflects that used by the CFI in paragraph 61 of its Airtours judgment, as well as by the Commission in its administrative practice.

as to maximise their joint profits by restricting production with a view to increasing prices. Where such an incentive exists, the following basic conditions must be fulfilled for coordination to be sustainable over time,[59] namely:

C. the coordinating firms must have the means of *monitoring*, sufficiently quickly and precisely, whether the terms of coordination are being adhered to by other members of the alleged dominant oligopoly; and

D. there must be an *incentive* not to depart from the common policy on the market, of which the notion of retaliation in respect of conduct deviating from the common policy is an integral part.

E. Actual and/or potential market constraints: whether, in any event, the foreseeable actions of outsiders, such as actual and potential competitors, as well as customers, would not be able to jeopardise the results expected from the implicit coordination seen to be taking place.

An assessment of the existence of joint or collective dominance will need to take into account the overall impact of all these factors, rather than being confined to the analysis of any single indicator of collective dominance.

4.21 These factors will be assessed primarily in the context of the retail mobile communications market because, in the absence of transactions at the wholesale level, apart from indirect access via NTCs, factors at the retail level will primarily provide the available competitive indicators to ComReg's analysis. Furthermore, at the wholesale level there exists primarily only a notional market, and access is only relevant insofar as it can be seen as the basis of delivering retail services. Additionally, the absence of transactions at the wholesale level, apart from indirect access via NTCs, is arguably itself a legitimate cause for concern as regards collective dominance, and will be examined separately.

A. The Degree of Market Concentration

4.22 ComReg is of the preliminary view that the retail mobile communications market is highly concentrated in Ireland, as outlined below. There are currently four vertically integrated mobile operators in Ireland, namely, Vodafone, O_2, Meteor and '3'. To date, there are no independent mobile service providers in Ireland.

4.23 A large combined market share among very few undertakings might indicate that they form a collectively dominant group of undertakings and that a situation prevails which threatens effective competition. Currently, the Irish mobile market continues to be dominated by two operators who, between them, command a 95% market share of the retail market for mobile communications services based on mobile subscribers. The third operator, Meteor, appears to have had little impact on the market share of the established operators since its entry into the market in February 2001, nearly three years ago. For example, Meteor's entry and pricing

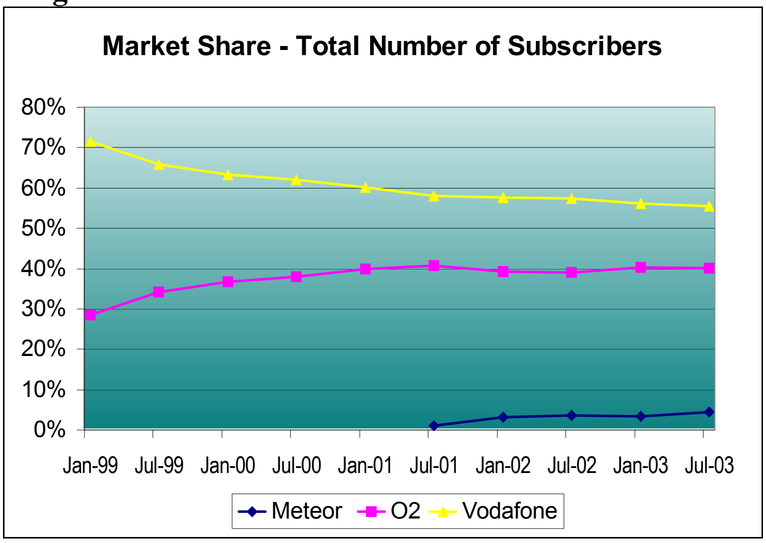
[59] See, in particular, the Airtours judgment, Case T-342/99, Airtours plc v. Commission, ECR [2002] II-2585, the SMP Guidelines.

strategy appears to have had only a small effect on the competitive interactions between O_2 and Vodafone. Despite focusing on a different customer profile which targets, above all, pre-pay customers, and despite offering a significant price advantage to customers in general, Meteor has been unable to make a significant competitive impact on the positions of Vodafone and O_2.

4.24 There are significant gaps between the two largest firms, Vodafone and O_2, and the current remaining market participant, Meteor ('3's market presence is negligible at this stage). In addition to a combined market share of 95% of the total subscriber base, it is estimated that Vodafone and O_2 have a combined market share of greater than 95% by value and by volume for outbound mobile communications services. In the case of a duopoly and, in the absence of evidence to the contrary, the CFI in *Gencor/Lonhro*[60] held that a large market share provides a "strong" indication of the existence of collective dominance.

4.25 As illustrated in Figure 4, since the beginning of 2001 the Irish retail market has been characterised by a high degree of market share stability. Vodafone's market share has stabilised at around 56% and O_2's share at around 39%. The same high degree of stability is also revealed when looking at market shares in terms of outbound minutes or total retail revenues.

Figure 4: Market Share



Source: ComReg

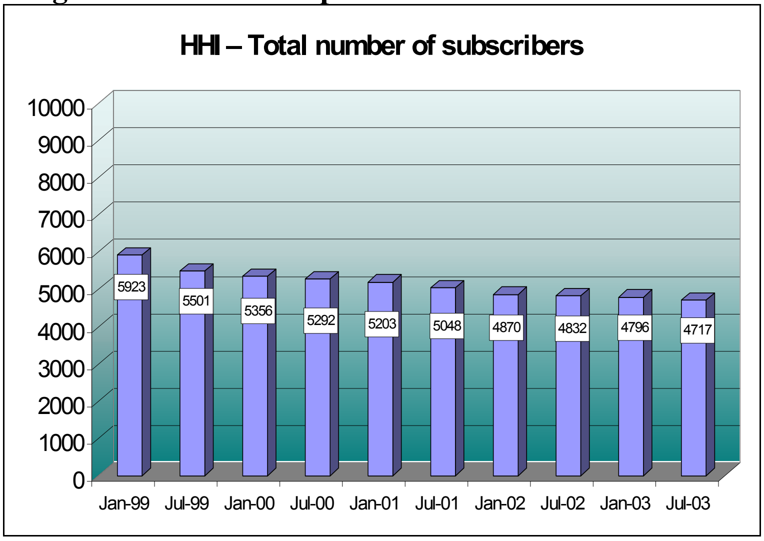
Q. 11.	**Do you agree with ComReg's preliminary assessment of market share developments at the retail level in Ireland?**

4.26 The more complex measure of market concentration, the Herfindahl-Hirschman Index ("HHI"), is greater than 4,500 for Ireland, whether measured by mobile subscribers or mobile outbound minutes or revenues. Figure 5 below demonstrates the HHI development in the Irish mobile market over the period

60 Case T-102/96, Gencor Ltd. v. Commission.

January 1999 to July 2003. A market with a HHI greater than 1,800 is "highly concentrated" for the purposes of economic analysis.[61] While Figure 5 shows that the HHI for Ireland has declined over time, the level of concentration for Ireland, 4,500, greatly exceeds the figure of 1,800 mentioned above.

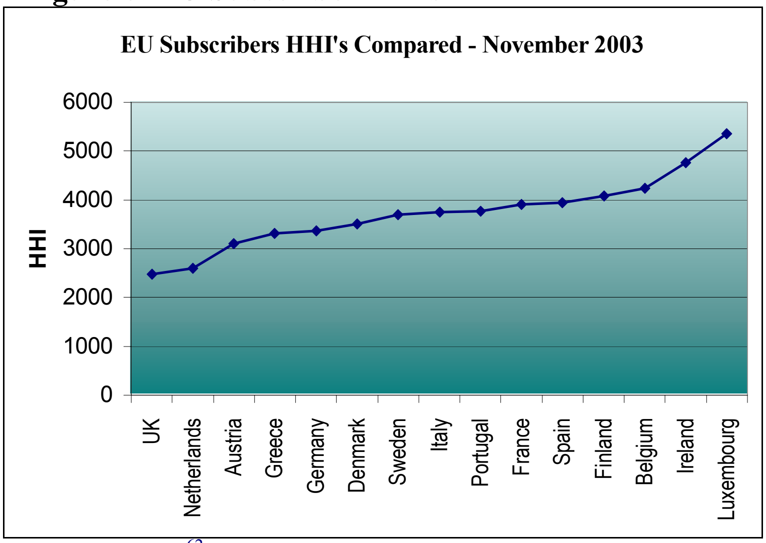
Figure 5: HHI Development in mobile market in Ireland



Source: ComReg

4.27 According to Figure 6 below, with the exception of Luxembourg which has only two mobile operators, Ireland has the highest HHI in the EU, measured on the basis of mobile subscribers.

Figure 6: EU Subscriber HHIs



Source: ComReg[62]

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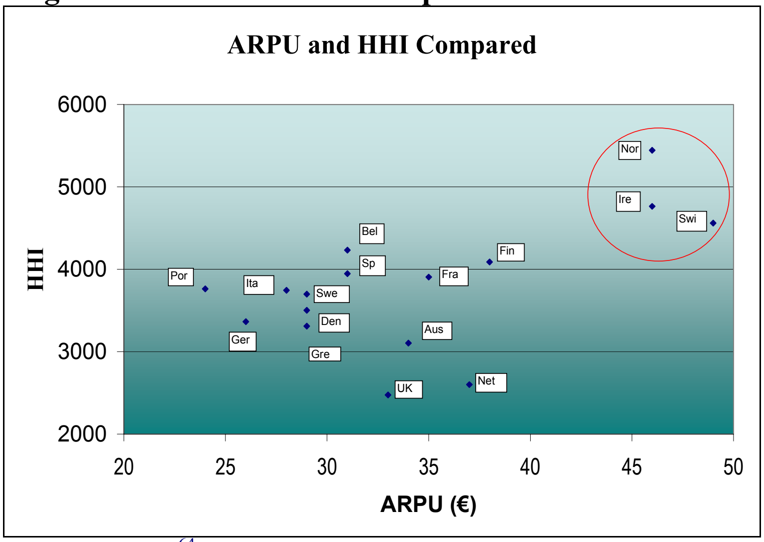
[61] See The Competition Authority Guidelines for Merger Analysis (N/02/004). A market with a HHI less than 1000 is considered "unconcentrated", while a market with a HHI between 1000 and 1800 is considered moderately concentrated.

[62] Subscriber figures taken from Baskerville November 2003

4.28 Figure 7 below compares Average Revenue Per User ("ARPU")[63] to the HHI in various European countries. There appears to be a correlation between high ARPUs and high market concentration. Ireland, Switzerland and Norway are the countries with the highest levels of concentration, and which are also the countries with the highest levels of ARPU.

Figure 7 ARPU and HHI compared



Source: ComReg[64]

> **Q. 12. Do you agree with ComReg's preliminary conclusion that the mobile communications market at the retail level is highly concentrated in Ireland?**

B. Incentive and Ability to Co-ordinate

4.29 Whether or not undertakings operating in a highly concentrated industry, such as the Irish mobile sector, have the necessary economic incentives to implicitly co-ordinate their market behaviour will depend on the interaction between a number of factors, including:

B.1 the relative maturity of the market;
B.2 the degree of symmetry and its consequences in terms of market shares, technological innovation, costs and profitability;

63 As far as possible, ARPU figures are obtained directly from operators. Where unavailable, ARPU is calculated by dividing annual service revenues by the mid-term installed base (the sum of the opening and closing customer bases for the period divided by two). Once the Yankee group has obtained or calculated all individual ARPU figures, they are applied to each operator's mid-term user base to obtain service revenues by operator, which are then combined to obtain a country total. This total revenue figure is then divided by total mid-term users to derive country-level ARPU.

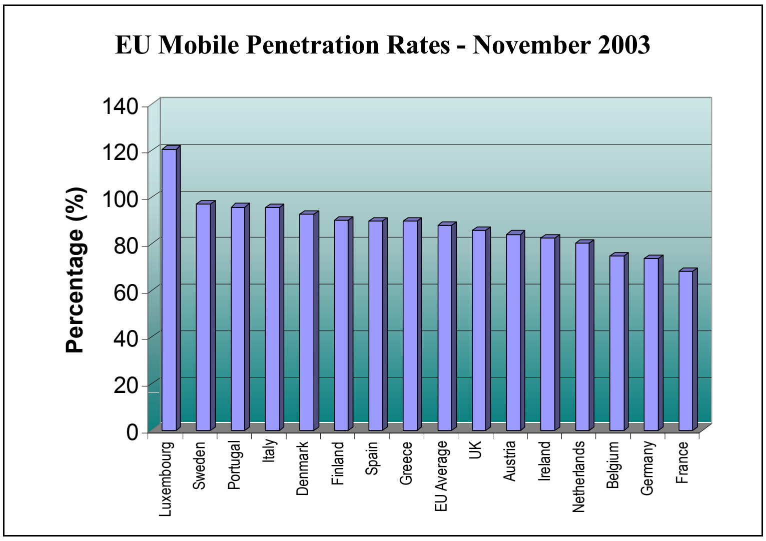
64 Subscriber figures are from Baskerville for November 2003 while ARPU figures are from The Yankee Group for Q3 2003.

B.3 retail market competitiveness, including the effects of churn and possible countervailing buyer power; and
B.4 wholesale market behaviour.

B.1 Maturity of the market

4.30 The adoption of co-operative behaviour is facilitated in relatively stable and foreseeable sectors and a stable market structure. In common with other European countries, Ireland is a relatively mature market for 2G mobile services. Mobile penetration in Ireland is currently at 83% (slightly below the EU average of 88%). It is arguable that there is, therefore, some room for further penetration, but this is limited and it may also be the case that those remaining customers are not particularly attractive in revenue terms.

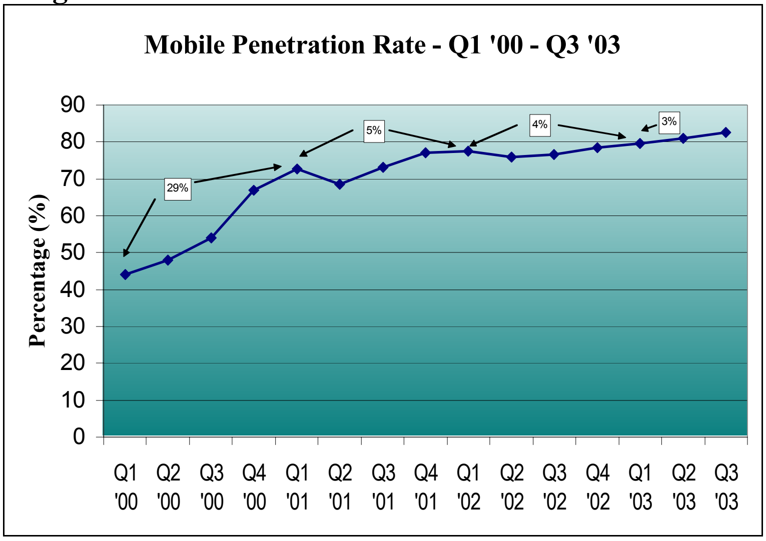
Figure 8: European Penetration Rate



Source: Baskerville

4.31 As illustrated in figure 9 below, the rate of growth of mobile penetration has been in decline in Ireland in recent years.

Figure 9: Irish Mobile Penetration Rate

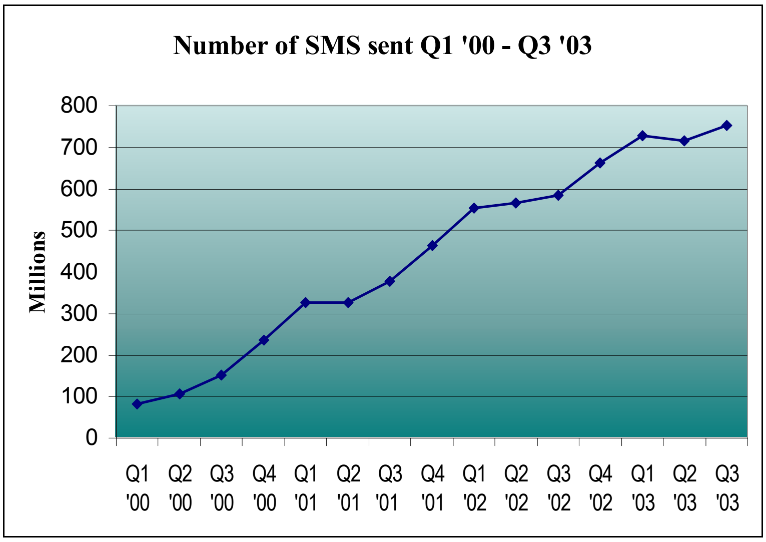


Source: ComReg

4.32 When considering the rate of growth of the mobile retail market in terms of subscribers, minutes and revenues, data available to ComReg suggests that this has slowed over time, suggesting that the market is becoming more mature.

4.33 It is not clear whether new products in the mobile portfolio will have the effect of further increasing the mobile market penetration. While products such as SMS have shown growth, as illustrated in figure 10 below, SMS is just one product out of a bundle of mobile services offered at the retail level. As stated in the previous paragraph, the rate of growth of revenue of mobile services has slowed over time.

Figure 10 Number of SMS sent



Source: ComReg

4.34 A market characterised by slow growth is considered to discourage new entry and/or aggressive moves to capture growth in the market, and is therefore unlikely to provide high incentives for competition. Given that growth in the voice market has slowed, continued industry growth is likely to be contingent on the development of mobile data services.

4.35 It could be argued that, given the fact that existing services such as voice are to be provided along with future innovative services on a bundled basis; there should be an incentive on the part of mobile operators to compete in the provision of the voice component of such bundles, along with other services. Nevertheless, it also appears to be economically rational, and hence profitable, for Vodafone and O_2 at least, not to compete aggressively on voice tariffs, as to do so would only harm their existing core voice revenues, which currently account for approximately 80%[65] or greater of their revenue.

4.36 Even though Full Mobile Number Portability ("FMNP") was introduced in Ireland in July 2003, the evidence in the mobile market thus far suggests that the advantage enjoyed by Vodafone and $O_{2,}$ as well established operators, is of such significance that their current market positions in terms of their shares of the total subscriber base are unlikely to be eroded significantly by operators such as Meteor or '3' over the timeframe of this review. The inability of Meteor to advance beyond 5% of the retail market, despite its undercutting of the retail prices of Vodafone and $O_{2,}$ suggests that a sufficient challenge to the existing major operators is not very likely over the timeframe of this review. In terms of 3G, it is more than likely that the current positions of Vodafone and O_2 in a 2G environment will translate into comparable positions in the provision of 3G services. The migration of an existing 2G customer base into a 3G customer base seems to be a significant commercial driver for both Vodafone and O_2. As regards '3', its ability to operate in both the UK and Irish markets should provide it with some additional competitive advantage as compared to Meteor. However it is difficult for ComReg to determine how 3G will develop in Ireland at this early stage. Moreover, it is arguable that '3' will need to rely on 2G national roaming to be able to provide voice services on a national level, particularly in the early stages of network build-out.

4.37 Finally, the mobile market, particularly the 2G environment, is characterised by a stable level of technological innovation. The industry functions on the basis of harmonised standards, with innovation being driven by the industry as a whole, which is made up of a combination of equipment providers, service providers and MNOs. Accordingly, once handset or functionality innovation is introduced to the marketplace, it is embraced by all MNOs, the effect of which is to ensure that any given MNO cannot disrupt the overall market through access to a unique technology. 3G represents an extension of the existing mobile service provider industry to new services and as such does not represent a radical departure from underlying industry structure, representing more of an evolution than a revolution. While 3G technology offers scope for a different service offering to that available over 2G technology, given the timing uncertainties with respect to the wider availability of 3G services to end users, 3G technological developments are unlikely to affect the current positioning of the mobile market over the timeframe of this review. Rather, these 3G technological developments have the potential to strengthen the position of Vodafone and O_2 in the future as these operators have vertically integrated 2G and 3G networks, as opposed to '3' which is a 3G "greenfield" entrant. While '3' will bring further competition to the market, it is

[65] Source: Vodafone and O_2 Group Interim Results for the six months to 30th September 2003.

unlikely to be able to act as an effective competitive constraint on Vodafone and O_2 over the timescale of this review.

4.38 Taking into consideration the above, ComReg is of the preliminary view that the mobile communications market is mature, at least for the services defined in the retail cluster market.

Q. 13. Do you agree that the mobile communications marketplace is mature, at least for the services defined in the retail cluster market? If not, what scope exists for growth, and in which areas? Please elaborate in your response.

Q. 14. Do you agree that technological innovation is mature in the Irish mobile communications sector? Please elaborate in your response.

B.2 Retail Symmetries

4.39 The ability and, consequently, the incentive, for Vodafone and O_2 to achieve and sustain tacitly coordinated behaviour over a period of time in the mobile communications sector in Ireland is greatly enhanced if they have symmetrical positions as regards key commercial indicators such as, for example, their costs, business strategies, range and quality of services, and spectrum assignments. The greater the similarities between these economic indicators relative to the relevant structural features of the market in which the oligopolists operate, the more likely that their commercial behaviour will be consciously parallel. A symmetric market structure is reflected where firms have comparable market shares, comparable resources and a comparable ease of access to all relevant inputs and sales channels. In this section, retail symmetries are discussed in terms of market shares, technological innovation, cost structures, profitability and Average Revenue Per User ("ARPU").

(i) Market Shares

4.40 The greater the symmetry in market shares between oligopolists, the greater the likelihood that their commercial interests are aligned. The relative market shares of the leading Irish mobile operators, when measured by subscribers, are 56% and 39% respectively. These market shares are sufficiently proximate to one another, and sufficiently distant from the market share of the nearest rival (a gap of 34 percentage points) so that, when assessed in the broader context of the other indices of collective dominance discussed herein, they are capable of producing competitive results that one would expect from symmetric market shares.

4.41 In addition, market shares have remained stable since the beginning of 2001. The same high degree of stability is also revealed when looking at market shares in terms of outbound minutes or total retail revenues. The stability of market shares between the leading operators can constitute an indicator of the absence of dynamism in the competitive relations on the market in question.

(ii) Technological Innovation

4.42 The rollout of major new technologies is generally mirrored by other mobile operators. Analogue mobile networks were first rolled out in Ireland in December 1985, while GSM-based networks were first rolled out in July 1993. In 2002 Vodafone and O_2 enhanced their GSM networks with the deployment of General Packet Radio Service (GPRS), which introduced packet data transmission, while Meteor introduced GPRS in 2003. Vodafone and O_2, together with ‘3’, have also launched 3G services and are in the process of rolling out their 3G radio access technology.

4.43 The above and other new technologies are generally accessible to each MNO, as they may be purchased from a variety of equipment suppliers, who have manufactured them on the basis of open industry standards. In addition, network upgrades and the introduction of innovative services are controlled by the MNOs themselves, while new independent service providers will rely, to a considerable extent, on the underlying platforms of the operators. The scope for differentiation is, therefore, significantly reduced. While ‘3’ have recently entered the mobile marketplace, its mobile network characteristics are expected to be similar to those of Vodafone and O_2.

4.44 Basic voice services appear to have been unaffected by technological developments in the mobile communications sector in Ireland over the last three years. However, the sector has witnessed considerable changes in the quality and type of data services available, primarily due to the introduction of packet switched transmission, via GPRS. While it is arguable that the introduction of innovative mobile data solutions provides mobile operators with an incentive to compete, ComReg is of the preliminary view that, if such is the case, these operators will not wish to do so at the expense of jeopardising their revenues from voice services, at least for the foreseeable future, as these services account for approximately 80% or greater of their revenue.

(iii) Cost structures

4.45 Vodafone and O_2 have similar portfolios of mobile network infrastructure and services in Ireland and have similar population and geographic coverage. They also have the ability to source inputs and support services from the United Kingdom and other markets in their respective groups, resulting in economies of scale. In addition, these operators generally mirror each other’s new products. Vodafone and O_2 have also been assigned an identical number of spectrum channels, namely, 36 channels of 200 KHz in the GSM 900 frequency band and 72 channels of 200 KHz in the GSM 1800 frequency band. All of the above would tend to suggest that their quality related costs are comparable.

4.46 It is clear that successful operators with large customer bases benefit from falling average costs, and that the ability to create and exploit scale economies is, in principle, a very strong driver of competition, providing strong incentives to win customers and increase traffic volumes on the network. Thus, Vodafone and O_2 may face lower average costs, due to their larger customer bases, compared to smaller operators. In addition, the configuration and optimisation of Vodafone and O_2's networks might be different from that of a smaller operator, and they should be able to benefit from greater synergies (*e.g.*, collective purchasing) in light of their greater pan-European foothold. The size of the Irish market is not such as to suggest that the cost savings available to Vodafone are significantly different to those available to O_2.

(iv) Profitability

4.47 Persistent supernormal profits are a sign of the absence of effective competition. Although both the European Court of Justice and the European Commission have been historically reluctant to endorse high profitability as an indicator of dominance, it is a legitimate indicator of market power in economic literature, particularly in the context of network industries.[66]

4.48 In an effectively competitive market, prices should reflect efficiently incurred costs, including the cost of capital. One way of measuring this is the use of the Rate of Return on Capital Employed (ROCE). A ROCE that persistently and significantly exceeds the cost of capital might indicate that prices charged by that particular mobile network operator are higher than would be found in an effectively competitive market.

4.49 This ratio can be calculated in a number of different ways. In this case, most of the goodwill has been excluded because normally only the fixed assets and working capital of the company are used by regulators when assessing the level of return. The ratio is also based on the addition of long term debt and equity, since the relationship between the two is the financing decision of the individual parent company. The figures are also calculated using consolidated Irish statutory accounts based on the Historical Cost Convention, and not on Current Cost Accounting or Long Run Increment Cost numbers.

4.50 During the course of 2003, O_2's cash balances increased quite significantly. ComReg does not believe that a ROCE on cash is appropriate, because this is not a productive asset invested directly in the business and could be used in a completely non-related activity. ComReg has excluded cash from the 2003 ROCE figures for O_2.

4.51 It should be noted that the ROCE figures are calculated in relation to the business as a whole and included profits for termination, international roaming and retail services. The high figures for ROCE from the statutory accounts suggest that excess profits made by the operators are not being competed away in any segment

66 Refer, for example, to Discussion Paper prepared by OXERA for the UK's Office of Fair Trading (OFT), entitled "Assessing Profitability in Competition Policy Analysis", OFT 657, July 2003, available at www.oft.gov.uk.

of the overall mobile market (e.g. retail or wholesale).

4.52 The following table shows the ROCE for Vodafone and O_2 from 1999 to 2003. It illustrates the stability of Vodafone's ROCE over the past few years and the growth of O_2's ROCE to a level that is approaching that of Vodafone. The factors listed above should be taken into account in interpreting the data in the table below. It should be noted that this is an indication of overall profitability of the respective Irish groups.

Table 2: Rate of Return on Capital Employed

	Rate of Return on Capital Employed				
	1999	2000	2001	2002	2003
Vodafone	26%	35%	32%	31%	39%
O_2	-16%	-18%	8%	24%	38%

Source: ComReg

4.53 Both O_2 and Vodafone's current ROCE levels at 38% and 39% respectively appear high, as research from Cullen International indicates that the highest determined cost of capital determined by NRAs for certain MNOs in Europe, albeit only in the interconnection market, is 19.5% in Belgium, while the lowest is 12% in the UK. In their interim results for 30th September 2003, Vodafone has reported an increase in Irish operating profit before goodwill of 25% and O_2's profits before goodwill and exceptional items has increased by 71% compared to the previous year. These figures indicate that the ROCE is likely to remain at current levels. Both Vodafone and O_2 are now achieving similar and high returns, which appears to indicate that competition for the overall business at the retail level and wholesale level is not yet fully effective.

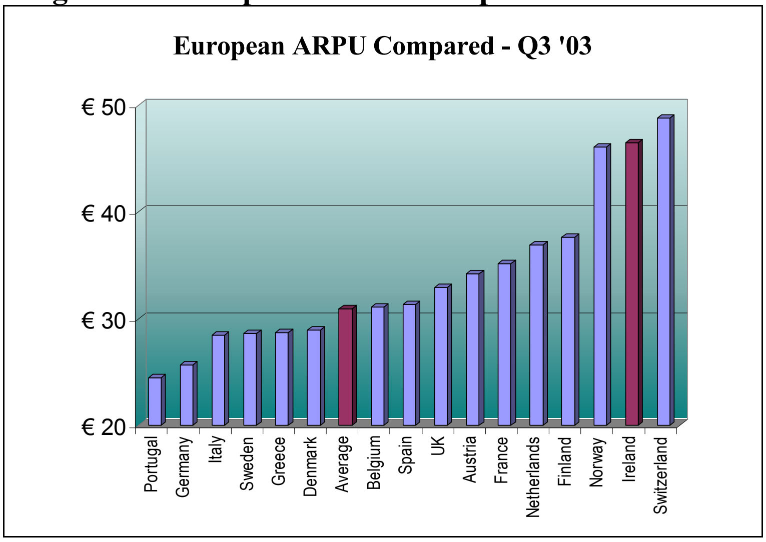
(v) ARPU

4.54 Another means of comparing the commercial situations of Vodafone and O_2 is to compare their respective ARPUs. The interim results of Vodafone and O_2 show similar ARPUs, respectively €576 and €551, for the 12 months period to 30th September 2003.[67]

4.55 Figure 11 shows that the Irish mobile operators' ARPU is €46 per month, the highest ARPU in the EU, while the EU average is €31 per month. High ARPU can be a result of high prices or high usage, or a combination of both.

[67] Vodafone and O_2 Group Interim Results, respectively, for the period ended 30th September 2003.

Figure 11: European ARPU Compared



Source: The Yankee Group

4.56 Regarding prices, ComReg believes that despite some absolute reductions, Irish mobile retail prices on average remain amongst the highest internationally. While Teligen mobile baskets show Ireland to be the 4th lowest country in Europe in terms of pre-pay tariffs, Teligen also show that post-pay tariffs are above the European average (See Appendix B, Graphs B.13 to B17).

4.57 In terms of usage, the mobile operators claim that high ARPUs in Ireland are driven by high minutes of use (“MOU”).[68] In Vodafone’s submission to the Oireachtas, Vodafone supply a comparison of Vodafone Ireland’s MOU to other selected MNOs, suggesting that Vodafone Ireland’s MOU are high when compared internationally. However, this submission only compared MOUs with a select number of MNOs and no MNOs from Vodafone’s group.

4.58 Furthermore, it is not clear whether comparisons of usage across Europe are based upon comparable calculations, *e.g.* some operators include incoming and outgoing minutes, while others only include outgoing minutes in calculating their total MOU. This draws into question the validity of comparisons of MOU figures between MNOs.

4.59 Given the above arguments, it is not clear whether the high ARPUs in Ireland are due to high minutes of use, as the evidence to date is not conclusive. Without accurate and comparative data based upon a robust method of calculation which can be benchmarked internationally both in terms of other operators and the Irish operators subsidiaries, ComReg remains unconvinced that high ARPUs in Ireland are primarily due to high MOUs.

[68] Vodafone and O_2’s submission to the Joint Oireachtas Committee on Communications, Marine and Natural Resources, October 14th 2003.

Q. 15. Do you believe that the high level of ARPUs in Ireland is the result of high prices, high MOUs or a combination of both? When supplying supporting information on prices or MOUs, please provide accurate and comparative data, based upon a robust method of calculation which can be benchmarked internationally both in terms of other operators and group subsidiaries.

Preliminary Conclusion on retail symmetries

4.60 ComReg is of the preliminary view that there are a number of characteristics of Vodafone and O_2 which are symmetrical to both undertakings: market shares are sufficiently proximate to each other; developments in technological innovation are available to all; cost structures are comparable, both have high ROCE, and ARPU levels. It is also clear that these indicators must be appraised in light of the fact that these MNOs operate in the most highly concentrated national market in the EU, after Luxembourg. ComReg's preliminary evaluation of these economic indicators suggests that both Vodafone and O_2 are able to insulate themselves from effective competitive pressure at the retail level. This ability is reinforced by the fact that both undertakings display a whole range of symmetrical characteristics that are conducive to the adoption of parallel behaviour.

Q. 16. Do you agree with ComReg's preliminary assessment that there are a number of characteristics of Vodafone and O_2 which are symmetrical to both undertakings? If you disagree, please elaborate in terms of (i) Market Shares, (ii) Technological Innovation, (iii) Cost Structures, (iv) Profitability, (v) ARPU and (vi) any other. Please justify your response with data, wherever possible.

Q. 17. Do you agree with ComReg's preliminary conclusions derived from economic indicators such as ROCE and ARPU? In your view, has ComReg overestimated or ignored any elements? Please elaborate your response and provide full supporting evidence and calculations for any alternative indicators that you consider should be used for the calculation of profitability and ARPU.

B.3 Retail market pricing behaviour / customer churn / countervailing buyer power

4.61 An indication of whether the retail mobile communications market is effectively competitive is found by examining the historical retail prices of Vodafone and O_2, customer churn, and the possibility of countervailing buyer power being possessed and exercised by larger customers.

(i) Pricing

4.62 Over the past three years, the Irish marketplace has been characterised by relatively stable mobile pricing behaviour at the retail level by Vodafone and O_2 (as shown in Appendix B, Graphs B1 to B12). This is most apparent when one compares the significantly lower prices offered by Meteor, which have not resulted in its acquisition of a significant customer base, suggesting that its prices do not significantly impact on Vodafone and O_2 and that these operators are able to set prices independently of their nearest competitor.

4.63 In order to trace the price developments from January 2000 to December 2002, ComReg has constructed price indices for four user profiles (low, medium, high and very high users); with each user category further broken down into mostly peak usage, even usage and mostly off-peak usage. Appendix B shows the price indices based on one operator's customer profile. Price indices were calculated on the basis of all MNOs' customer profiles and the conclusions drawn were similar.

4.64 Graphs B.1 to B.12 in Appendix B show that both Vodafone and O_2 reduced their prices in anticipation of Meteor's market entry but, since then, have held the level of prices largely constant even where Meteor's prices are substantially lower. Moreover, for some user categories, there appears to be a clear parallel and stable development of prices over an extended period of time between Vodafone and O_2.

4.65 These pricing patterns exist despite the fact that Vodafone seems to have focused on a different customer profile compared to O_2. It appears that competition has been muted by this type of targeting of differing customer profiles and price differentiation.

4.66 A benchmark of Irish mobile prices compared to other EU jurisdictions is also contained in Appendix B (Graphs B.13 to B.17). The results show that while Ireland is placed in 4th lowest position in the pre-pay basket, Irish prices are above the European average for all the post-pay baskets.[69] Note that Meteor has competed more successfully in the pre-pay sector than for post-pay.

(ii) Customer Churn

4.67 Annual churn for both Vodafone and O_2 is estimated at approximately 25%. Switching has been made easier for consumers following the introduction of Full Mobile Number Portability ("FMNP") in July 2003. The number of customers

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[69] In France Telecom/Orange, Case COMP/M.2016, at para. 26, the EC Commission found that, "prior to the entry of Orange into the Belgian mobile market, the two existing players, Proximus and Mobistar, were in a position to exercise joint dominance. As the Commission noted, for the four years preceeding Orange's entry, both operators had almost similar and transparent pricing, their pries following exactly the same trends." (Refer to para. 106 of the SMP Guidelines).

switching to competitors is lower than the overall churn figure, as this churn figure includes subscribers that stay with an MNO but only change packages, for example, moving from post-pay to pre-pay or vice versa. In one operator's response to the qualitative questionnaire, it estimated that the number of its subscribers that switched to another network during the year was 10%. However, given that Vodafone and O_2 have a 95% share of the market; it would appear that the majority of this churn is flowing back and forth between these MNOs, thus not impacting upon their combined high level of market share.

(iii) Countervailing buyer power

4.68 Countervailing buyer power exists where large customers have the ability within a reasonable timeframe to resort to credible alternatives (*e.g.*, not to purchase or to retaliate) if the supplier decides to increase prices or to deteriorate the conditions of delivery. ComReg is of the preliminary view that there exists insufficient countervailing buyer power, either at the wholesale or at the retail level, as regards outbound mobile calls made in Ireland. There is no evidence to suggest that business customers have been able to exert pressure on either Vodafone or O_2 that has had an impact on price levels charged by the two main operators (and would be reflected in changes to the ROCE and ARPU figures). Furthermore, the pricing graphs in Appendix B show that O_2 and Vodafone have consistently maintained higher prices than Meteor, particularly for high end users.

4.69 If those demanding mobile call origination and access services at the wholesale level held a certain degree of countervailing purchasing power, it might be more difficult for mobile operators to sustain any coordinated approach. On the contrary, collective dominance is expected to be more likely to occur on a concentrated market when the demand side of the market is dispersed. To date, there is no wholesale service-based competition in the mobile market, and therefore no wholesale purchasers in the market who could aggregate demand from retail consumers.

Preliminary Conclusion

4.70 A preliminary review of retail pricing behaviour suggests that price competition between Vodafone and O_2 has been relatively weak since the period immediately following the entry of Meteor into the marketplace. Lack of effective price competition at the retail level, sustained over a period of years in the face of a highly concentrated market, suggests that the Irish mobile retail sector might be particularly susceptible to a position of joint dominance being enjoyed by Vodafone and O_2. This tendency does not appear to be capable of being offset by countervailing purchasing power or customer churn over the period of this review.

Q. 18. Do you agree with ComReg's preliminary assessment of the pricing practices of Vodafone and O_2 at the retail level in Ireland?

Q. 19. Do you agree with ComReg's price index information as presented in Appendix B?

Q. 20. Do you consider that there are any material non-price dimensions of competition which have not been taken into account in the market analysis?

Q. 21. Do you agree with ComReg's preliminary conclusion that there is little countervailing buyer power either at the wholesale or retail level?

Q. 22. Do you believe that ComReg has correctly appraised the relative importance of churn between MNOs?

Q. 23. What economic and commercial criteria could ComReg rely upon to accurately monitor increased competitiveness at the retail level? Could such criteria be accurately monitored, and how?

Please elaborate your responses to the above questions and support it with economic data wherever possible.

B.4 Wholesale Market Behaviour

4.71 At the wholesale level, there currently is a lack of access and call origination products in the market, apart from self-supply and indirect access via NTCs. The failure of the MNOs to conclude any manner of access agreement is highly material in terms of its impact on ComReg's analysis of whether any of the MNOs are collectively dominant in the national wholesale market for access and call origination. Clearly, the foreclosure of competitors at the wholesale level through denial of access will inevitably dampen the effects of competition at the retail level in a highly concentrated market. Denial of access can occur when an operator refuses to supply a product or service, but may also occur when access is offered on unreasonable terms and conditions. Moreover, successful prosecutions at Community level for the abuse of a joint or collectively dominant position under Article 82 EC are generally characterised by cases involving denial of access or the sharing of markets.[70]

4.72 As has been made clear under EC case-law, especially in *Magill,*[71] undertakings can be found to have abused their position in a relevant market through their denial of access, where there is evidence of pent-up demand and the possibility of markets developing around that access. In *Magill*, individual broadcasters were held to have abused the position of dominance held by reason of their ownership of copyright in their respective programme listings through their refusal to license that copyright to parties who sought to provide composite listings of various broadcasters' programmes. In the circumstances, the refusal to supply prevented the development of a market for such composite listings. There was evidence of demand for the services requested, coupled with evidence that, where access to programme listings was available in other Member States, markets developed for such services.

4.73 In the mobile market in Ireland, evidence over the last few years has shown that there is demand for wholesale access to mobile services, ranging from airtime resale, to MVNO access, to national roaming agreements, and that this demand has not been met.

4.74 While carrier pre-select is currently not available on mobile networks in Ireland, some services based on a form of carrier selection on a call-by-call basis are available via NTC numbers such as 1800, 1850, 1890. Although the retail cost of an 1800 call is free to the consumer making the call, both Vodafone and O_2 introduced in July 2000 wholesale access charge on operators facilitating this type of service and 1850 and 1890 numbers. The competitive impact was that increased mobile origination charges at the wholesale level were pushed through to the retail level, thereby potentially dampening greater competition in the retail mobile market.

4.75 ComReg has also identified that the allocation of E.164 numbering resources and mobile network codes (MNC) are required by prospective MVNOs.[72] A number of prospective MVNOs have been allocated MNCs by ComReg, with a view to these organisations concluding commercial agreements with the MNOs. However, no MVNO currently exists in the Irish mobile market.

4.76 Currently, both ‘3’ and Meteor are seeking to enter into national roaming agreements for 2G services with Vodafone or O_2. The length of time which Meteor and ‘3’ have been discussing national roaming varies, with Meteor having commenced national roaming discussions up to 2 years ago. Vodafone and O_2 have an obligation to negotiate a national roaming agreement with ‘3’ under the

[70] See, for example, Compagnie Maritime Belge NV and Dafra-Lines v. Commission, Cases T-24/93 to T-26/93 and T-281/93, appealed to the Court of Justice, Cases C-395/96 P and 396/96 P. See also TACA v. Commission, Judgment of the Court of First Instance, 30 September 2003 (NYR).

[71] Case C-241/91, RTE & ITP v Commission [1995] ECR I-743.

[72] See ComReg document 00/52 http://www.comreg.ie/_fileupload/publications/odtr0052.pdf

terms of their respective 3G licences. It appears that ‘3’ may conclude such negotiations commercially, without the need for regulatory intervention. However it does not appear that Meteor’s bargaining power *vis a vis* Vodafone and O_2 is sufficient for it to obtain a commercially negotiated national roaming agreement with either MNO.

4.77 Currently, no national roaming agreements have been concluded between the MNOs in Ireland. European experience suggests that MVNO and national roaming agreements are rarely concluded unless mandated. Furthermore, regulatory intervention may be required to avoid protracted discussions on access terms.

4.78 In light of the above, ComReg is of the preliminary view that there has been pent up demand for mobile access and call origination services in Ireland.

Q. 24. Do you agree that there has been pent-up demand for mobile wholesale access and call origination services in Ireland?

C. Market Monitoring

4.79 Firms are able to influence one another’s commercial behaviour more easily if they can monitor one another’s actions. The fact that the services being provided are relatively homogenous, coupled with the fact that there exists adequate means by which operators in a collectively dominant position can monitor the actions of other members of that collectively dominant position, support market monitoring. In examining the scope of market monitoring, ComReg has taken into account the extent of homogeneity of services and the levels of market transparency.

C.1 Homogeneous services

4.80 In order for Vodafone and O_2 to be able to sustain tacit co-ordination over time, it is necessary that each of these undertakings is able to observe the behaviour of the other in respect of their range of services and/or prices. Where this is not the case, these undertakings will be much more likely to deviate from any tacit understanding, since their deviations will be much more difficult to detect. In addition, diversified and heterogeneous services make it more difficult to reach a common understanding between operators.

4.81 ComReg is of the preliminary view that the mobile communications services provided by Vodafone and O_2 are sufficiently homogeneous, as these operators provide both voice and data communications services on the basis of similar 2G, 2.5G and 3G network platforms over similar geographic and demographic coverage areas.

Q. 25. Do you agree with ComReg's preliminary view that the Irish mobile market is characterised by the provision of homogenous services by Vodafone and O_2? If not, please elaborate.

C.2 Market transparency

4.82 Each member of a dominant oligopoly must have the ability to know, sufficiently precisely and quickly, how the other members of the oligopoly are behaving in order to monitor whether or not they are adopting a common policy. In a relatively transparent market, it is easy for an undertaking to follow the actions of its competitors and to adapt its own decisions accordingly.

4.83 A preliminary analysis reveals that there exists a relatively high level of market transparency in the Irish mobile market. At the retail level, operators are fully aware of the various, if complex, offerings of their competitors, as retail prices are published on operators' websites and elsewhere. The prices offered to large customers who contract for mobile communications services are less transparent, particularly as regards customer discounts. However, given that only a small number of operators can bid for these contracts, it is likely that Vodafone and O_2 can obtain insights into the offerings of the other operators bidding for the contract. Moreover, at the wholesale level mobile operators are aware of the charges for voice call and SMS termination services via their respective agreements for these services.

Q. 26. Do you agree that the Irish mobile communications market is characterised by a relatively high level of market transparency at the wholesale and retail level? Please elaborate on your response.

D. Deterrence Mechanisms

4.84 The European Court of First Instance has taken the position that the situation of collective dominance must be sustainable over time, namely, there must be some form of credible incentive not to depart from a common policy on the market. This means, for example, that each member of the dominant oligopoly must be aware that highly competitive action on its part designed to increase its market share would provoke identical action by the others, so that it would derive no benefit from its initiative. It is also an established economic principle that co-ordination between undertakings will be easier to uphold if deviations from a co-ordinated strategy – either explicit or otherwise - are more likely to be detected by other undertakings which have the means to punish deviation in an efficient and timely manner.

4.85 The issue of deterrence in the context of the mobile communications sector, which is characterised by connectivity and common inputs received from competitors, is best assessed by reference to whether the members of the collectively dominant position are able to revert to the normal conditions of competitive behaviour that would otherwise prevail in the absence of their parallel conduct. In other words, at least at the retail level, the only deterrent or disciplinary mechanism required by Vodafone or O_2 to compel parallel behaviour is the implicit threat of their reversion to the normal conditions of competition.

4.86 This implicit threat might also be capable of being exercised more broadly in the retail market practises of Vodafone and O_2 in other jurisdictions due to their pan-European presence.[73]

4.87 At present, ComReg is of the preliminary view that Vodafone and O_2 are denying access to third parties at the wholesale level. If either did so, the other could retaliate in two ways – either by supplying similar services itself, or by cutting its retail prices. One or other, or both, responses could be rational, if the other firm undertook a course of action which reduced the retail price of services provided over its network.[74] Overall it would appear that the potential reversion to the normal conditions of competition at the retail level constitutes a sufficiently serious disciplinary mechanism to perpetuate the consciously parallel market behaviour being witnessed at present.

Q. 27. Do you agree with ComReg's preliminary assessment of the effectiveness and operation of 'deterrence' mechanisms in the relevant markets? Please elaborate your response, supporting it with relevant economic evidence.

E. Actual and/or Potential Market Constraints

4.88 Even a collectively dominant group of undertakings might be subject to significant competitive pressure, either from existing smaller 'fringe' competitors or potential new entrants. In the context of mobile communications, practical possibilities for entry need to be assessed both with respect to 2G and 3G platforms, and judgements made as to the relative height of barriers to entry, expansion and exit. In examining potential competitive pressures ComReg discusses fringe competitors and potential competition and barriers to entry / exit.

E.1 Fringe competitors

4.89 The presence of a competitive fringe will, in theory, tend to limit the scope for co-ordination, particularly where such competitors may be considered as "maverick" firms. The latter are generally reluctant to collude on account of, for example, their capacity reserves and different business strategies. It is important to note that

73 See Belgian Brewers – Bilateral Cartel and Private Label cases, EC O.J. L222/1, at para. 53; cf. Dutch Industrial and Mineral Gases, EC O.J. L84/1, at para. 372.

74 Retaliation could also occur in direct interaction between Vodafone and O2 (e.g., in relation to the setting of termination rates, if that were unregulated).

while the presence of a competitive fringe may erode dominant firms' market power; it need not necessarily eliminate it completely.

4.90 Four mobile network operators (MNOs) have launched services in Ireland: Vodafone launched in 1985; O_2 in 1997; Meteor in 2001; and '3' in September 2003. The different launch dates appear to have had an impact on the market shares of the MNOs. Vodafone and O_2 having 95% market share between them.[75] Meteor has struggled to grow market share (5%). As a result, it has had little impact on the total subscriber base of the established operators.

4.91 Meteor's difficulty in attracting subscribers, traffic and revenues seems to demonstrate that Meteor is currently unable to pose a serious competitive threat to Vodafone and O_2 and is unlikely to be able to successfully adopt the role of a "maverick" competitor. Indeed, despite lower prices compared to its MNO competitors, Meteor has not made any material impact on the pricing practices of Vodafone and O_2.

4.92 While there is some evidence that Vodafone and O_2 decreased their prices prior to market entry by Meteor,[76] there is little evidence of Meteor having made any significant impact on the retail tariffs of Vodafone and O_2 since its commercial launch, and especially since January 2001. The lack of full geographic coverage, in the absence of a national roaming agreement, is one factor that may have inhibited Meteor from gaining a greater share of the market and constrained its ability to compete effectively with Vodafone and O_2.

4.93 Coverage differentiation appears to have softened price competition, with services offered by wider coverage networks being sold at higher prices than networks with smaller coverage. In that regard, Meteor's demographic and geographic coverage is appreciably less than that of Vodafone and O_2. Mobile customers may feel that the mobile service offered by Meteor is not as complete as that offered by O_2 and Vodafone and, therefore, might be reluctant to become a Meteor customer. Meteor has sought to conclude a national roaming agreement with Vodafone or O_2 over a significant period of time.

4.94 Finally, Meteor has a 'late mover' disadvantage, having entered the marketplace considerably later *vis a vis* third entrants in other EU Member States. In particular, it appears that the prior entrants, Vodafone and O_2, with established subscriber bases and attractive on-net tariffs, have been able to perpetuate their advantage over the later entrant.[77] In addition, the 'deep pockets' of Vodafone and O_2, particularly in terms of advertising and other forms of promotion, constitute a significant competitive advantage over Meteor. That competitive advantage is

75 As per the latest ComReg quarterly review (December 2003), the market share of the MNOs was Vodafone (56%), O_2 (39%) and Meteor (5%). '3' launched a 3G service in September 2003.

76 There is evidence of Vodafone and O_2 having decreased their on-net tariffs for pre-pay subscribers during mid-2000, which was just prior to the entry of Meteor.

77 It is self-evident that the value of a service to a user increases with the number of other users using the same service.

reinforced by the fact that both Vodafone and O_2 benefit from a significant amount of advertising available on Irish TV through the re-transmission of UK-origin TV broadcasts.

4.95 The existence of barriers to market access (legal restrictions, economies of scale and scope, "sunk costs" barriers to exit, *etc.)* affect the level of potential competition for the market in question. High market entry barriers limit, in principle, the level of potential competition and may favour the adoption of collusive behaviour between existing competitors, Vodafone and O_2.

Preliminary Conclusion

4.96 ComReg has reached the preliminary conclusion that Meteor does not constitute, at least in the timeframe of this review, a significant competitive threat to the market positions of O_2 and Vodafone in Ireland. ComReg's investigation appears to demonstrate that Meteor has not had a particularly disruptive effect on its competitors since it commercially launched its services in February 2001. This may in part be attributed to Meteor's late entry into the market (relative to other third entrants in other EU Member States), and in part to its relative functional deficiencies in terms of coverage or the absence until recently of 2.5G data services. The cost of making off-net calls may also have had a negative impact on Meteor's growth. It would also appear to be the case that given the relative level of maturity of the mobile market, particularly the 2G environment, there is not great scope for rapid growth, as there are barriers to expansion faced by firms on the competitive fringe.

Q. 28. Do you agree with ComReg's preliminary analysis and conclusions regarding the competitive positions of Vodafone and O_2, as compared to Meteor? Please elaborate your response.

E.2 Potential competition and barriers to entry/exit

4.97 A market that is characterised by few market actors, on the one hand, but is also characterised by easy entry and exit, on the other, will generally not generate competitive concerns about its oligopolistic market structure. ComReg considers that, to address the question of potential competition, it needs to examine whether there exist competitively meaningful and effective possibilities of market entry that could, and would, be likely to take place so as to be capable of constraining the perceived market power of Vodafone and O_2.

4.98 Oligopolies tend to be more contestable in new and dynamically growing markets than in stagnating or declining markets characterised by overcapacity, since the former offer greater opportunities to achieve profits. This is not the case if certain barriers to market entry exist. If market entry did not occur (*i.e.,* pent up demand for wholesale mobile access) or was not effective in the past despite objectively good opportunities, this might indicate a dominant oligopoly that acts as a deterrent to firms that would in principle be interested in entering the market.

4.99 The remainder of this section examines potential competition and barriers to entry in terms of the impact of ‘3’ on the market, potential 2G/3G network operators and other entrants.

(i) Impact of ‘3’

4.100 ‘3’ has just entered the Irish market, and its impact has yet to be measured. However, ComReg is of the preliminary view that the arrival of ‘3’ is unlikely to have an immediate and effectively disruptive effect on the behaviour of Vodafone and O_2.

4.101 Equal amounts of core 3G spectrum were offered to each 3G mobile licensee. It should be noted that 3G spectrum may be used for voice services, the provision of which may be supported by a national roaming agreement. The rollout of ‘3’s mobile network, as well as the provision of its mobile communications services, is facilitated by the obligation on Vodafone and O_2 to negotiate an agreement with ‘3’ to provide national roaming facilities on their 2G networks once ‘3’s 3G network is capable of serving at least 20% of the Irish population. Given that ‘3’ is a greenfield 3G network operator, access to 2G networks, for example, through roaming on commercially viable terms, is essential for a timely launch of a competitive offering. Regulatory concerns may arise in asymmetric situations since, without national roaming, it would be very difficult to compete against incumbent operators. In the absence of intervention, the entrants may become too weak and competition could not fully develop. National roaming is likely to stimulate competition in the short run by improving network quality and coverage and by promoting timely 3G deployment.

4.102 Given the potential for entities with both 2G and 3G networks to use services delivered over 2G networks to supplement 3G services, there exists the potential for such entities to exploit the transitional phase of 3G roll-out, as 3G operators without the ability to mirror such behaviour will be at a competitive disadvantage.

4.103 The capability to develop new data services will be enhanced by the launch of 3G mobile services. However, a key factor in the successful deployment of such services will be the availability and costs of new handsets and infrastructure equipment to facilitate the delivery of these new services. Lack of handset availability has hindered the launch of 3G networks across Europe. Further, the high cost of 3G handsets, relative to 2G handsets, is likely to require operators to provide heavy subsidies to kick-start 3G take-up. The availability, cost to the end user, level of subsidies and reliability of dual handsets could have a significant impact on the migration of users from existing 2G or 2.5G networks to a combined offering with 3G, thus reducing ‘3’s potential to provide a significant competitive threat over the period of this review.

4.104 The uncertainty surrounding the potential revenue streams and demand for 3G services may also be a significant factor in shaping the future mobile industry structure. Already in 2003, a number of 3G licences have been returned in other parts of the EU, due to financial and other difficulties, while other licence holders have announced their intention not to launch services. No 3G licence has been returned in Ireland.

4.105 At this stage, it is too early to predict how the Irish mobile sector will react to '3's entry. However, 3G has the potential to strengthen the dominant position of Vodafone and O_2 relative to '3', a 3G greenfield entrant, as these operators may be able to migrate their existing 2G customers onto 3G. Given that Vodafone and O_2 have existing customer bases, '3's subscriber acquisition costs are likely to be high considering its "late mover" disadvantage.

4.106 On balance, ComReg is of the preliminary view that '3' will not be able to act as an effective competitive constraint on Vodafone and O_2 within the timescale of this market review.

Q. 29. Do you agree with ComReg's preliminary conclusions regarding the likely competitive impact of '3' on the Irish marketplace for the purposes of this review? Please elaborate your response.

(ii) Potential 2G/3G network operators

4.107 In addition to '3', it is in theory possible that a fifth network operator could enter the mobile sector by taking up the remaining 3G licence which currently remains unassigned. Such a new entrant would, however, face similar hurdles to '3' as outlined above, including high set-up costs in terms of network infrastructure and the development of a subscriber base from a "late mover" position.

4.108 As well as making spectrum available for 3G services, unassigned spectrum in the 900 MHz and 1800 MHz bands could potentially be made available for further expansion of 2G (GSM) services. Currently, a total of 2 x 26 MHz of spectrum in the 1800 MHz band and 2 x 13 MHz of spectrum in the 900 MHz band remain unassigned.

4.109 While there continues to be 2G/3G spectrum available in Ireland, the assignment of this spectrum is subject to a licensing process. Experience across the EU points to a number of 3G licences which either have not been taken up or have been handed back *i.e.*, even where spare spectrum was available it was not used. Furthermore, high costs may deter entrants from building new networks. Overall, ComReg is of the preliminary view that these entry barriers may deter potential 2G/3G network operators from effectively constraining Vodafone and O_2's dominance in this market over the timeframe of this review.

(iii) Other potential entrants

4.110 It is possible that other players may also enter the market via more-service-based competition, *e.g.* MVNOs or independent service providers, providing that appropriate wholesale services are available.

4.111 As part of the 3G competition, all applicants for the "A" licence were invited to offer a voluntary binding commitment relating to the provision of access ('MVNO access')[78] to the radio access part of their 3G mobile network and, where applicable, any 2G mobile radio access network in which the applicants had, or may in the future, have an ownership interest. '3's subsequent success in winning the "A" licence means that they are now obliged to offer MVNO access on a "retail minus X" basis. It is envisaged that the entry of MVNOs has the potential to enhance competition at the retail level.

4.112 A possible revenue stream for network operators is that of wholesale service provision, via indirect access, wholesale airtime, MVNOs, etc. Evidence to date has shown that the Irish MNOs are reluctant to commercially conclude such deals, as currently there are no such wholesale services provided in Ireland. However, this might change with the introduction of '3' into the market, especially given its licence obligation to provide MVNO access to its network. *eircom* has recently issued a Request For a Proposal ("RFP") for access to the mobile operator's networks, with a view to possibly entering the mobile market via this mechanism.

4.113 In all the cases cited above, potential new entrants to the Irish mobile sector face a number of challenges upon entry. These range from the ability to attract mobile customers from the established MNOs, to the high capital expenditure costs required to finance a new operation. Only three out of four 3G licences were issued in the 3G licensing process run in 2002, thus illustrating that new entrants must have a viable business case to enter the market. The business case for new entrants may be moving towards more service-based operations, *e.g.* MVNOs, where the initial financial requirements should be lower. Overall, ComReg is of the preliminary view that other potential entrants will not be able to act as an effective competitive constraint on Vodafone and O_2 within the timescales of this market review.

[78] MVNO operators are generally defined as organisations operating a physical network infrastructure comprising as a minimum a mobile switching centre, home location register and authentication centre (or 3G equivalent), having its own unique mobile network code with distinct IMSI and E.164 number series (where applicable), but without a mobile radio access network.

Q. 30. Do you agree with ComReg's preliminary analysis that potential 2G/3G network operators and/or other potential entrants are unlikely to significantly constrain the competitive behaviour of Vodafone and O_2 over the period of this review? Please elaborate your response.

Preliminary Conclusion

4.114 ComReg is of the preliminary view that, on balance, the mobile communications sector in Ireland is characterised by high and non-transitory entry barriers. Furthermore, ComReg believes that potential competitive pressures provided by fringe competitors or potential competition are unlikely to effectively constrain Vodafone and O_2's dominant position in this market over the timeframe of this review.

Q. 31. Do you agree that the mobile communications sector in Ireland is characterised by high and non-transitory entry barriers?

Q. 32. Do you agree that potential competitive pressures are unlikely to effectively constrain Vodafone and O_2's dominant position in this market over the timeframe of this review?
Please elaborate your response.

Preliminary conclusions on Market Analysis and Joint Dominance

4.115 ComReg's preliminary view is that the essential conditions warranting a finding of collective dominance, as set out in the judgment of the Court of First Instance in *Air-Tours* and as set out in the Commission's *SMP Guidelines*, appear to be met in relation to the relevant market for wholesale mobile access and call origination.

4.116 The Irish market is today characterised by a uniquely high level of concentration (exceeded only by Luxembourg), relatively high levels of penetration, stable pricing patterns at the retail level, stable market shares at the retail level, a lack of wholesale access and call origination transactions other than self-supply and indirect access via NTCs, similar cost structures and high profitability ratios for both Vodafone and O_2. The combination of these factors makes the Irish market particularly susceptible to collective dominance, and this will continue in the absence of regulatory action. The implicit threat of a reversion to the normal conditions of competition at the retail level appears to provide the type of retaliatory mechanism, which can sustain the prevailing market conditions.

4.117 Moreover, the market power of Vodafone and O_2 is reinforced by:

- their size relative to each other, and to other market actors in Ireland;
- their control of infrastructure which is unlikely to be economically duplicated over the period of this review;
- the absence of countervailing buyer power in the related downstream retail product market or at a wholesale level;
- their sustained high levels of ROCE;
- the economies of scale and scope resulting from membership of large European groups, including easier or privileged access to capital markets / financial resources; and
- highly developed distribution and sales networks.

4.118 More importantly, however, there are strong indications that the aligned or consciously parallel behaviour identified by ComReg has resulted in a lack of effective competition at the retail level. For example, there appears to be little effective price competition between Vodafone and O_2 in the provision of their retail services. Further, despite the existence of the potential to secure a wholesale revenue stream from the provision of wholesale access and call origination services, particularly in the context of the spare 2G capacity of both undertakings, these operators have yet to conclude any indirect access, wholesale minutes/ capacity, MVNO or national roaming agreements with other network operators or service providers.

4.119 ComReg is therefore of the preliminary view that the Irish mobile wholesale access and origination market and the retail mobile communications market is not effectively competitive.

4.120 Furthermore, alternative sources of market entry appear to be also unlikely to be able to exert sufficient competitive pressure on Vodafone and O_2 over the timeframe of this review.

Q. 33. Do you agree with the above preliminary conclusions regarding market analysis? Please provide a reasoned response.

5 Designations of Undertakings with Significant Market Power

5.1 Having regard to the sections above, ComReg is of the view that, in accordance with the *Framework Regulations*, that:

5.2 Vodafone should be designated as having SMP on the wholesale mobile market for access and call origination in Ireland; and

5.3 O_2 should be designated as having SMP on the wholesale mobile market for access and call origination in Ireland.

5.4 A reference in this section to any given undertaking shall be taken to include any undertaking carrying out business activities in the Republic of Ireland where the undertaking is engaged either directly or indirectly in the commercial activities falling within the scope of the relevant market defined in section 3.

Q. 34. Do you agree with ComReg's preliminary view that Vodafone and O_2 occupy a position of collective SMP in the relevant product market under review? Please provide a reasoned response.

6 Proposed Market Remedies

Background

6.1 In light of ComReg's identification of the relevant market as the market for wholesale mobile access and call origination over all mobile networks in Ireland, and ComReg's preliminary conclusions on market analysis which shows evidence of a market failure, in that market forces are unable to generate sufficient wholesale access and call origination opportunities which would be reflected in increased competition at both the wholesale and retail levels, this section sets outs the proposed market remedies to apply to all undertakings listed as having SMP in Section 5 of this Consultation.

6.2 ComReg takes the view that the proposed remedies in this section are the most appropriate for the period under review and are in accordance with the principles set forth in the Framework and Access Directives and the Framework and Access Regulations. The proposed remedies are aimed at removing any distortions that are occurring in the relevant market, such as the collective ability to exclude alternative access and call origination operators, which would potentially result in prices to end users above the competitive level.[79]

The need for ex-ante regulation

6.3 According to the Guidelines,[80] the purpose of imposing *ex-ante* obligations on undertakings designated as having SMP is to ensure that undertakings cannot use their market power either to restrict or distort competition on the relevant market, or to leverage such market power onto adjacent markets. The Guidelines make it clear that the mere designation of an undertaking as having SMP on a given market, without imposing any appropriate regulatory obligations, is inconsistent with the provisions of the new regulatory framework, notably Article 16 (4) of the Framework Directive.[81] Furthermore, ComReg is obliged by the Framework Regulations to impose appropriate obligations on undertakings identified through the market analysis process as having Significant Market Power.[82]

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[79] Regulation 9(5) of the Access Regulations state "Where, in exceptional circumstances, the Regulator intends to impose on operators with SMP obligations for access or interconnection other than those set out in Regulations 10 to 14, the Regulator shall submit to the European Commission a request for permission, to impose such other obligations."

[80] Commission Guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services at paragraph 16.

[81] Commission Guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services at paragraph 114.

[82] Regulation 27(4) states 'Where the regulator determines that a relevant market is not effectively competitive, it shall designate undertakings with significant market power in accordance with Regulation 25 and it shall impose on such undertakings such specific obligations as it considers appropriate'.

The nature of the Potential Competition Problems

6.4 Section 5 of this Consultation lists the undertakings which ComReg views as potentially having SMP in the wholesale mobile access and call origination market, namely, Vodafone and O_2. Due to the nature of this market, it is probable that competition problems of both a structural and a behavioural nature exist or could potentially exist in this market. These competition problems can be broadly categorised into issues, such as, denial of access including a constructive refusal to deal, pricing problems and non-price problems.

6.5 An undertaking with individual and / or collective SMP on the wholesale market may attempt to leverage its market power by denying access to or refusing to deal with undertakings operating upstream or downstream and which compete with the incumbent's retail operation. Refusal to deal or denial of access can directly foreclose a market, for example, where the wholesale product is a necessary input into the down stream market, but may alternatively lead to the raising of rivals' costs.

6.6 ComReg's preliminary conclusion is that there is demand for wholesale access and call origination products, as evidenced from the various forms of undertakings that have attempted to enter the Irish mobile market over the last number of years. Presently however the only wholesale access and call origination products offered by the SMP operators are self-supply and indirect access via NTCs.

6.7 The opportunity exists for MNOs to commercially negotiate access agreements with organisations seeking to become potential alternative mobile access providers and, therefore, to earn wholesale revenues. However, evidence to date has shown that despite demand for access to mobile networks, in particular, MVNO access and national roaming, the leading Irish MNOs are reluctant to commercially conclude such deals. The failure of the MNOs to conclude any manner of access agreement has the potential, in terms of its impact, to limit competition at both the wholesale and retail level. Clearly, the foreclosure of competitors at the wholesale level through the denial of access will inevitably dampen the effects of competition at the retail level in an already highly concentrated market.

6.8 Even where access to wholesale inputs is made available, the upstream dominant firm(s) may still have the ability to distort competition on the downstream market by offering to supply only on unreasonable terms (*e.g.*, constructive refusal to supply). For the purposes of discussion, unreasonable terms may be categorised into two areas - pricing and non-price problems as follows.

6.9 Undertakings with SMP can abuse their position through pricing behaviour. For example, the current failure by the MNOs to offer mobile access and call origination services (*e.g.*, national roaming, MVNO access, indirect access) to other undertakings in the Irish market, might be due in part to unreasonable pricing terms being requested by SMP operators for the provision of that access. Furthermore, where there are some mobile call origination services available to other undertakings via indirect access using NTCs (*e.g.*, 1800, 1850, 1890 access), the wholesale charges associated with these indirect access offerings may limit the effectiveness of these service providers at the retail level. Overall, such behaviour is not beneficial to the market and retards competition at the wholesale and retail levels.

6.10 Even where access is mandated at a regulated price, SMP operators could potentially discriminate in favour of their own retail arm, and against downstream competitors, using non-price factors such as the withholding of information, discrimination in terms of quality, delaying tactics, unjustifiable requirements, strategic design of product and discriminatory use of information.[83] These actions can impact upon the quality of competing operators' offerings, raising their costs and restricting their sales. The conclusion of any access agreement can hinge on both price and non price aspects and as such price and non-price issues become equally relevant.

6.11 ComReg's market analysis in previous chapters suggests that market forces alone are not sufficient to instil effective competition in the mobile market for wholesale access and call origination. This potential lack of effective competition at the wholesale level may also have effects at the downstream retail level. ComReg believes that regulatory intervention through the imposition of appropriate remedies may be required at this time in order to restore proper incentives for mobile network operators to compete against each other.

Q. 35. Do you agree with this analysis of potential competition problems? Are there any further competition problems which you believe ComReg should remedy? Please elaborate your response.

Potential Regulatory Remedies

6.12 As stated previously, ComReg is obliged by the Framework Regulations to impose an obligation on undertakings with significant market power.[84] Such obligations are outlined in the Access Regulations and the Universal Service Regulations.[85] ComReg is obliged to impose appropriate obligations listed in Regulation 10 to 14 of the Access Regulations,[86] which are as follows:

- Obligation of transparency;

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83 ERG Consultation document ERG (03)30 "Draft joint ERG/EC approach on appropriate remedies in the new regulatory framework", http://erg.eu.int/documents/index_en.htm

84 Regulation 27(4) states 'Where the regulator determines that a relevant market is not effectively competitive, it shall designate undertakings with significant market power in accordance with Regulation 25 and it shall impose on such undertakings such specific obligations as it considers appropriate'.

85 Appendix D outlines the relevant text from Access Regulations and the Universal Service and Users' Rights Regulations.

86 Regulation 9(1) of the Access Regulations.

- Obligation of non-discrimination;
- Obligation of accounting separation;
- Obligation of access to, and use of, specific network facilities; and
- Price control and cost accounting obligations.

Regulations 14 to 16 of the Universal Service Regulations refer to the following regulatory controls:

- Regulatory controls on retail services;
- Regulatory controls on the minimum set of leased lines; and
- Carrier selection and carrier pre-selection.

6.13 It should be noted that ComReg may be justified in imposing remedies other than those set out above or, in exceptional cases, remedies that *go beyond* what is prescribed in the Access Regulations, provided that the approval of the Commission is first obtained.[87]

Principles to be applied when selecting remedies

6.14 When selecting appropriate remedies to address the competition problems identified in this market, ComReg has to abide by a number of principles. ComReg has an obligation to consider the objectives of Section 12 of the Communications (Regulation) Act 2002 (to promote competition, to contribute to the development of the internal market, and to promote the interests of users). Furthermore, Regulation 9 of the Access Regulations requires that any obligations imposed by ComReg must be based on the nature of the problem identified, be proportionate and be justified in the light of the objectives laid down in Section 12 of the Communications Act 2002.

6.15 As stated previously, potential competition problems in this market appear to be primarily structural in nature, suggesting that some form of mandated access to network infrastructure may be a proportionate remedy to increase competition at both the wholesale and retail level. ComReg is aware that access remedies imposed must facilitate further competition by providing access on terms and conditions that promote efficiency and sustainable competition, while being mindful of the need to encourage efficient investment in infrastructure and promote innovation.[88]

6.16 While ComReg is obliged to impose the least burdensome and most effective remedy or remedies to address the competition problems in this market, the

[87] Commission Guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services. See paragraphs 21 and 116. See also Regulation 9 (5) of the Access Regulations.

[88] Access Regulations Regulation 13 (2), Access Directive recital 19.

interplay of a number of remedies might often be necessary. Therefore, the remedies available to ComReg in the Access Regulations and Universal Service Regulations could be seen as a complementary suite of remedies that support and reinforce each other.

Q. 36. Do you agree with the principles which ComReg believes should be used when selecting remedies? Do you think there are other principles that ComReg should consider when selecting appropriate remedies? Please elaborate your response.

Existing obligations

6.17 In considering the appropriate level of regulation and whether to maintain, amend or remove obligations, ComReg is considering the following existing obligations.

Existing SMP obligations

6.18 Currently, O_2 and Vodafone are designated as having SMP in both the mobile public telephony networks and services market and in the national market for interconnection.[89] Obligations already placed on these SMP operators flow from a number of former EU Directives establishing the Open Network Provision (ONP) framework and the corresponding regulations transposing them into Irish legislation.

6.19 In summary the obligations imposed on Vodafone and O_2 as organisations designated with SMP in the mobile market include:

a. the obligation to meet all reasonable requests for access to the network;

b. the requirement to adhere to the principle of non-discrimination with regard to interconnection offered to others;

c. the requirement to make available all necessary information and specifications on request to organisations considering interconnection;

d. the requirement to provide copies of all interconnection agreements to ComReg; and

e. the requirement to ensure the confidentiality of information received from an organisation seeking interconnection.

6.20 An additional obligation imposed on the mobile operators designated with SMP in the national market for interconnection includes the requirement that charges for interconnection follow the principles of transparency and cost orientation.

6.21 The obligations outlined above are relevant to the ONP Framework and namely the public mobile telephony network and services market and the national market

89 ComReg Document 02/53, Decision 08/02, "Significant Market Power in the Irish Telecommunications Sector"

for interconnection. Under the new regulatory framework, there are a number of mobile markets identified, including the wholesale access and call origination market.[90] The relevant markets for *ex-ante* regulation under the new regulatory framework differ from those under the old ONP framework. Therefore, in considering obligations on this newly configured relevant market, ComReg aims to maintain the thrust of the above obligations as appropriate to the new regulatory framework.

Existing non-SMP obligations under the new regulatory framework and 3G licensing competition

6.22 Currently, there are a number of non-SMP access obligations included in the Access Regulations, Universal Services Regulations and in the 3G licences. These non-SMP obligations are separate to any remedies imposed via a SMP review. However, when considering the appropriate *ex-ante* SMP remedies to impose, it is necessary to consider the impact of these obligations on the market.

Non-SMP access obligations in the context of the 3G licensing competition[91]

6.23 Currently, there are a number of non-SMP access obligations included in the 3G licences. Vodafone and O_2 have an obligation to negotiate an agreement with a new market entrant to provide national roaming services, while '3' has an obligation to negotiate an agreement with an MVNO to provide MVNO access. These access obligations were measures imposed through the 3G licensing process and continue to exist separately to any remedies imposed via the Access and Framework Regulations and corresponding SMP review.

(a) National Roaming

6.24 Vodafone and O_2's 3G licences contain an obligation to negotiate an agreement with a new market entrant to provide national roaming services onto their GSM network to new market entrants that meet the qualifying minimum roll-out requirement. The aim of this obligation was to allow a 3G new entrant to offer mobile services on a national basis for a transitional period during the roll-out of its network. Currently, '3' is the only operator that qualifies as a new market entrant under Vodafone and O_2's 3G licences. The national roaming obligation applies for a period of five years from the date of the granting of the 3G licence to the new market entrant and becomes effective only when the new market entrant has rolled out a 3G mobile radio access network infrastructure capable of serving at least 20% of the Irish population.

6.25 ComReg is aware that '3' is in commercial negotiations with Vodafone and O_2 on national roaming, and that a national roaming agreement has yet to be concluded. While the national roaming obligation in the 3G licence makes provision for

90 The other mobile markets identified by the Commission are the wholesale mobile voice call termination market and the wholesale national market for international roaming on public mobile networks.

91 By 3G licences, ComReg is referring to an operator's Wireless Telegraphy Licence and 3G spectrum right of use.

regulatory intervention as required, to date such action has not been taken.

(b) MVNO Access

6.26 ‘3’s 3G licence requires it to negotiate an agreement with an MVNO to provide MVNO access priced on a “retail minus X” basis to MVNOs. An MVNO is identified in ‘3’s 3G licence as an organisation operating a physical network infrastructure comprising as a minimum a mobile switching centre, home location register and authentication centre (or 3G mobile equivalents), having its own unique mobile network code with distinct IMSI and E.164 number series (where applicable), and issuing its own branded SIM-cards (or 3G mobile equivalents), but without a mobile radio access network.

6.27 ComReg believes that the MVNO access obligation in ‘3’s 3G licence can increase competition in the mobile market at the retail level. However ‘3’ has only recently launched 3G services, is currently building out its network and has yet to conclude a national roaming agreement. Furthermore, the MVNO obligation in ‘3’s 3G licence is limited to a specific type of MVNO, as outlined above, which may not suit all potential market entry strategies.

6.28 In conclusion, while the non-SMP access obligations in the 3G licences are designed to facilitate further competition in the mobile market, ComReg believes that these obligations are not sufficient of themselves for effective competition to develop at either the wholesale or retail level, over the timeframe of this review.

Non-SMP obligations under the new regulatory framework

6.29 There are a number of non-SMP obligations contained in the Access Regulation and Universal Services Regulations that continue irrespective of the outcome of this market review and cover topics such as FMNP and operator assistance and directory inquiry services.

Proposed remedies for the wholesale access & call origination market

6.30 As stated in Section 5 of this Consultation, ComReg is of the preliminary view that O_2 and Vodafone are jointly dominant in the wholesale access and call origination market. As identified earlier, access to the mobile networks on reasonable terms and conditions appears to be the core competition problem in this market. The proposed remedies in this section aim to address this core competition problem and to restore proper incentives for mobile network operators to compete against each other while also stimulating competition through alternative service providers.

6.31 While ComReg can potentially impose remedies at the retail or wholesale level to stimulate competition, the Commission recommends that even where there are competition problems at the retail level, regulatory controls at the retail level should be considered where wholesale measures fail. Given the above and the fact that competition problems in this market appear to be predominantly structural in nature, ComReg proposes to focus upon remedies at the wholesale level in this Consultation. ComReg's preliminary view is that that remedies at the wholesale level, rather than at the retail level, are the most appropriate to address competition problems in this market for the period of the review.

Q. 37. In light of the market analysis, should ComReg apply remedies at the level of the retail market (*e.g.* controls on retail prices) as well as at the wholesale level?

6.32 In considering the wholesale remedies ComReg believes that access to mobile networks has the potential to stimulate greater competition in the mobile market and realise potentially substantial benefits to consumers by providing more choice and possibly lower prices. Such access could create opportunities for a range of service providers to enter the market giving rise to greater opportunities for increased tariff and value added service competition. For example, such service providers include: independent service providers on the basis of wholesale airtime resale; indirect access providers; and MVNOs.

6.33 There are many forms of service providers possible, each having different characteristics and mobile service offerings. Examples include:

- Service providers who resell minutes purchased (wholesale airtime) from a network operator and have their own billing relationship with their subscriber;
- More enhanced forms of service providers who offer their own tariff structures and packages including value added services; and
- MVNOs, which are the final tier in the hierarchy of services providers. They generally have their own identity and issue their own SIM cards, and in the more advanced form of MVNOs, they own network infrastructure elements.

However, all forms of service provider are ultimately dependant on their wholesale access agreements with their "partner" MNO. Additionally, service providers could also possibly operate in the wholesale market, dependent upon the terms and conditions of their wholesale access agreement.

6.34 ComReg considers that access to mobile networks for service providers on reasonable terms is beneficial in terms of promoting competition and consumer choice. However, ComReg in considering the appropriate remedies to address market failure has taken into account the need to maintain an appropriate balance between network and service based competition. While, service based competition can be effective in reducing end-user tariffs, particularly for high-margin services like international calls, it does not offer the same potential benefits as network based competition.

6.35 While existing network operators (Meteor and '3'), combined with the potential entry of service providers, may enhance competition, ComReg's market analysis would primarily suggest that the market is likely to see the more established operators Vodafone and O_2 maintain or strengthen their current strong market positions due to their existing 2G network and customer base. Considering that network based competition can potentially provide greater benefits to end users than service based competition, ComReg is of the view that remedies should first attempt to increase competition via this means. In that regard ComReg believes that the introduction of national roaming obligation on SMP operators for an appropriate period is the least burdensome remedy to achieve this objective.[92]

6.36 The more detailed discussions on ComReg's proposed remedies is outlined in the remainder of this document and is divided into two areas, namely;

- Proposed remedies aimed at increasing competition at the wholesale and retail level via mobile network operators; and
- Questions and proposed remedies aimed at increasing competition at the wholesale and retail levels via service provider access.

<u>Proposed remedies to enhance competition via mobile operators</u>

6.37 ComReg is of the provisional view that the introduction of wholesale national roaming access can enhance competition at the wholesale and retail level. ComReg's market analysis has shown that even where existing entrants have significantly under-cut the prices of the established operators, this has only resulted in a small gain of market share for these entrants. This suggests that mobile subscribers value more items than just price when choosing their mobile service provider. ComReg's consumer survey[93] indicates that coverage is an importance factor that consumers consider when choosing their mobile service provider, with 65% of respondents rating geographic coverage as very important when choosing a mobile phone package. Therefore, ComReg believes that where MNOs have not rolled out their network to the same extent as of network rivals, with the result that they are experiencing some coverage gaps, for example, in remote or less densely populated areas, the conclusion of a national roaming agreement, for an appropriate period, may stimulate competition between mobile networks with further potential positive effects on competition at the retail level via service providers.

6.38 Currently, the coverage of the non-SMP MNOs (Meteor and '3') is less than that of Vodafone and O_2. The more established network operators are likely to maintain strong market positions due to their existing 2G network and customer base. Wholesale national roaming access on 2G networks for an appropriate period has the potential to improve the non-SMP MNOs' ability to compete with

92 The proposed remedies outlined in this document are without prejudice to any action taken by ComReg under Article 6 of the *Access Regulations*, which transposes Article 5 of the *Access Directive* into Irish law. Note, that Oftel (now OFCOM) have used Article 5 of the *Access Directive* to ensure that their national roaming obligation is maintained.

93 ComReg Consumer Survey, ComReg Document No. 03/127b

Vodafone and O_2, by allowing them to offer nationwide services as they build out their networks. Also, a national roaming obligation may increase competition at the wholesale level, as it allows non-SMP MNOs to offer access and call origination products with equivalent levels of coverage as the SMP Operators, thus increasing their attractiveness to potential service providers.

6.39 ComReg believes that the least burdensome access requirement for national roaming relates to “2G networks”. ComReg believes that 2G network coverage is sufficient to allow the non-SMP MNOs to compete more effectively, as it allows them to offer the bundle of mobile services outlined in the market definition section of this Consultation. Furthermore, 3G networks are only currently being rolled out and are therefore in the early phase of development. It should be noted that the remedy proposed in this section is without prejudice to the rights of any entity under the 3G licence national roaming condition.

6.40 In accordance with ComReg’s objective of promoting network as well as service based competition, ComReg proposes that the proposed national roaming obligation will become effective only when the non-SMP MNO has rolled out radio network infrastructure capable of serving at least 20 per cent of the Irish population.

6.41 With regard to the timing of the introduction of a national roaming obligation on SMP operators, ComReg notes that all MNOs in Ireland have already had considerable discussions on this issue. ‘3’ is currently in negotiations with the SMP operators, while Meteor has requested national and regional roaming from the SMP operators and has had discussions as far back as two years ago. All MNOs should be relatively familiar therefore with the issues required to implement a national roaming agreement. On the basis of lengthy discussions that have already taken place with respect to national roaming access, ComReg is minded to introduce a national roaming remedy as soon as is practicable following the conclusion of this consultation.

6.42 Chapter 7 of this consultation sets out in more detail the specific terms of ComReg’s proposed national roaming obligation. In selecting the terms and conditions to be applied to the national roaming obligation outlined in this section and in chapter 7, ComReg believes that it has applied the principles set out earlier in this paper. ComReg is of the view that the proposed national roaming remedy is the least burdensome and most effective remedy to address the competition problem caused by the lack of access for other MNOs to the networks of the SMP mobile operators. In arriving at the process to determine the terms and conditions of the national roaming obligation, ComReg believes that the method chosen promotes efficiency and sustainable competition, while also encouraging efficient short to medium term usage of infrastructure.

6.43 Additionally, ComReg believes that the national roaming obligation outlined above, and in the following chapter, is consistent with Section 12 of the Communications (Regulation) Act 2002, which sets out a number of objectives for ComReg to follow in exercising its functions – the objectives are

- to promote competition;
- to contribute to the development of the internal market; and
- to promote the interests of users.

6.44 ComReg is of the view that the introduction of national roaming can ***promote competition*** at the retail and wholesale level, as this allows non-SMP MNOs to provide an equivalent mobile service in terms of mobile network coverage when providing “2G services”.

6.45 The objective of contributing to the ***development of the internal market*** contains a number of sub-objectives, including: the obligation to ensure that, in similar circumstances, there is no discrimination in the treatment of undertakings providing electronic communications networks and services; and to co-operate with other NRAs and the European Commission in a transparent manner to ensure consistent regulatory practice. ComReg plans on consulting with other NRAs and the Commission in line with the process set out in the Framework Regulations, thus supporting the objectives of transparency and consistency of regulation within the internal market. Additionally, the inclusion of a non-discrimination obligation with respect to national roaming supports this particular objective.

6.46 With regard to the objective of ***promoting the interests of users***, the national roaming obligation proposed above contributes to this objective, by increasing the level of competition in the retail and wholesale markets.

6.47 Overall, ComReg believes that the national roaming obligation proposed in this section assists in addressing the nature of the problem, is the least burdensome and most effective remedy, and is also in line with the objectives of ComReg, as set out in section 12 of the Communications Regulation Act 2002.

Q. 38. Do you agree that the proposed remedy is in line with the principles set out by ComReg for selecting remedies? Please elaborate your response.

Q. 39. What form of national roaming access do you think is the most appropriate for ComReg to impose? Are there specific wholesale products or any specific technical specifications which you think are required for each form of access? Please elaborate your response

Proposed remedies to enhance competition via mobile service provider access

6.48 As stated previously, ComReg believes that the proposed national roaming obligation can increase competition at the wholesale and retail levels. However, the proposed national roaming obligation, by itself, may not be sufficient to get an effectively competitive retail market. ComReg is therefore considering a range of possible wholesale access remedies which would encourage market entry at the wholesale level, thus increasing competition at the retail level, including:

a. independent service providers, on the basis of competitive wholesale airtime possibilities;

b. indirect access operators, on the basis of wholesale call origination offered by Vodafone and O_2, including carrier selection or carrier pre-selection; and / or

c. MVNOs, on the basis of being afforded access to the radio access networks of Vodafone and O_2, which would allow them to offer mobile subscriptions.

6.49 ComReg believes that there are advantages and disadvantages to each of the above access methods.

6.50 With regard to independent service providers on the basis of competitive mobile resale, ComReg believes that the benefits to consumers from simple resale tend to be limited in nature and duration. However there may be more scope for potential entry via this access route, as it is likely that the capital outlay requirements for independent service providers are lower than those required for MVNO or Indirect access.

6.51 With regard to indirect access, ComReg believes that this can offer potential competition on a call by call basis for existing mobile subscribers. However, indirect access operators may not compete in the full cluster of mobile services and may only target certain segments (*e.g.* international calls).

6.52 ComReg believes that MVNOs potentially can offer a greater range of services than the other access options, but is also aware that market entry via an MVNO is more difficult given the high costs associated with acquiring subscribers in a maturing market. However, since MVNOs are able to provide the full bundle of mobile communications services, they may be in a better commercial position to compete with MNOs in the longer term.

6.53 ComReg's definition of an MVNO, as per the 3G licence competition, is an organisation operating a physical network infrastructure comprising at a minimum a mobile switching centre, home location register and authentication centre (or 3G mobile equivalents), having its own unique mobile network code with distinct IMSI and E.164 number series (where applicable), and issuing its own branded SIM-cards (or 3G mobile equivalents), but without a mobile radio access network. ComReg is aware that there are also other types of MVNOs that may exist and would welcome views with regard to the type of MVNO that is most appropriate for this market.

6.54 As the introduction of a service provider obligation can directly increase the number of competitors in the retail market, the use of such an obligation can be used in conjunction with the proposed national roaming obligation for the purpose of further increasing competition. The extent of such benefits to competition depends upon a number of factors, including the form of service provider, the nature of their mobile service offering, including their marketing/branding strategy, and their tariff packages. In considering such an obligation ComReg has to consider whether this encourages efficient investment in infrastructure, promotes innovation, efficiency and sustainable competition.

6.55 Should ComReg impose a service provider remedy, ComReg may follow a process similar to that outlined for national roaming to implement remedies and will further consult where appropriate.

Q. 40. Do you believe that the proposed national roaming condition is sufficient to bring the relevant market to an effectively competitive level?

Q. 41. Do you believe that the level of competition can be increased by the introduction of service provider access obligations?

Q. 42. Do you believe that ComReg should impose service provider obligations in combination with the proposed national roaming remedy to increase the level of competition in the relevant market?

Q. 43. Which form or forms of service provider access do you think are the most appropriate for ComReg to impose: indirect access operators; MVNOs; independent service providers? Are there specific wholesale products or any specific technical specifications which you think are required for each form of service provider access? Are there other forms of service provider access which you believe that ComReg should also consider?

Q. 44. Do you have comments on ComReg's definition of an MVNO in the context of service provider access? Do you believe that other MVNO definitions exist that are more appropriate? Please elaborate on your views.

Q. 45. Do you have any comments on the process which ComReg should follow to implement a service provider access remedy, if deemed appropriate?

Please elaborate your response

Pricing issues: Service Provider Access

6.56 ComReg recognises that there is a need for regulatory certainty with regard to the pricing of access under this section, *i.e.*, the desire of entrants to know what the regime will be and the prices and other conditions that will surround their entry. ComReg is aware that there are a number of methods to set this price and is seeking views on the most appropriate method of price regulation for this access method.

6.57 A “retail-minus” price is aimed at ensuring that there is just sufficient margin for service providers to operate and does not disrupt the existing structure of retail prices. However, “retail-minus” pricing can restrict the competitive pressures which a service provider can bring to the retail market, as there is an incentive for the SMP MNOs to maintain retail prices above the competitive level, as retail prices and costs are used to set the wholesale charge.

6.58 Cost oriented prices focus on the wholesale costs and can set a wholesale price where the SMP MNO is allowed to make a normal profit in that market. This pricing methodology does not restrict the service provider’s ability to compete in the retail market. The judgement between these pricing methods hinges in part on how desirable the existing nature of prices is seen to be and the relevant risks attached to the return on infrastructure investment for the MNOs.

6.59 ComReg is considering the possibility of applying different approaches to pricing alternative mobile access and call origination products:

6.60 It might, for example, be appropriate to adopt the “retail-minus” approach where the service provider is reselling a single mobile product such as outgoing calls via indirect access and to adopt cost orientation where an entrant such as an MVNO proposes to undertake considerable investment and to supply a full range of retail services involving some product differentiation.

6.61 Another possibility could be to offer call origination at cost-oriented prices to wholesale airtime resellers, but for a limited period to encourage and enable them to climb the “ladder of investment”. In this context, the issue of price differentiation needs to be considered, including the fact that resellers or MVNOs could pay a different price for an access service than an MNO to obtain national roaming using “retail-minus”.

6.62 Where an access price is set, ComReg believes that this price should only incorporate the elements required for the particular form of service provider access. This may differ between the various forms of service provider access, as MVNOs may require different network elements to indirect access providers.

Q. 46. Which pricing methodology do you believe is the most appropriate for the different forms of service provider access?

Q. 47. Do you believe that different pricing methodologies for different classes of service provider access operators are appropriate? What alternative pricing remedy do you consider to be preferable?

Q. 48. Where a differentiated pricing regime for service provider access is proposed, what approach to access pricing should be adopted in the cases of an MVNO; wholesale airtime; indirect access?

Please elaborate your response.

Non-Price issues: Service Provider Access

6.63 In addition to access and price-related remedies, ComReg is aware that remedies aimed at addressing the non-price competition problems may also be required. Depending upon the competition problem and the specific form of mandated access, remedies according to Regulation 10 (Transparency) and 11 (Non-Discrimination) of the Access Regulations may be appropriate.

6.64 For example, a transparency obligation could include the obligation to publish technical specifications, network characteristics, terms and conditions for supply and use and prices. A non-discrimination obligation may require the SMP operator to treat equivalent undertakings in an equivalent manner. Where an SMP operator has a non-discrimination obligation, ComReg may also require the SMP operator to publish a reference offer of sufficient detail.

Q. 49. With regard to service provider access, which form of non-price remedy, if any, do you think is appropriate for ComReg to impose? Please elaborate on your views.

Q. 50. Please comment on the level of regulatory certainty required on such issues as pricing, service levels *etc.*, that service providers would require before choosing to enter the market using this access method?

Proposed Additional Remedies on SMP-MNOs

6.65 As outlined above, ComReg is of the preliminary view that the most appropriate remedy to address the competition problems identified is access to the networks of SMP mobile operators. There are a number of obligations which ComReg believes may be appropriate to introduce to ensure that access to mobile networks is on both fair and reasonable terms. These remedies are outlined below:

Transparency

6.66 ComReg believes that a transparency obligation is appropriate in order for ComReg to ascertain whether MNOs have met their obligations. MNOs would be required to submit copies of their access agreement to ComReg to ensure that they have met their obligations.

Non-Discrimination

6.67 ComReg believes that, a non-discrimination obligation is required to ensure that equivalent undertaking receive equivalent access services. In this regard, ComReg's understanding of non-discrimination for equivalent undertakings is guided by the application of that principle used under Article 82 EC.

Accounting Separation and Cost Accounting Systems

6.68 In order to collect information to implement any access remedies, ComReg believes it is appropriate in principle to require the SMP MNOs to prepare separated accounts and develop appropriate cost accounting systems. Given the need for a timely resolution to any access agreement, ComReg believes that it is appropriate to impose this obligation following the SMP notifications.

6.69 Accounting separation is required to address such issues as unfair cross subsidy and discrimination, while cost accounting obligations can address issues such as sustaining prices at and excessively high level, or applying a price squeeze to the detriment of end-users.

6.70 The details of its implementation and nature of separated accounts will be consulted on separately. For an outline of issues concerning Accounting Separation and or Cost Accounting Systems obligations and implementation, previous ComReg and ODTR consultations, in particular, the mobile accounting separation consultation,[94] and European best practice should be consulted.

[94] ComReg Document No 02/86

Q. 51. Do you agree with the proposed introduction of Transparency, Non-Discrimination and Accounting Separation and Cost Accounting Systems remedies to ensure fair and reasonable terms for access to mobile networks? Please elaborate your response.

Regulatory Impact Assessment

6.71 The Ministerial Direction (issued by the Minister for Communications, Marine & Natural Resources in accordance with S.13 of the Communications Regulation Act, 2002) published in February 2003, directs:

"The Commission before deciding to impose regulatory obligations on undertakings in the market for electronic Communications or for the purposes of the management and use of the radio frequency spectrum or for the purposes of the regulation of the postal sector, shall conduct a Regulatory Impact Assessment in accordance with European and International best practice and otherwise in accordance with measures that may be adopted under the Government's Better Regulation programme."

6.72 ComReg will conduct a Regulatory Impact Assessment which will form part of the decision-making process and would invite comments on the proportionality and justification of the proposed remedies in this consultation. In addition to the principles of proportionally and justification, ComReg is likely to use the following factors in its Regulatory Impact Assessment:

- Promotion of competition;
- Development of the internal market;
- Promotion of user interests;
- Technology neutrality; and
- Impact on competition, having regard to the different stages of development of market players.

Q. 52. Do you believe that the proposed remedies in this document are in line with the factors that ComReg proposed to take into account when carrying out its Regulatory Impact Assessment?

Q. 53. Do you believe that there are other factors which ComReg should consider in its Regulatory Impact Assessment?

Q. 54. Please comment on the importance of each factor of ComReg's proposed Regulatory Impact Assessment, indicating any error costs that you believe to be relevant. Please provide supporting data including total costs and calculations, where appropriate.

7 Specifics of the proposed national roaming obligation

7.1 The following sections set out in more detail the specifics of ComReg's proposed national roaming obligation and should be read in conjunction with ComReg's outline proposal set out in Chapter 6, and the draft decision on national roaming outlined in Appendix C. The specifics discussed in this section include;

- General process for implementing a national roaming obligation
- Additional obligations on SMP-MNOs;
- Pricing methodology for setting a national roaming price;
- Duration

Process for implementing national roaming

7.2 ComReg believes that the introduction of wholesale national roaming access on 2G networks for an appropriate period may stimulate competition between mobile networks with further potential positive effects on competition at the retail level via service providers. In that regard, ComReg believes that any access requirement for national roaming should relate only to 2G networks as 2G network coverage is sufficient to increase competition in the short to medium term. 3G networks are only currently being rolled out and are therefore in the early phase of development.

7.3 ComReg would encourage MNOs to introduce wholesale national roaming access on 2G networks based on commercially agreed terms. Furthermore, ComReg believes that any conclusion of any national roaming agreement should be agreed in a timely and effective manner. ComReg, mindful of the fact that lengthy discussions have already taken place between MNOs with respect to wholesale national roaming access on 2G networks, and considers that one month is a reasonable period to conclude a national roaming agreement where obligated to do so. All operators have reasonable knowledge of the relevant negotiating issues at this time.

7.4 Where, subject to a decision by ComReg to impose an obligation on SMP operators to provide wholesale national roaming access on 2G networks, commercial negotiations fail to give rise to such access for non SMP MNOs, if requested, or where national roaming negotiations take longer than one month to conclude an agreement, ComReg will take a view whether sufficient negotiations have taken place and whether regulatory intervention is required.

7.5 Concerning the implementation of the proposed national roaming obligation, ComReg believes that an approach which is based on an escalating series of requirements is one which potentially results in the minimum amount of regulatory intervention. In that regard, a number of possible approaches are open to ComReg, for example, to exercise its powers on its own initiative, where justified, and / or to resolve issues relevant to a roaming agreement via a dispute resolution process. The aim of this approach is to first encourage a commercial agreement. However, ComReg also wishes to ensure that appropriate and acceptable terms and conditions, including, a price for national roaming, are finally reached.

<u>Interim Decision</u>

7.6 Discussions with respect to national roaming appear protracted to date. Where regulatory intervention is required, therefore, ComReg will also consider the need to establish an interim solution, including, but not limited to an interim price for national roaming. ComReg will consider the appropriateness of any interim decision having immediate effect two weeks from the failure of commercial negotiations.

7.7 ComReg may consult on an interim decision on national roaming issues, within two weeks of any commercial negotiations failing. In order to meet the above timeline and to effect an interim decision, ComReg will take in to account a range of factors in addition to any information provided by interested parties. For example, for the purposes of resolving any disagreement regarding the price for national roaming, ComReg is minded to employ a methodology based on a combination of factors such as the following; other national roaming agreements, ARPU calculations, MTR rates, statutory accounts, practices in Ireland or in other countries. In a case where ComReg has to determine an interim price, but national roaming transactions have commenced, ComReg will consider whether prices based on an interim decision will apply from the date that transactions under a national roaming agreement commence.

7.8 Additionally, cost accounting methods independent of those used by the operator (e.g. Bottom-up models) and prices available in comparable competitive markets may also be used to assist the determination of the relevant price.

<u>Final Decision</u>

7.9 At a later stage, ComReg may issue a final decision in this matter. However, where an interim decision, and in particular a decision on prices, determined under this process results in an agreement which is acceptable to all parties, ComReg believes that no further action may be necessary and therefore this decision could be considered to be final. Where an interim decision is not accepted by parties involved, ComReg believes that a more detailed calculation will be required. Such calculations are likely to require:

- Cost accounting systems, (including full transparency of cost accounting methods *e.g.* Historical Cost Accounting ("HCA"), Current Cost Accounting ("CCA"), Long Run Incremental Costs ("LRIC") and avoidable cost) to enable ComReg to understand the basis of preparation of costs, including the amounts involved, for these services;

- Accounting separation, as obliged in section 6.68 and 7.16, to increase transparency of prices and to verify the application of the non-discrimination obligation.

7.10 When setting a price under a final decision it is likely that this price will apply from four months of the filing of separated accounts with ComReg. Should a SMP MNO not file the separated accounts with ComReg within the specified time, in the case that the final price is greater than the interim price, ComReg would apply the final price from four months of the actual date of receipt. In the case where the final price is less than the interim price, ComReg would apply the final price from four months from the date when the accounts should have been received. This is to avoid the situation, where a SMP MNO gains an advantage from delaying the filing of the separated accounts. Additionally, cost accounting methods independent of those used by the operator (e.g. Bottom-up models) and prices available in comparable competitive markets may also be used to assist the determination of the relevant price.

7.11 In order to set national roaming prices over a number of years, ComReg may determine the price each year or implement a wholesale price cap over a number of years. ComReg will consider this issue when determining a final decision.

7.12 As stated in Section 6, ComReg intends to consult further on the detail of the implementation of accounting separation and cost accounting systems.

Q. 55. Do you agree with the principle of an "escalation" approach when implementing the proposed national roaming remedy?

Q. 56. Do you agree with each of the specific requirements of the "escalation" approach to remedies for the proposed national roaming remedy?

Q. 57. What are your views on a price control for national roaming?

Please elaborate your response.

Additional remedies on SMP MNOs

7.13 For timely and effective implementation of a national roaming agreement ComReg considers that the following obligations may be appropriate.

Transparency

7.14 With regard to the level of transparency that is required for the national roaming obligation, ComReg believes that SMP - designated MNOs should be required to submit national roaming agreements to ComReg in order for ComReg to ascertain whether those MNOs have met their obligations, within two weeks of their agreement. ComReg believes that this is the least burdensome transparency requirement that can be imposed on the SMP – designated MNOs. Other transparency requirements may be required where accounting separation and cost accounting systems are implemented.

Q. 58. Do you agree with the proposed transparency remedy for national roaming? Please elaborate your response.

Non-Discrimination

7.15 ComReg believes that, where regulatory intervention is required to resolve a national roaming issue either on an interim or final basis, a non-discrimination obligation is required to ensure that equivalent undertakings receive an equivalent service, whether that be with respect to the charges or other terms or conditions applied. In this regard, ComReg's understanding of non-discrimination for equivalent undertakings is guided by the application of that principle used under Article 82 EC.

Q. 59. Do you agree with the proposed non-discrimination remedy for national roaming?

Q. 60. Do you think that the non-discrimination obligation for national roaming should apply where there is no regulatory intervention required in the concluding of a national roaming agreement?

Please elaborate your response.

Accounting Separation and Cost Accounting Systems

7.16 As outlined in Section 6, ComReg believes that it is appropriate to require the SMP MNOs to prepare separated accounts and develop appropriate cost accounting systems in order to support the remedies outlined above, including non-discrimination and price control. Accounting separation is also required to address such issues as unfair cross subsidy, while cost accounting obligations can address issues such as sustaining prices at and excessively high level, or applying a price squeeze to the detriment of end-users.

7.17 Given the need for a timely resolution to any national roaming agreement, ComReg believes that it is appropriate to impose this obligation following the SMP notifications. As outlined previously, ComReg intends to consult further on the detail of the implementation of accounting separation and cost accounting systems. This further consultation will deal such issues as the date which the SMP MNOs are required to file separated accounts with ComReg.

7.18 ComReg believes that the remedies outlined above are the minimum required to achieve the objective under these circumstances, as without such information, there may be concerns over the validity of the decisions set by ComReg.

Q. 61. Do you agree with the proposed accounting separation and cost accounting systems remedy for national roaming? Please elaborate your responses.

7.19 ComReg believes that the remedies outlined above are the minimum required to achieve the objective under these circumstances, as without such information, there may be concerns over the validity of the decisions set by ComReg.

Q. 62. Do you think that there are alternative remedies that may be appropriate to consider when implementing the proposed national roaming remedy?
Please elaborate on your response.

"Retail Minus" vs. Cost Orientation

7.20 This section discusses the principle of whether a "retail-minus" or cost orientation methodology is appropriate for setting national roaming prices.

7.21 "Retail-minus" access prices can protect a particular structure of retail prices, which might be jeopardised if access were available to a competitor on the basis of cost-oriented prices. With "retail-minus" pricing, it is not necessary to reduce wholesale prices to a cost-oriented level to allow a non-SMP MNO to be able to compete in this area, as the wholesale prices are determined by retail prices and costs. Further, a "retail-minus" pricing structure may help to reduce the incentives for an SMP MNO to disrupt the negotiation procedure, as it would allow the SMP MNO to continue making its current return for wholesale access and call origination services. The use of a "retail-minus" pricing methodology may not necessarily be an appropriate competition remedy in all circumstances.

7.22 A "retail-minus" tariff has the disadvantage that it may not reduce prices to a cost-oriented level and it could also result in a MNO paying more for national roaming access than a service provider buying an access service based on a cost oriented method.

7.23 A cost-oriented methodology can result in a price for wholesale national roaming access that is set at the competitive level, but it may not encourage the non-SMP operators to build out their networks. Further, it may be easier to set a cost-oriented price for national roaming as opposed to one set on a "retail-minus" basis, *e.g.* because of the difficulty in calculating actual retail prices for a particular service.

7.24 The difference in approach to the setting of prices for different access methods may give conflicting signals to the market. For this reason, ComReg is considering whether a cost-oriented price for national roaming is more appropriate than one set on a "retail-minus" basis.

Q. 63. Do you believe that the "retail-minus", cost oriented price or some other method is the appropriate approach to pricing national roaming?

Q. 64. What problems do you foresee if any in the calculation of a "retail-minus" price and in the implementation of accounting separation and cost accounting systems, if necessary, for these calculations? Do you agree with the way in which ComReg intends to carry out its retail price calculations?
Please elaborate on your responses.

Duration

7.25 As regards its duration, ComReg is of the view that national roaming is a "transitional" remedy that should not be mandated on an indefinite basis. For this reason, ComReg proposes that the duration of this obligation should be in the region of three to five years. The Commission has considered two cases of 3G network sharing. In these two decisions the Commission exempts roaming in rural areas until 31st December 2008.[95] ComReg believes that the timeframe of three to five years is sufficiently long for MNOs to realise their business case, while at the same time providing an incentive to MNOs to continue their network build-out. MNOs might commercially conclude a national roaming agreement which is longer than three to five years provided that such an agreement does not impact upon the MNOs' regulatory commitments or infringe competition law.

Q. 65. Do you agree with ComReg's proposed duration for a national roaming agreement? Please elaborate on your views.

95 Commission Decision of 30 April 2003 in Case number COMP/38.370 – O_2 UK Limited/T-Mobile UK Limited ('UK Network Sharing Agreement'), OJ L 200; 7.8.2003, p.59. Commission Decision of 16 July 2003 in Case number COMP/38.369 T-Mobile Deutschland/O_2 Germany.

8 Submitting Comments

8.1 All comments to this consultation are welcome. However, it would make the task of analysing responses easier if comments were referenced to the relevant question numbers from this document.

8.2 The consultation period will run from 27th January 2004 to 9th March 2004, during which time ComReg welcomes written comments on any of the issues raised in this paper.

8.3 ComReg appreciates that many of the issues raised in this paper may require respondents to provide confidential information if their comments are to be meaningful. Respondents are requested to clearly identify confidential material and, if possible, to include it in a separate annex to their response. Such information will be treated as strictly confidential.

8.4 Having analysed and considered the comments received, ComReg will review the mobile wholesale access and call origination market review and publish a report on the consultation which will *inter alia* summarise the responses to the consultation.

8.5 In order to promote further openness and transparency, ComReg will publish the names of all respondents and make available for inspection responses to the consultation at its Offices.

Q. 66. Please provide any further comments which you feel are relevant to this Consultation.

Appendix A – Consultation Questions

List of Questions

Appendix B – Price Index

This Annex summarises the assumptions underlying the calculations of Minimum Yearly Bills (MYBs).

Methodology
The minimum yearly bill (MYB) is the annual cost to a subscriber with a given user profile (in terms of annual volume of minutes, distribution between peak/off-peak/weekend, and between calls to fixed networks/ mobile on-net calls/ mobile off-net calls) assuming that he / she uses the best available tariff option from his / her mobile operator.

The following tariff components are reflected in the MYB:

- monthly rental;
- free calls and/or free money; and
- peak off-peak and weekend national call charges to fixed and (on-net and off-net) mobile phones.
- SMS

The cost of handsets, connection charges, international call charges, international roaming charges, prices for data and Internet access are not taken into account.

Assumptions
All the main pre-pay and contract tariff options are considered in calculating the MYBs, with the exception of multiple connection tariffs designed for SMEs and add-on packages for international calls or international roaming. The analysis covers the period from January 2000 to December 2002. The tariffs cited are in Euro and exclusive of VAT.

The following must be borne in mind when analysing the tariffs:

- Promotional tariffs and discounts for multiple connections have not been included;
- Different time periods apply for different tariff plans, *i.e.* peak, off-peak and weekend times may vary;
- Tariffs which are valid at the first day of the month are taken as being relevant for the calculation for the full month;
- Tariff options have different peak/off-peak/weekend times (certain tariff options may have a longer off-peak time than others);

- Voicemail is not included;
- "Call a friend for free" is not included for Vodafone; and
- Tariff plans are only included where they are available to a new subscriber. *i.e.* where a tariff plan expires it is no longer included in the basket.

User Profiles

The user profiles are differentiated by: (1) traffic volumes (average number of minutes and number of SMS): (2) peak/off-peak usage patterns; and (3) call distribution between calls to fixed networks, mobile on-net calls and mobile off-net calls.

Traffic volumes: The four basic user profiles are: (a) low volume users: (b) medium volume users: (c) high volume users; and (d) very high volume users (see Table B.1).

Table B.1

Traffic Profiles				
Profiles	Low User	Medium User	High User	Very High User
Total Usage Voice	55	160	400	850
SMS	80	53	73	58

Peak/off-peak usage: Each user profile is further divided into three peak/off-peak profiles which are: (a) mostly peak usage: (b) even usage: and (c) mostly off-peak usage (see table B.2).

Table B.2

Traffic Time Profiles			
Profiles	Mostly Peak	Even Usage	Mostly Off-Peak
Peak	60%	50%	40%
Off-Peak	20%	25%	30%
Weekend	20%	25%	30%

Type of national calls: Each user profile is characterised by a particular percentage distribution of national traffic volume between: (a) calls to fixed networks: (b) on-net mobile calls: and (c) off-net mobile calls (see table B.3).

Table B.3

	Low user			Medium user		
	mostly peak	even	mostly off-peak	mostly peak	even	mostly off-peak
Mobile to fixed calls	29%	23%	49%	33%	29%	26%
Mobile on-net calls	54%	57%	25%	48%	49%	49%
Mobile off-net calls	17%	20%	22%	19%	22%	25%

Table B.4

	High user			Very High user		
	mostly peak	even	mostly off-peak	mostly peak	even	mostly off-peak
Mobile to fixed calls	32%	26%	24%	32.%	27%	24%
Mobile on-net calls	47%	50%	50%	46%	49%	49%
Mobile off-net calls	21%	24%	26%	22%	24%	27%

The MYB analysis is based on information about user profiles provided by an operator and tariff information provided by all mobile operators to ComReg. User profiles somewhat vary between the mobile operators, but the overall conclusions are not affected.

MYB Developments from January 2000 – December 2002.
The charts below outline the development in tariffs for each operator over the three year period from January 2000 to December 2002. Figures B.1-B.6 are for Low and Medium Volume users and are relevant for both pre and post paid tariffs. Figures B.7-B.12 include post paid tariffs only. For each operator the tariff plan that results in the lowest MYB is selected in each case. Figures B.1-B.12 present the MYB for each operator on a scale of 0 to 100.

Since December 2002, some new post-pay tariffs were introduced and there have been some changes to pre-pay tariffs.

Figure B.1 Low Volume User Mostly Peak

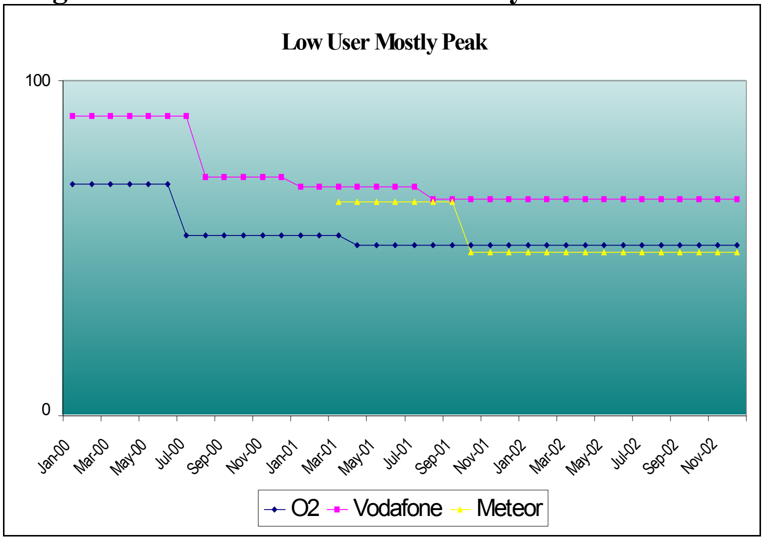


Figure B.2 Low Volume User Even Usage

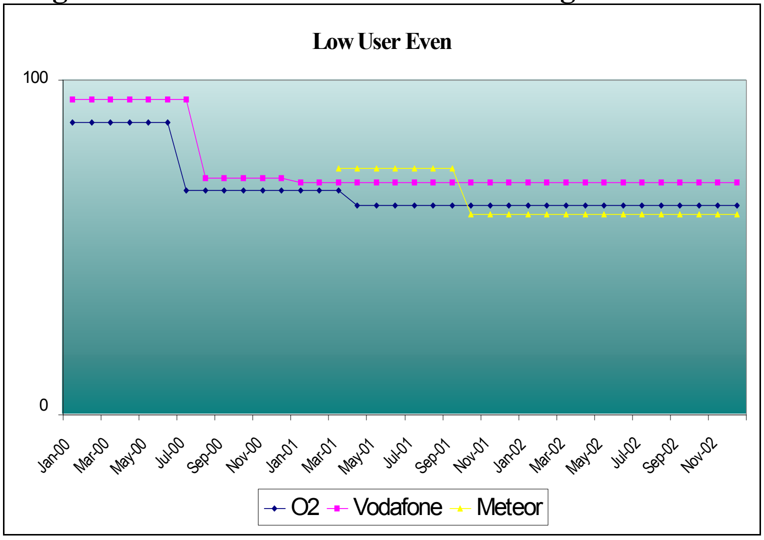


Figure B.3 Low Volume User Mostly Off-peak

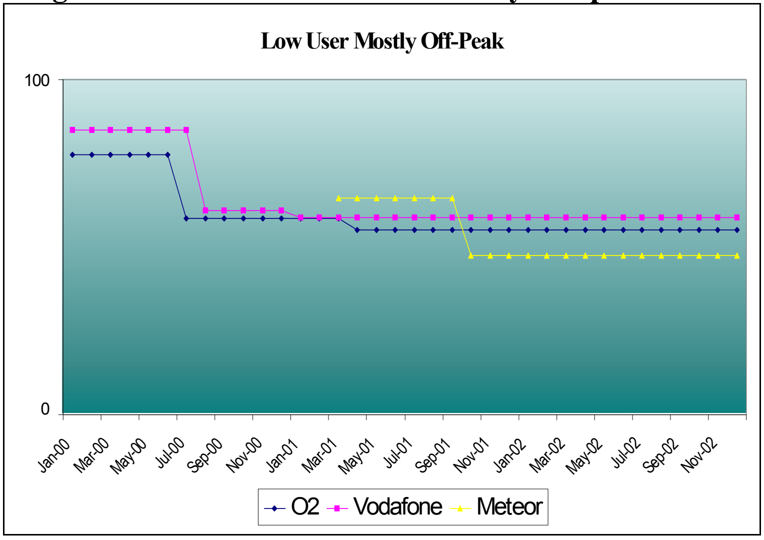


Figure B.4 Medium Volume User Mostly Peak

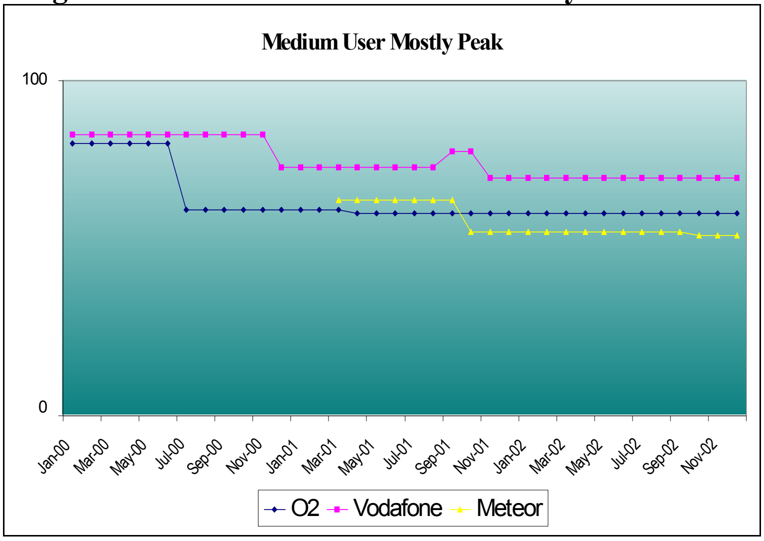


Figure B.5 Medium Volume User Even Usage

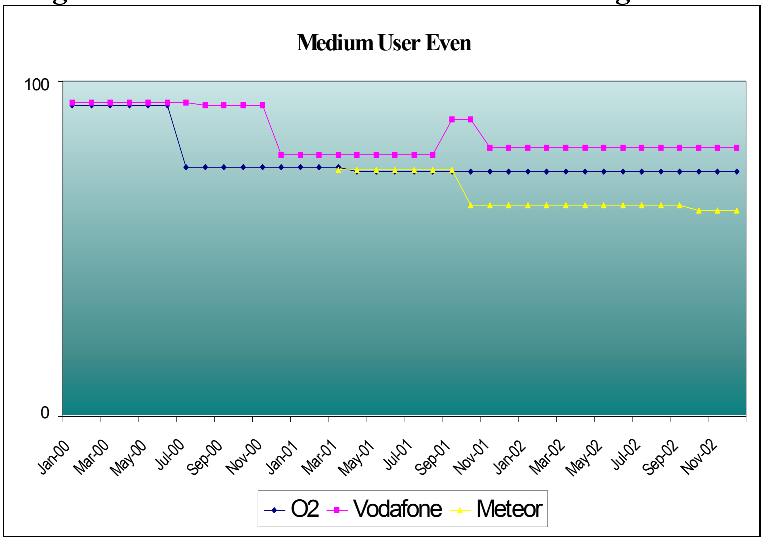


Figure B.6 Medium Volume User Mostly Off-peak

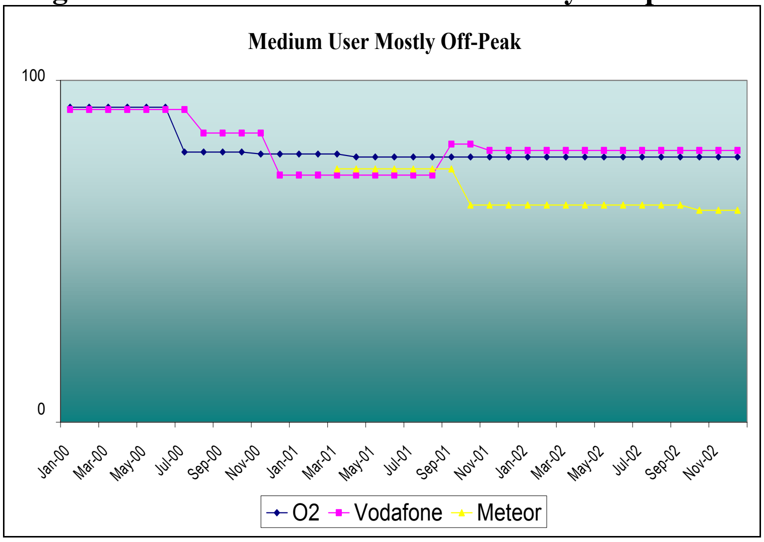


Figure B.7 Post-pay High Volume User Mostly Peak

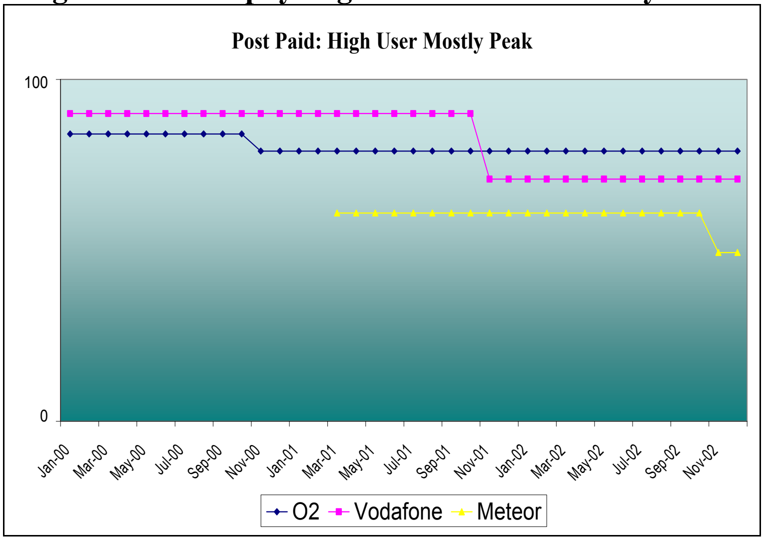


Figure B.8 Post-pay High Volume User Even Usage

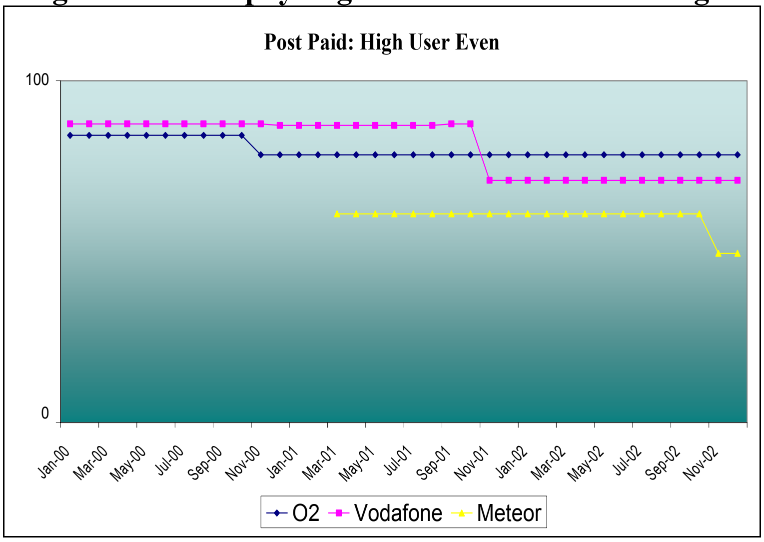


Figure B.9 Post-pay High Volume User Mostly Off-peak

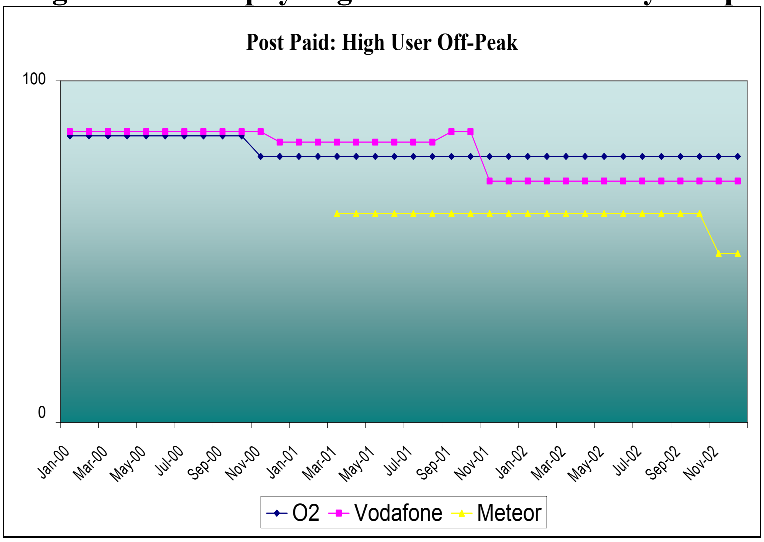


Figure B.10 Post-pay Very High Volume User Peak

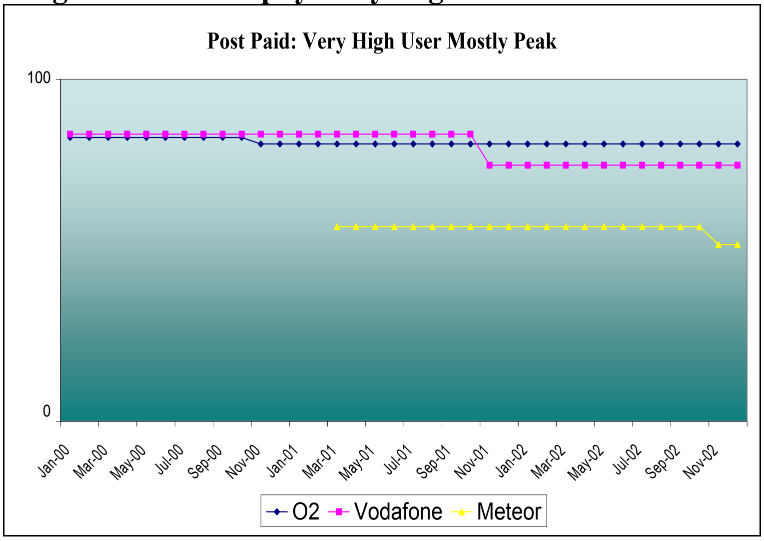


Figure B.11 Post-pay Very High Volume User Even Usage

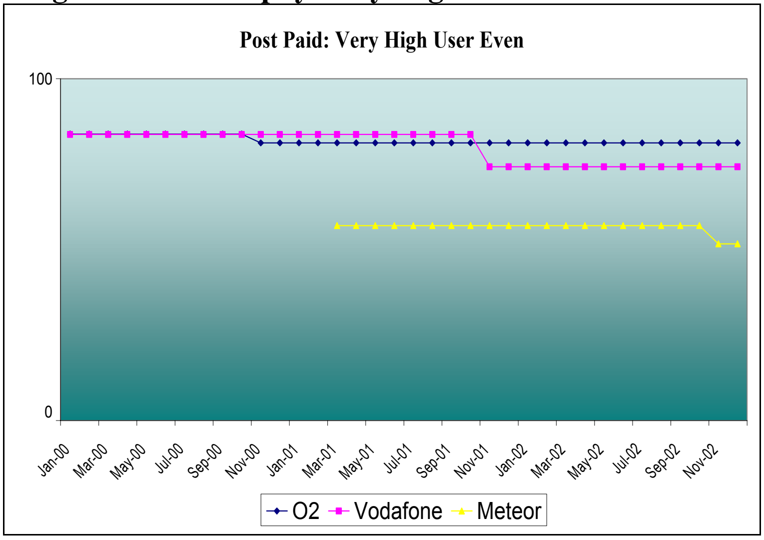
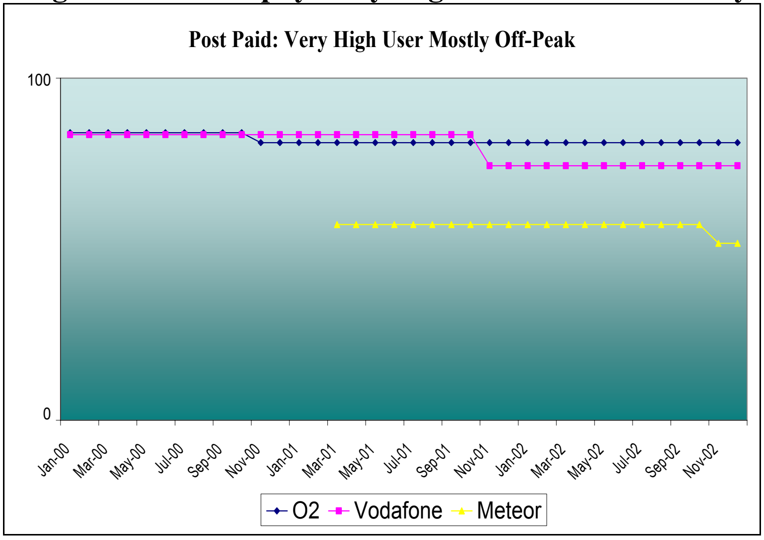


Figure B.12 Post-pay Very High Volume User Mostly Off-Peak



Teligen Mobile Baskets

Figure B.13 Low Usage Basket

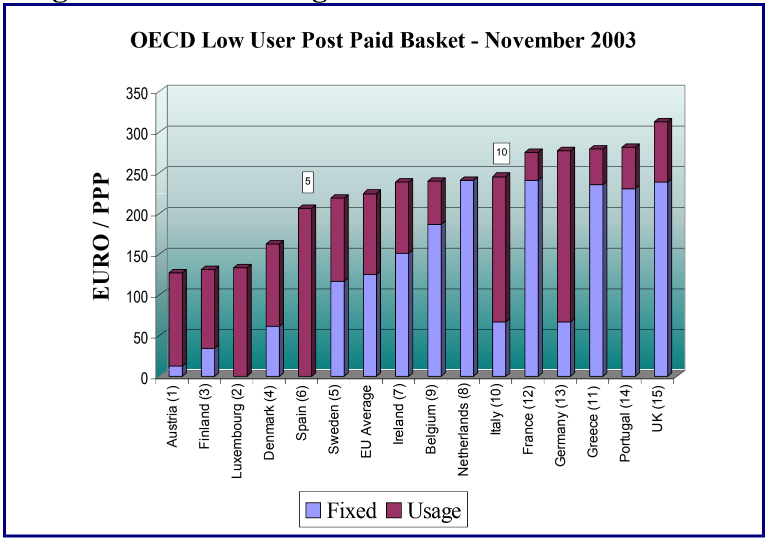


Figure B.14 Medium Usage Basket

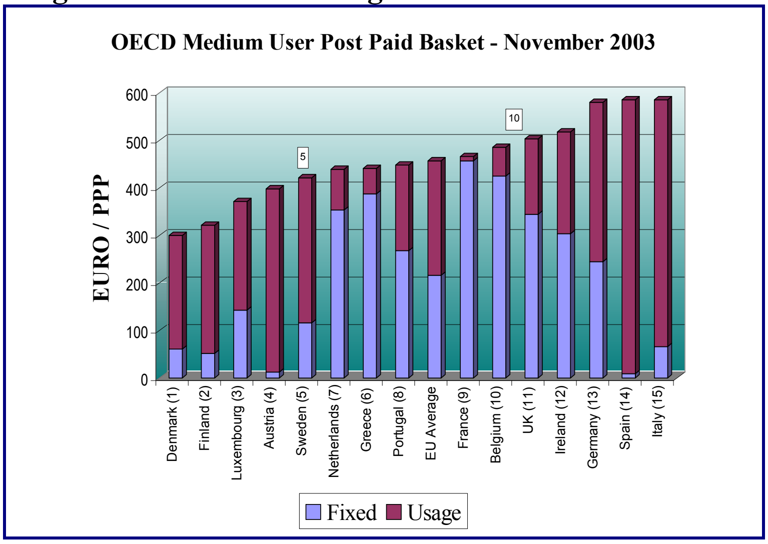


Figure B.15 High Usage Basket

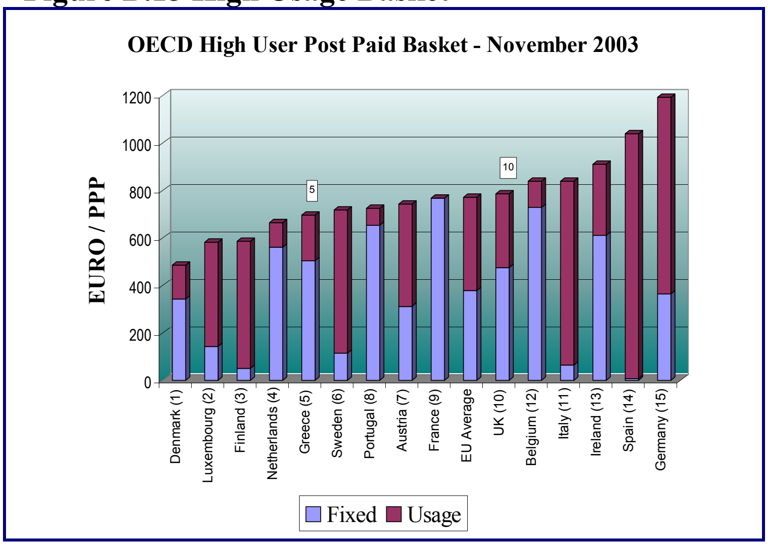


Figure B.16: OECD Pre-pay Basket

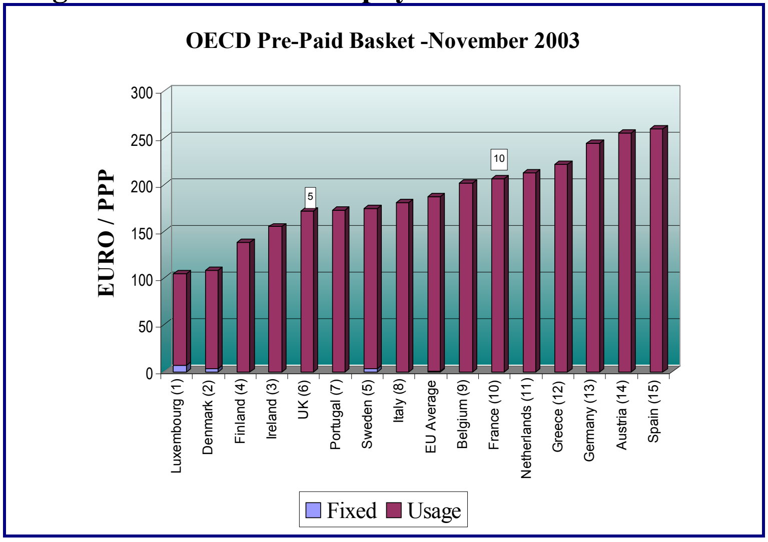
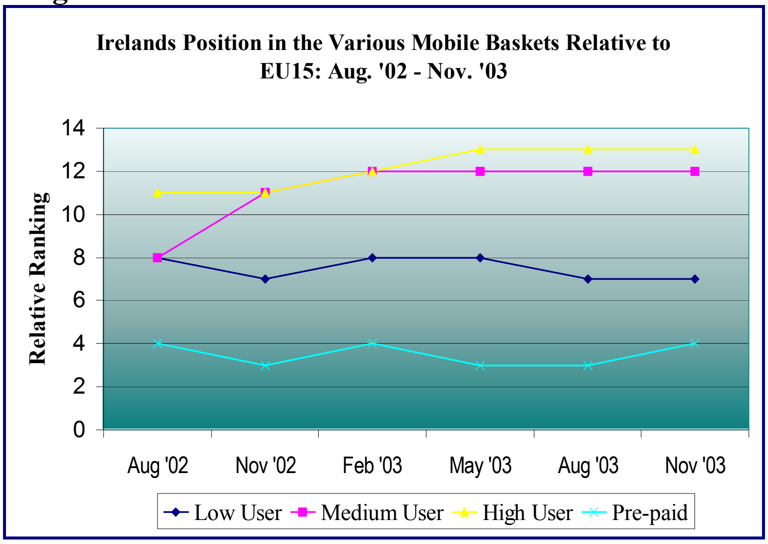


Figure B.17: Ireland's Position in the Various Mobile Baskets



OECD Mobile Baskets Methodology

1. The new baskets are based on the principles agreed in the Mobile Basket Workshop in London in October 2001, where representatives from a large number of OECD countries, regulators and operators were present.

2. The baskets outlined in this document are based on averages or summaries of the information provided by the representatives at the October 2001 meeting, and others responding to a call for information from the OECD.

3. All baskets will include:

    - Registration or installation charges with 1/3 of the charges, *i.e.* distributed over 3 years.

    - Monthly rental charges and any option charges that may apply to the package, or package combination.

4. The three new baskets are:

- Low user basket. The usage level of this basket is low, with a call volume less than half of that in the Medium user basket.

- Medium user basket. This basket will have 75 outgoing calls per month.

- High user basket. The usage level is about twice the Medium user basket.

5. The usage profiles will also include a number of SMS messages per month.

6. Call and message volumes for each basket are:

	Outgoing calls /month	SMS per month
Low user	25	30
Medium user	75	35
High user	150	42

7. The information received showed that there is little difference between the average pre-pay usage and the low user post-pay usage. The low user basket can therefore be used for both pre- and post-pay tariffs, allowing a simple comparison also between the two types.

8. Only national calls are included in the profiles, with 4 different destinations:

- Local area fixed line calls. This is used to accommodate the tariffs that have separate charges for the local area. When such charges are not available, this proportion of calls is included in the National.

- National fixed line calls. This covers all fixed line calls outside the local area, except in cases as noted above.

- Same network mobile calls (On-net). This includes all calls made to mobiles in the same mobile network as the caller.

- Other network mobile calls (Off-net). This includes calls to all other mobile networks in the caller's country. When the charges are different depending on destination network, the market shares based on subscriber numbers are used for weighting the charges. Up to 3 other networks will be considered in each country.

9. Distributions per destination for each basket are:

% of total number of calls	Fixed Local area	Fixed National area	On-net mobile	Off-net mobile
Low user	28.0%	14.0%	40.0%	18.0%
Medium user	24.0%	12.0%	43.0%	21.0%
High user	26.0%	14.0%	42.0%	18.0%

10. As the information received produced little evidence on the split between local and national fixed line calls, the assumption has been used that the ratio would be 2:1 for local: national, *i.e.*, 67% local and 33% national. This assumption is taken from the averages in fixed baskets, and the scarce information received.

11. Instead of splitting time and day into distinct times and days the following approach will be used:

- Peak time calls at weekdays, most expensive time during daytime.
- Off-peak time calls at weekdays, cheapest time before midnight.
- Weekend time calls, at daytime Sundays.

12. Distributions over time and day for each basket are:

% of total number of calls	ToD Peak	ToD Off-peak	ToD Weekend
Low user	38.0%	35.0%	27.0%
Medium user	47.0%	30.0%	23.0%
High user	63.0%	22.0%	15.0%

13. There will be 3 separate call durations:

- Local and national fixed line calls
- Same network mobile calls (On-net)
- Other network mobile calls (Off-net)

14. Call durations for each basket are:

Minutes per call	Dur Fixed National	Dur Mobile On-net	Dur Mobile Off-net
Low user	1.6	1.4	1.4
Medium user	2.1	1.9	1.9
High user	2.2	2.0	2.1

15. Any call allowance value included in the monthly rental will be deducted from the usage value once the basket is calculated. The deduction cannot be larger than the actual usage value, i.e. negative usage is not allowed. No transfer of unused value to next month is taken into account.

16. Any inclusive minutes will be deducted from the basket usage before starting the calculation of usage cost. The inclusive minutes are assumed to be used up with the same calling pattern that is described in the basket, i.e. the same peak/off-peak ratio and the same distribution across destinations. Where the inclusive minutes are clearly limited to specific destinations or times of day this will be taken into account. No transfer of unused minutes is taken into account.

17. Any inclusive SMS-messages will be deducted from the basket before starting the calculation of the SMS message cost, up to the number of messages in the basket.

18. For each of the operators covered a set of packages shall be included so that the cheapest package offered by that operator can be calculated for each of the 3 baskets.

19. Multiple operators in each country shall be included, with at least the two operators with highest number of subscribers in each country. The operators included shall have a total market share of at least 50% based on subscriber numbers.

20. Basket results are calculated for a period of one year.

Appendix C – Proposed Decision on National Roaming

In making this Decision and imposing the obligations set out herein, ComReg has taken account, amongst other things, of its functions under Regulation 6 (1) of the Access Regulations,[96] assessed the proportionality of these obligations relative to the objectives of ComReg set out in section 12 of the Act of 2002,[97] has taken in to account the factors set out in Regulation 13 (4) of the Access Regulations and has complied with and taken in to account the Policy Directions made by the Minister.[98] ComReg's Decision contained below is based on the market analysis and reasoning conducted by ComReg in relation to the wholesale mobile access and call origination market as part of the consultation process arising from the Consultation Paper entitled *Market Analysis: Wholesale Mobile Access and Call Origination* (Document No: 04/05) dated 27 January, 2004.

1 OBLIGATION TO MEET REQUESTS FOR AND TO PROVIDE NATIONAL ROAMING SERVICES

If from the date of this Decision a MNO[99] designated as having SMP[100] ('a SMP MNO') is requested by a MNO not designated as having SMP ('a non-SMP MNO') to provide National Roaming Services[101] to the non-SMP MNO, it shall, as provided by Regulation 13 of the Access Regulations have from the date of this Decision, an obligation to meet reasonable requests for access to and to provide National Roaming Services on its Mobile Network[102] to the non-SMP MNO**.**

[96] S.I. No. 305 of 2003 the European Communities (Electronic Communications Networks and Services) (Access) Regulations 2003 which transposes Directive 2002/19/EC of the European Parliament and the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities.

[97] The Communications Regulation Act 2002.

[98] Policy Directions made by Dermot Ahern T.D. Minister for Communications, Marine and Natural Resources on 21 February 2003.

[99] A mobile network operator authorised under the Postal and Telecommunications Services Act 1983 and the Wireless Telegraphy Acts 1926-1988 (as subsequently modified or amended) to provide a public mobile network and services or associated facilities.

[100] Significant market power on the market for access and call origination on public mobile telephone networks at the wholesale level, as referred to in the Annex to EU Commission Recommendation of 11 February, 2003 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services. References to a SMP MNO means a MNO or MNOs designated in accordance with Regulations 25-27 of the Framework Regulations.

[101] Facilities enabling a MNO to provide and receive electronic communications services (as defined in the Framework Regulations) on a public mobile communications network, including but not limited to; bearer services (as defined in current and future versions of the ETSI GSM technical specifications) teleservices (as defined in current and future versions of the ETSI GSM technical specifications), standard supplementary services (those supplementary services which are most widely used by mobile retail customers i.e. subscribers) and supplementary services (as meant by the relevant ETSI GSM standards, or equivalent standards).

[102] A public mobile communications network using '2G' spectrum i.e. spectrum within the 900 MHz and / or 1800 MHz bands.

2 COMMERCIAL NEGOTIATION OF A NATIONAL ROAMING AGREEMENT

2.1 If after the date of this Decision a SMP MNO is requested by a non-SMP MNO to provide National Roaming Services to the non-SMP MNO, it shall from the date of this request have an obligation to negotiate in good faith a National Roaming Agreement[103] with the non-SMP MNO. Negotiations in relation to a National Roaming Agreement shall be concluded no later than 1 month from the date of the request by the non-SMP MNO.

2.2 Any National Roaming Agreement between a SMP MNO and a non-SMP MNO ('the Parties') shall not be effective until such time as the non-SMP MNO has constructed its own Mobile Network to cover 20% of the population of Ireland.

2.3 The obligations in section 2.1 of this Decision shall also apply in the case of a National Roaming Agreement which expires or is terminated prior to the end of the period referred to in section 8 of this Decision.

2.4 In addition to the obligations referred to in sections 1 and 2 of this Decision, a SMP MNO shall from the date of this Decision have the obligations referred to in section 6 of this Decision.

3 OWN INITIATIVE ACTION BY COMREG

3.1 If no Roaming Agreement is concluded pursuant section 2.1 of this Decision, ComReg reserves its right to decide to exercise its powers on its own initiative where justified and as appropriate, under the Access Regulations, the Framework[104] Regulations, the Authorisation Regulations[105] and the Universal Service Regulations[106] (as provided by Regulation 6 (5) of the Access Regulations) in order to secure the policy objectives and regulatory principles set out in section 12 of the Act of 2002, in accordance with the Access Regulations and Regulations 19, 20, 31 and 32 of the Framework Regulations.

3.2 If ComReg decides to exercise its powers under the Access Regulations of its own initiative, it may, amongst other things, direct that the Parties conclude a National Roaming Agreement.

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[103] An agreement and any amendment thereto to provide National Roaming Services in Ireland.

[104] S.I. No. 307 of 2003 the European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2003 which transposes Directive 2002/21/EC of the European Parliament and the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services.

[105] S. I. No. 306 of 2003 the European Communities (Electronic Communications Networks and Services (Authorisation) Regulations 2003 which transposes Directive 2002/20/EC of the European Parliament and the Council of 7 March 2002 on the authorisation of, electronic communications networks and services.

[106] S.I. No. 308 of 2003 the European Communities (Electronic Communications Networks and Services) (Universal Service and Users' Rights) Regulations 2003 which transposes Directive 2002/22/EC of the European Parliament and the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services.

3.3 ComReg may, within 2 weeks of a decision referred to in section 3.1 of this Decision (or a decision to investigate a dispute under Regulation 31 of the Framework Regulations), issue a draft direction specifying an interim price for National Roaming Services and/or any other terms and conditions to be contained in a National Roaming Agreement. This draft direction will be adopted by ComReg as soon as is practicable. Where necessary, ComReg will instigate a process for reaching and issuing a final decision with respect to a National Roaming agreement.

4 MEDIATION

4.1 If commercial negotiation fails or, as an alternative to dispute resolution, ComReg may offer mediation, if the Parties agree to its use and agree to be bound by the outcome of the mediation. For the avoidance of doubt, any mediated agreement arising from mediation will be binding on the Parties.

4.2 If the Parties agree to mediation, they will furnish ComReg with evidence in writing of their agreement to be bound by any mediated agreement.

5 DISPUTE RESOLUTION

5.1 A non-SMP MNO may, if there is a dispute arising between it and a SMP MNO regarding rights or obligations under this Decision or the Access Regulations notify the existence of the dispute to ComReg. If such a notification is made to ComReg, Regulation 31 of the Framework Regulations and the dispute resolution procedures set out in Decision D18/03[107] shall apply.

5.2 If ComReg decides to investigate a dispute, it may, 2 weeks from the date that it informs the Parties of that decision, issue a draft direction specifying an interim price for National Roaming Services and/or any other terms and conditions to be concluded in a National Roaming Agreement. This draft direction will be adopted by ComReg as soon as is practicable. Where necessary, ComReg will instigate a process for reaching and issuing a final decision with respect to a National Roaming Agreement.

6 ADDITIONAL OBLIGATIONS ON SMP MNO

In addition to the obligations imposed in sections 1 and 2 of this Decision, a SMP MNO shall from the date of this Decision have the following obligations:-

i. An obligation of transparency as provided for by Regulation 10 of the Access Regulations. Without prejudice to the generality of this obligation, a SMP MNO shall be required to submit to ComReg any National Roaming Agreement between the Parties in order for ComReg to ascertain whether a SMP MNO has complied with its obligations in this Decision and the requirements of directions issued by ComReg;

[107] ComReg document entitled 'Response to Consultation & Decision Notice D18/03 - Dispute Resolution Procedures' Reference Number: 03/89.

ii. An obligation of non-discrimination as provided for by Regulation 11 of the Access Regulations. Without prejudice to the generality of this obligation, a SMP MNO shall ensure that National Roaming Agreements are concluded on equivalent terms and conditions with all non-SMP MNOs and that it provides services and information to non-SMP MNOs under the same conditions and of the same quality as the SMP MNO provides for its own services or those of its subsidiaries or partners;

iii. An obligation in relation to accounting separation as provided for by Regulation 12 of the Access Regulations. ComReg will consult further on the detailed requirements of and the practical implementation of this obligation; and

iv. An obligation in relation to cost accounting as provided for by Regulation 14 of the Access Regulations. ComReg will consult further on the detailed requirements of and the practical implementation of this obligation.

7 FAIR AND REASONABLE TERMS

A SMP MNO that enters into a National Roaming Agreement with a non SMP MNO shall ensure that the terms and conditions of a National Roaming Agreement are fair and reasonable.

8 PERIOD FOR WHICH OBLIGATIONS REMAIN IN FORCE

The obligations imposed under this Decision shall remain in force for a period of **[●]** years[108] from the date of this Decision.

9 PROVISION OF INFORMATION

ComReg may, under Regulation 17 of the Framework Regulations require any undertaking[109] to provide (within such time as ComReg shall specify in the document containing the requirement) any information, including financial information, that ComReg considers necessary for the purpose of ensuring compliance with this Decision.

10 DIRECTIONS

ComReg may, for the purpose of further specifying requirements to be complied with relating to obligations imposed by this Decision, issue directions to any undertaking to do or refrain from doing anything which ComReg specifies in the direction and the undertaking shall comply with any such direction.

11 AMENDMENT OR REVOCATION OF OBLIGATIONS

ComReg may, pursuant to Regulation 15 of the Access Regulations, amend or revoke any obligations imposed by this Decision.

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[108] ComReg considers that a period of 3 – 5 years is appropriate for the remedial obligations in this Decision to remain in force. The views of respondents are sought in relation to the period they would consider appropriate for the remedial obligations to remain in force.

[109] As defined in the Framework Regulations.

Appendix D - Selected text from Access Regulations and Universal Service and Users' Rights Regulations

Regulation 10 to 14 of the Access Regulations (S.I. 305 of 2003)

Transparency

10. (1) The Regulator may in accordance with Regulation 9 impose on an operator obligations to ensure transparency in relation to interconnection, access or both interconnection and access, requiring such operator to make public specified information, such as accounting information, technical specifications, network characteristics, terms and conditions for supply and use, and prices.

(2) The Regulator may, in particular where obligations under Regulation 11 are imposed on an operator, require such operator to publish a reference offer that is sufficiently unbundled to ensure that undertakings are not required to pay for facilities which are not necessary for the service requested and such offer shall include:

(a) a description of the relevant offerings broken down into components according to market needs; and

(b) a description of the associated terms and conditions, including prices.

(3) The Regulator may specify in an obligation referred to in paragraph (1) or (2) the precise information to be made available the level of detail required and the manner of publication.

(4) Notwithstanding paragraph (3), where an operator has obligations under Regulation 13, concerning unbundled access to the twisted metallic pair local loop, the Regulator shall require such operator to publish a reference offer containing at least the elements set out in the Schedule.

(5) The Regulator may issue directions requiring an operator to which this Regulation applies to make changes to a reference offer to give effect to obligations imposed under these Regulations and to publish the reference offer with such changes.

Non-discrimination

11. (1) The Regulator may in accordance with Regulation 9 impose on an operator obligations of non-discrimination in relation to interconnection, access or both interconnection and access.

(2) Any such obligations shall ensure, in particular, that the operator:

(a) applies equivalent conditions in equivalent circumstances to other undertakings providing equivalent services, and

(b) provides services and information to others under the same conditions and of the same quality as the operator provides for its own services or those of its subsidiaries or partners.

Accounting separation

12. (1) The Regulator may in accordance with Regulation 9 impose on an operator obligations for accounting separation in relation to specified activities related to interconnection, access or both interconnection and access.

(2) Without prejudice to the generality of paragraph (1), the Regulator may require an operator which is vertically integrated to make transparent its wholesale prices and its internal transfer prices, *inter alia,* to ensure compliance with any obligation imposed under Regulation 11 or, where necessary, to prevent unfair cross subsidy and, where it does so, may specify the format and accounting methodology to be used.

(3) A requirement upon an operator under Regulation 17 of the Framework Regulations may, in order to facilitate the verification of compliance by an operator with any obligations of transparency under Regulation 10 and non-discrimination under Regulation 11, include a requirement that accounting records, including data on revenues received from third parties, are provided by any such operator to the Regulator on request.

(4) Subject to the protection of the confidentiality of any information which the Regulator considers confidential, the Regulator may publish any information obtained by it under paragraph (3) to the extent that the Regulator considers that such information would contribute to an open and competitive market.

Obligations of access to and use of specific network facilities

13. (1) The Regulator may in accordance with Regulation 9 impose on an operator obligations to meet reasonable requests for access to, and use of, specific network elements and associated facilities *inter alia* in situations where the Regulator considers that the denial of such access or the imposition by operators of unreasonable terms and conditions having a similar effect –

(a) would hinder the emergence of a sustainable competitive market at the retail level,

(b) would not be in the interests of end-users, or

(c) would otherwise hinder the achievement of the objectives set out in section 12 of the Act of 2002.

(2) Without prejudice to the generality of paragraph (1), the Regulator may require an operator, *inter alia*:

(a) to give third parties access to specified network elements, facilities or both such elements and facilities, including unbundled access to the local loop;

(b) to negotiate in good faith with undertakings, requesting access;

(c) not to withdraw access to facilities already granted;

(d) to provide specified services on a wholesale basis for resale by third parties;

(e) to grant open access to technical interfaces, protocols or other key technologies that are indispensable for the interoperability of services or virtual network services;

(f) to provide co-location or other forms of facility sharing, including duct, building or mast sharing;

(g) to provide specified services needed to ensure interoperability of end-to end services to users, including facilities for intelligent network services or roaming on mobile networks;

(h) to provide access to operational support systems or similar software systems necessary to ensure fair competition in the provision of services; or

(i) to interconnect networks or network facilities.

(3) The Regulator may attach to any obligations imposed under paragraphs (1) and (2) conditions covering fairness, reasonableness and timeliness.

(4) When considering whether to impose obligations referred to in paragraphs (1) and (2) and, in particular, when assessing whether such obligations would be proportionate to the objectives set out in section 12 of the Act of 2002 the Regulator shall take into account in particular the following factors:

(a) the technical and economic viability of using or installing competing facilities, in the light of the rate of market development, taking into account the nature and type of interconnection and access involved;

(b) the feasibility of providing the access proposed, in relation to the capacity available;

(c) the initial investment by the facility owner, bearing in mind the risks involved in making the investment;

(d) the need to safeguard competition in the long-term;

(e) where appropriate, any relevant intellectual property rights; and

(f) the provision of pan-European services.

Price control and cost accounting obligations

14. (1) The Regulator may in accordance with Regulation 9 impose on an operator obligations relating to cost recovery and price controls, including obligations for cost orientation of prices and obligations concerning cost accounting systems, for the provision of specific types of interconnection, access or both such interconnection and access in situations where a market analysis indicates that a lack of effective competition means that the operator concerned might sustain prices at an excessively high level, or apply a price squeeze to the detriment of end-users.

(2) When considering the imposition of obligations under paragraph (1), the Regulator shall, take into account any investment made by the operator in electronic communications networks or services or associated facilities which the Regulator considers relevant and allow the operator a reasonable rate of return on adequate capital employed, taking into account the risks involved.

(3) The Regulator shall ensure that any cost recovery mechanism or pricing methodology that it imposes under this Regulation serves to promote efficiency and sustainable competition and maximise consumer benefits. In this regard, the Regulator may also take account of prices available in comparable competitive markets.

(4) Where an operator has an obligation under this Regulation regarding the cost orientation of its prices, the burden of proof that charges are derived from costs, including a reasonable rate of return on investment shall lie with the operator concerned. For the purpose of calculating the cost of efficient provision of services, the Regulator may use cost accounting methods independent of those used by the operator. The Regulator may issue directions requiring an operator to provide full justification for its prices, and may, where appropriate require prices to be adjusted.

(5) The Regulator shall ensure that, where implementation of a cost accounting system is imposed under this Regulation in order to support price controls, a description of the cost accounting system is made publicly available, showing at least the main categories under which costs are grouped and the rules used for the allocation of costs. Compliance with the cost accounting system shall, at the choice of the Regulator, be verified by the Regulator or by a suitably qualified independent body.

(6) The Regulator shall cause to be published annually a statement concerning compliance with any cost accounting system imposed under this Regulation.

Regulation 14 & 16 of the Universal Service and Users' Rights Regulations (S.I. 308 of 2003)

Regulatory controls on retail markets

14. (1) Where -

(a) the Regulator determines, as a result of a market analysis carried out by it in accordance with Regulation 27 of the Framework Regulations, that a given retail market identified in accordance with Regulation 26 of the Framework Regulations is not effectively competitive, and
(b) the Regulator concludes that obligations imposed under the Access Regulations or Regulation 16 of these Regulations would not result in the achievement of the objectives set out in section 12 of the Act of 2002,

the Regulator shall impose such obligations as it considers appropriate to achieve those objectives on undertakings identified by the Regulator under Regulation 27(4) of the Framework Regulations as having significant market power on a given retail market.

(2) Any obligations imposed by the Regulator pursuant to paragraph (1) shall be based on the nature of the problem identified pursuant to the market analysis and be proportionate and justified in the light of the objectives set out in section 12 of the Act of 2002 and may include requirements to ensure that the undertaking concerned does not –

(a) charge excessive prices,
(b) inhibit market entry or restrict competition by setting predatory prices,
(c) show undue preference to specific end-users, or
(d) unreasonably bundle services.

(3) The Regulator may require an undertaking to which paragraph (1) applies to comply with -

(i) measures to control individual tariffs, or
(ii) measures to orient tariffs towards costs or prices on comparable markets,

in order to protect end-users' interests whilst promoting effective competition.

(4) The Regulator shall, on request, provide information to the European Commission concerning any retail controls applied and, where appropriate, the cost accounting systems used by the undertakings concerned.

(5) An undertaking that is subject to retail tariff regulation or other relevant retail control shall operate and maintain a cost accounting system that is-

(i) based on generally accepted accounting practices,
(ii) is suitable for ensuring compliance with this Regulation, and

(iii) is capable of verification by the Regulator.

(6) The Regulator may specify the format and accounting methodology to be used by an undertaking to which paragraph (5) applies.

(7) Compliance by an undertaking with a cost accounting system referred to in paragraph (5) shall be verified by a qualified independent body. For this purpose, the Regulator may carry out an audit itself , provided it has the necessary qualified staff, or it may require an audit to be carried out by another qualified body, independent of the undertaking concerned.

(8) An undertaking to which paragraph (5) applies shall publish in its annual accounts a statement concerning compliance by it with a cost accounting system referred to in paragraph (5).

(9) Without prejudice to Regulations 8(2) and 9, the Regulator shall not apply retail control mechanisms under paragraph (1) in a relevant market, in relation to which the Regulator is satisfied that effective competition exists.

Regulatory controls on the minimum set of leased lines

15. (1) Where the Regulator determines, as a result of a market analysis carried out by it in accordance with Regulation 27 of the Framework Regulations, that a relevant market consisting of the provision of part or all of the minimum set of leased lines, as identified in the list of standards published in the Official Journal of the European Communities pursuant to Article 17 of the Framework Directive, is not effectively competitive, it shall impose obligations regarding such provision, and regarding the conditions for such provision which are set out in Schedule 3, on an undertaking designated under Regulation 27(4) of the Framework Regulations as having significant market power in such relevant market.

(2) Where, as a result of a market analysis referred to in paragraph (1), the Regulator determines that a relevant market for the provision of leased lines in the minimum set is effectively competitive, it shall withdraw the obligations referred to in Regulation 13 or, as appropriate, paragraph (1), in relation to that specific leased line market.

Carrier selection and carrier pre-selection

16. (1) Where the Regulator determines, as a result of a market analysis carried out by it in accordance with Regulation 27 of the Framework Regulations, that a relevant market consisting of the provision of connection to and use of the public telephone network at a fixed location is not effectively competitive, the Regulator shall impose obligations to be complied with by an undertaking designated under Regulation 27(4) of the Framework Regulations as having significant market power in such relevant market for the purpose of enabling subscribers of such undertaking to access the

services of any interconnected provider of publicly available telephone services-

(a) on a call-by-call basis by dialling a carrier selection code, and
(b) by means of pre-selection, with a facility to over-ride any pre-selected choice on a call-by-call basis by dialling a carrier selection code.

(2) The Regulator may, pursuant to a market analysis under Regulation 27 of the Framework Regulations, determine that user requirements for the facilities referred to in paragraph (1)(a) and (b) shall be implemented on other networks or in other ways and any such determination shall be implemented in accordance with Regulation 12 of the Access Regulations.

(3) An undertaking to which paragraph (1) refers shall ensure that pricing for access and interconnection related to the provision of the facilities referred to in paragraph (1)(a) and (b) is cost oriented and that direct charges to subscribers, if any, do not act as a disincentive for the use of these facilities