Commission for
Communications Regulation

Response to Consultation & Notification to European Commission

Market Analysis - Wholesale Mobile Access and Call Origination

(Response to Consultation Document 04/05)

Document No:	**04/118 and** **04/118a**
Date:	**9 th December 2004**

All responses to this consultation should be clearly marked:- "Reference: Submission re ComReg 04/118 and 04/118a" as indicated above, and sent by post, facsimile, e-mail or on-line at www.comreg.ie (current consultations), to arrive on or before 6.00 pm 20th January 2005 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

Introduction

1.1 The new electronic communications regulatory framework requires that Commission for Communications Regulation (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 On the 27th January 2004, ComReg commenced a six week national consultation[2] on its review of the market for wholesale access and call origination on public mobile networks. Interested parties were asked to submit comments by March 9th 2004 in relation to a number of questions pertaining to ComReg's preliminary findings. ComReg received submissions from eight respondents, listed below.

The eight respondents to the Consultation were:

'3';

Blue consulting;

eircom;

Meteor;

Minute Buyer;

O_2 ;

Tele2; and

Vodafone.

1.3 ComReg thanks all respondents for their submissions. Having considered the views of all respondents, ComReg has set out in this document its conclusions regarding the market review for this market.

Market Definition

1.4 The EU Commission recommends, in its *Relevant Markets Recommendation*, that National Regulatory Authorities (NRAs) should analyse the relevant market for "wholesale access and call origination on public mobile telephone networks".[3] According to the EU Commission, a determination as to whether ex-ante regulatory intervention at the wholesale level might not be warranted will take account 'the level

1 S.I. No. 307 of 2003

2 ComReg doc no 04/05, Market Analysis Wholesale Mobile Access and Call Origination, 27 January 2004

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

of competition generally observed in the market at the retail level'.[4] It was ComReg's preliminary view at consultation 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 identified the key elements of the market at the retail level which is linked to the wholesale market, with a view to determining whether the level of competition generally observed at the retail level suggests that any market failure identified at the wholesale level is reflected in the level of competition witnessed in the linked retail market.

1.5 ComReg's analysis of the commercial and economic evidence suggests that a relevant market can be identified for the wholesale provision of access and call origination. ComReg's view is that this relevant product market consists of:

- all wholesale access and origination services provided by an Mobile Network Operators (MNO);[5]
- constitutes a single relevant market that includes all MNOs; and
- includes self-supplied access and call origination by vertically integrated MNOs.

1.6 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 view 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 Short Messaging Services (SMS). Pre-pay and post-pay mobile communications services form part of the same relevant services market.

1.7 ComReg has considered it appropriate to exclude advanced data services from its market definition, primarily on the basis that the services provided are emerging and are not significant at this stage of development. Hence, these services do not fall within the scope of the cluster of voice-based services currently acquired and provided by MNOs. ComReg has also taken into account that the cluster of voice and SMS–based services, consistent with the principle of technology neutrality, may be offered over 2G, 2.5G or 3G networks.

1.8 ComReg's view is that the geographical scope of the market 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.

4 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.

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

Market Analysis

1.9 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.

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

Single Dominance

1.11 ComReg believes that the evidence does not support the claim that any operator holds a position equivalent to individual dominance in this market. ComReg notes that barriers to expansion are low for both O_2 and Vodafone, and this factor, combined with a number of other factors as presented (such as economies of scale and scope, access to capital, etc.), means that Vodafone and O_2 could not act independently of each other.

1.12 ComReg's analysis presents circumstances that ultimately do not give rise to a finding of single dominance. Of particular significance are low barriers to expansion, a factor that was also noted to be important in the *Meridian Communications* judgment in April 2001, which ruled that Vodafone did not hold a position of single dominance in the Irish retail mobile market because barriers to expansion on the part of O_2 (then Digifone) were low. ComReg notes that respondents to the consultation agreed with ComReg that barriers to expansion in the market are low.

Collective (Joint) Dominance

1.13 ComReg's view is that the essential conditions warranting a finding of collective dominance, as set out in the judgments of the European Courts in the jurisprudence relating to Article 82 of the treaty establishing the European Community, as interpreted by the EU Commission in its *Access Notice* and in its *SMP Guidelines,* and also in light of the criteria discussed by the Court of First Instance in *AirTours,* are satisfied in relation to the relevant market for wholesale mobile access and call origination.

1.14 Applying the traditional approach under Article 82 EC Treaty, ComReg is of the view that the existence of a number of structural links exist between Vodafone and O_2, given the nature of the mobile electronic communications sector, so as to justify a finding of collective dominance on the market for wholesale mobile access and call origination in Ireland. The lack of effective competition witnessed by ComReg at the wholesale level, and supported by evidence gleaned from the retail level, is in part explained by the interdependence of both parties due to the existence of such links. This approach can be supplemented by a consideration of the more salient factors considered in *AirTours*. In the alternative, ComReg could appraise joint dominance in light of the three-pronged test established in *AirTours*.[6]

1.15 Adopting the approach of the Court of First Instance in *Airtours,* the structure of the Irish market has many of the characteristics that would give rise to coordinated effects. The combination of these factors makes the Irish market particularly susceptible to collective dominance, and this is likely to continue in the absence of appropriate regulatory action. The implicit threat of a reversion to the normal conditions of competition at the retail level provides the type of retaliatory mechanism, which can sustain the prevailing market conditions.

1.16 The market power of Vodafone and O_2 is reinforced by:

- their size relative to each other, and to other market players in Ireland;
- their control of infrastructure which is unlikely to be economically duplicated over the life 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 Return On Capital Employed (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.

1.17 There are strong indications that the aligned or consciously parallel behaviour identified by ComReg at the retail level, in addition to the behaviour identified at the wholesale level, is reflected in the unsatisfactory level of competition at the retail level. For example, there appears to be little effective price competition between Vodafone and O2 in the provision of their retail post-paid services. Furthermore, 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, Mobile Virtual Network Operators (MVNO) agreements with service providers.7 Furthermore, alternative sources of market entry appear to be also unlikely to be able to exert sufficient competitive pressure on Vodafone and O2 over the lifetime of this review.

1.18 ComReg is therefore of the view that the Irish wholesale mobile access and origination market is not effectively competitive and that Vodafone and O2 have each, jointly with each other Significant Market Power (SMP) on the market for wholesale mobile access and call origination in Ireland. ComReg believes that the mobile market in Ireland has a structure that is conducive to coordinated effects. In practice, ComReg

6 Namely: (1) the existence of sufficient market transparency; (2) incentives for sustaining cooperation between the collectively dominant firms beyond the short term, which can be policed through an appropriate retaliatory mechanism; and (3) the inability of customers and existing/future competitors to affect the tacit coordination through their market behaviour.

7 Indirect access agreements are common in other European markets. O2 concluded a regional roaming agreement with Meteor this year.

believes that the evidence supports the view that O2 and Vodafone are tacitly colluding in this market. Both Vodafone and O2 have a strong incentive to converge to a coordinated market outcome and refrain from reliance on competitive conduct. This is the case because these parties are aware that the long-term benefits of their tacit coordination outweighs any short-term gains resulting from deviation.

Remedies

1.19 There is demand for mobile wholesale services and ComReg requires MNOs to negotiate in good faith with access seekers wholesale access to mobile networks, including, the price (terms and conditions) of access. Commercial practice elsewhere in Europe demonstrates an increasing number of instances of mobile operators granting access to their networks without the need for regulatory intervention.

1.20 ComReg believes that the appropriate wholesale remedy for this market requires the following obligations to be placed on the SMP operators:

- An obligation to provide access on reasonable request;
- An obligation of non-discrimination;
- An obligation of cost orientation;
- An obligation of accounting separation; and cost accounting systems.

1.21 Mandated access on non discriminatory terms to the mobile networks of SMP MNOs is the cornerstone remedy required to increase competition at the wholesale and retail level. In that regard, SMP operators are required not to withdraw access services already provided to a third party, in particular, access to national roaming services.

1.22 ComReg proposes to *impose* all of these remedies as of the effective date of the decision. However, ComReg draws a distinction between the first two obligations above (access and non discrimination) and the latter three obligations. ComReg will allow a period of time for SMP operators to meet their obligations regarding access and non discrimination before requiring that the obligations regarding cost orientation, accounting separation and cost accounting systems above should be *implemented*. During this period commercial negotiations should be conducted in good faith. ComReg will require regular progress reports from SMP operators. If ComReg decides that commercial negotiations are unlikely to be successful on a timely basis, or if it decides that circumstances otherwise warrant it, ComReg will further direct SMP operators to *implement* the obligations relating to price control and cost orientation, accounting separation and cost accounting systems by way of a Direction.

1.23 ComReg will consider the use of benchmarking or a retail minus approach, or a combination of those measures might be considered as an interim measure, during the implementation of accounting separation and cost accounting systems. 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. In the absence of commercial agreement, ComReg can intervene, where appropriate and justified, on the basis of either its own initiative powers or via a dispute resolution process.

1.24 ComReg believes that mandated access to the mobile network of SMP MNOs should be imposed to encourage operators to commercially negotiate wholesale mobile access on non discriminatory terms in the first instance. By establishing the obligation to meet reasonable requests for access, ComReg hopes to restore proper incentives for mobile network operators to compete against each other while also stimulating competition through alternative access providers.
ComReg recognises that the range of regulatory measures must be kept to the level that is appropriate and proportionate to address the market failure but at the same time these measures should give legal certainty to the any third parties requesting access.

1.25 ComReg is publishing in Annex C its proposed draft measure to implement the remedies detailed above. ComReg is consulting on the measure as detailed in Annex C and would welcome comments on the provisions prior to final adoption.

1.26 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.

1.27 ComReg believes the remedies set out in this market support the above objectives specifically by addressing the market failure in the retail mobile market and the related wholesale mobile access and call origination market and in doing so promotes the best interests of the Irish consumers through additional competitive activity.

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 consistent with the functions and task of ComReg set out in the *Communications Regulation Act 2002* and the *Framework 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.[8]

2.5 The new communications regulatory framework requires that ComReg define relevant markets appropriate to national circumstances, 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.[9]

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

8 S.I. No 535
9 Regulation 27(3).

therefore be a need for ComReg to define markets that differ from those listed in the *Relevant Markets Recommendation*.[10] 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 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 MNOs on February 18th, 2003. ComReg held its second workshop on the 25th February, 2003 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.

2.10 On 27th January 2004, ComReg commenced a six week national consultation on its review of the market for wholesale mobile access and call origination on public mobile networks. Interested parties were asked to submit comments by March 9th 2004 on a number of questions pertaining to ComReg's preliminary findings. ComReg received submissions from eight respondents listed below.

The eight respondents to the Consultation were:

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Blue consulting;

eircom;

Meteor;

Minute Buyer;

O_2 ;

Tele2; and

Vodafone.

2.11 ComReg thanks all respondents for their submissions. Having considered the views of all respondents, ComReg has set out in this document its conclusions in relation to this market review. All responses received are available for inspection (with the exception of material supplied on a confidential basis) at ComReg's office. Responses to the consultation questions along with ComReg's position are contained in Annex F.

10 As Recognised by recital 19 of the Relevant Markets Recommendation.

2.12 This document is ComReg's notification to the European Commission as required under Article 7(3) and 7(4) of the Framework Directive.

Liaison with Competition Authority

2.13 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 Irish Competition Authority (the 'CA') for a period of three years.[11] To facilitate market review decision-making, a Steering Group including a representative from the CA, was established by ComReg. Through this forum, the CA has been informed and involved throughout the market review decision-making process. ComReg held several discussions with the board of the Competition Authority in relation to the results of its analysis. The views of the CA are contained in Annex A.

Consultation on Draft Measure

2.14 ComReg is consulting on the draft measure in Annex C of this document. ComReg welcomes all comments but would ask respondents 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.

2.15 The consultation period will run from 9th December 2004 to 20th January 2005, during which time ComReg welcomes comments on the provisions of the draft measure as detailed in Annex C.

Structure of the Document

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

- **Section 3** presents ComReg's conclusions on the definition of the wholesale mobile access and call origination market. This section consists of a 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 view on whether or not this market is effectively competitive;

- **Section 5** outlines ComReg's view on the undertakings to be designated as having Significant Market Power (SMP) in the relevant market(s);

- **Section 6** provides a discussion of the general principles associated with remedies and outlines the remedies to be applied to SMP operators;

- **Section 7** provides a regulatory impact assessment; and

[11] ComReg Document No. 03/06.

- Finally, the appendices contains the competition authority opinion (**Appendix A**), a series of empirical pricing charts (**Appendix B**), the draft measure (**Appendix C**), evidence of pent-up demand in Ireland (**Appendix D - Confidential**), Notification to European Commission (**Appendix E**), and the responses to the consultation document (**Appendix F**).

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 set out in the *Framework Regulations*. This obligation applies to both the relevant markets identified in the *Relevant Markets Recommendation* and to any additional relevant markets that ComReg considers merit investigation.[12] 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*.[13] [14]

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' (small but significant non-transitory increase in price) test where practicable.[15] The market definition exercise is concerned with the likely competitive response of a body of customers, which is not necessarily the majority of customers.[16]

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 EU Commission recommends, in the *Relevant Markets Recommendation*, that NRAs should analyse the relevant market for "wholesale access and call origination on public mobile telephone networks".[17] According to the *Relevant Markets Recommendation*, a determination as to whether ex-ante regulatory intervention at the

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12 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.

13 Regulation 27.

14 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.

15 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.

16 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.

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

wholesale level might not be warranted will take account 'the level of competition generally observed in the market at the retail level'.[18] It was ComReg's preliminary view at consultation that a relevant product market for wholesale mobile 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 identified the key elements of the market at the retail level which is linked to the wholesale market the subject of this review, with a view to determining whether the level of competition generally observed at the retail level suggests that any market failure identified at the wholesale level is reflected in the level of competition witnessed in the linked retail market.

3.5 The EU Commission notes that network access and call origination are typically supplied together by a network operator so that both services can be considered as part of the same market at the wholesale level.[19] 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

3.6 The wholesale services under examination in this review embrace the full range of services that potentially could be provided by Mobile Network Operators ("MNOs").

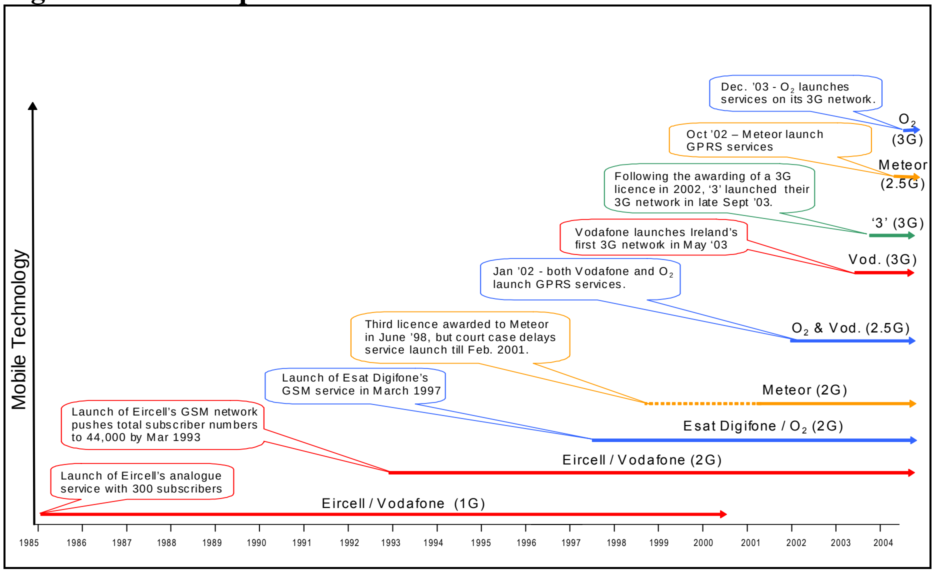
Market Structure

3.7 There are four 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 3.1 below illustrates the development of the mobile market in Ireland.

[18] 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.

[19] Explanatory Memorandum to the Relevant Markets Recommendation.

Figure 3.1: Development of Irish Mobile Market



Source: ComReg

3.8 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 89%. Mobile penetration exceeds fixed line penetration, with 3.5 million mobile lines compared to 1.6 million Public Switched Telephone Network (PSTN) lines, as at September 2004.[20]

The Relevant Product Market

General

3.9 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,[21] 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.

3.10 The electronic communications sector is characterised by two or more functional levels of competition, namely, the level for the provision of electronic 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).[22] The objective characteristics, intended use and pricing arrangements, reflected at each of these levels, are generally distinct, as are the

20 ComReg Document No. 04/96b – Irish Communications Market Quarterly Key Data Report.

21 See, for example, Case 322/81, Michelin v. Commission [1983] ECR 3461, as well as the Commission Recommendation and Explanatory Memorandum on Relevant Markets recommendation and the SMP guidelines paragraph 44

22 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).

parties involved in the transaction. While the levels are clearly linked, the competitive dynamics and other characteristics are not necessarily the same.

3.11 Although it is critical to distinguish between wholesale and retail markets with regard to 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.

3.12 Because the demand for wholesale mobile access and call origination principally derives from the associated services provided at the retail level, 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* regulatory intervention at the wholesale level might not be warranted.[23]

The Retail Marketplace

3.13 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. The relationship between the retail market and the wholesale market for mobile access and call origination is one-to-one. 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.

3.14 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.

23 Relevant Markets Recommendation, para. 4.3.1.

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

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

3.16 The EU Commission has, in a number of decisions, found that there is a market for mobile communications services that cannot be seen as being substitutable for fixed communications services. The EU 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.[24]

3.17 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.

3.18 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 a fixed service. The relevant question is whether an increase in mobile prices would cause customers to switch to fixed services.

3.19 Figure 3.2 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 off-peak periods for Vodafone and on-net calls at weekend and off-peak periods for O_2, and all on-net calls for Meteor, calls from the fixed network are considerably less expensive than calls from a mobile network.[25] There is a significant difference in price for local and national calls from a fixed line and a mobile phone.

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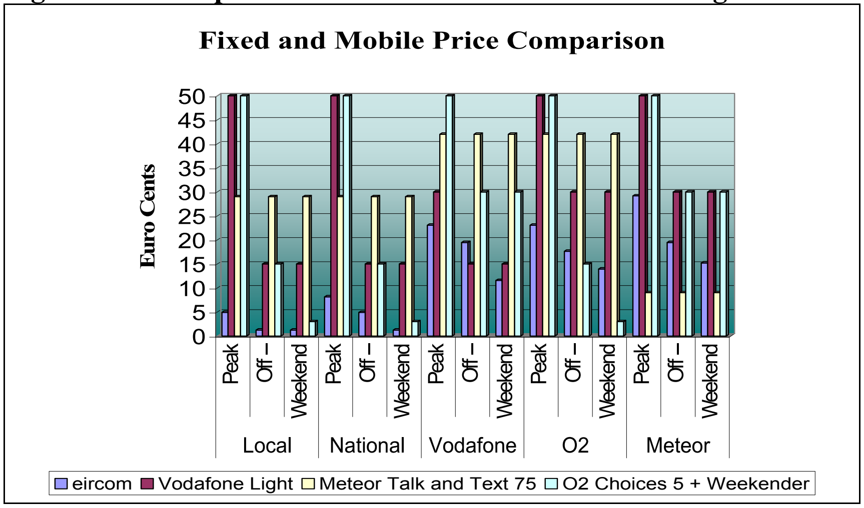
24 See, for example, Commission Decision of 10 July 2002, Case No. COMP/M.2803 – TeliaSonera, Commission Decision of 20 September 2001, Case No. COMP/M.2574 – Pirelli/Edizone/Olivetti/Telecom Italia, Commission Decision of 20 September 2001, Case No. COMP/M.1439 – Telia/Telenor and Commission Decision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

25 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 6.3452c which is excluded from the comparison. Line rental for *eircom* and monthly commitments for the mobile operators are not included.

Figure 3.2: Comparison of Fixed and Mobile Call Charges



Source: ComReg, November 2004

3.20 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 indicate that mobile services are in a separate market to fixed services.

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

3.21 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 3.1 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 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 3.1: 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 – 30 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, November 2004

3.22 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.

3.23 As acknowledged by the EU Commission in similar circumstances,[26] 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.

3.24 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.

3.25 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

[26] 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.

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.

3.26 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. Accordingly, it is arguable that such services might fall outside the scope of a cluster market. However, ComReg is of the 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 services.[27] ComReg is also of the 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.

3.27 ComReg is of the view that the retail market includes the provision of a cluster of services currently provided by MNOs, which includes:

- mobile access;
- basic voice services, including international roaming calls;[28]
- supplementary and value-added voice services;[29] and
- basic and value-added SMS.

27 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.

28 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).

29 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.

3.28 The cluster of services defined at the retail level does not restrict the full range of services that could potentially be offered by MNOs at the wholesale level. The cluster of services is defined primarily to analyse the level of competition generally observed in the market at the retail level to determine as to whether ex-ante regulatory intervention is required at the wholesale level.

3.29 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;
- 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

3.30 ComReg has considered the switching behaviour of end-users in relation to retail services. ComReg is of the 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 – 74%[30]) 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 view that pre-pay and post-pay are in the same market. This is consistent with the *Relevant Markets Recommendation* which states 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)”.

3.31 ComReg concludes that pre-pay and post-pay from part of the same relevant market.

3.32 ComReg recognises however that certain market segments may be more likely to choose a pre-paid service while other market segments may be more likely to choose post-paid services. Large Corporates and Small to Medium Sized Enterprises (SMEs) may be more likely to choose post-paid services while cost conscious users may choose pre-paid to try and control expenditure. As such, competitive conditions may be different between both markets. However, ComReg recognises that for the purposes of market definition that both pre-paid and post-paid form part of the same market.

[30] ComReg Quarterly Key Data Report, September 2004.

(b) Advanced mobile data services at the retail level

3.33 ComReg's conclusion is to exclude advanced mobile data services at the retail level from the cluster market definition. Retail mobile data services are relatively under-developed and the services offered are typically demand side complements to basic voice and SMS services. The markets may be distinct from other mobile services if consumers are faced with no effective substitutes for the data product. Since the markets are very immature it is too early to say whether other demand-side substitutes will emerge, but it may be that non GSM radio data communications services, currently used for tracking and telemetry applications will develop as competitors to General Packet Radio Services (GPRS) based data services. For these reasons ComReg is excluding advanced data services from its cluster market definition as outlined previously.

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

3.34 As regards the issue of whether Third Generation (3G) services should, or could, be included in the identified cluster market at the retail level, consistent with the principle of technology neutrality, ComReg has considered whether the delivery of 3G services falls within the same cluster as 2G services. ComReg's 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 in ComReg's view are clearly part of the same relevant product market. ComReg notes that this is consistent with the views expressed by the EU Commission in its response, of the 29th August 2003, to Oftel's notification of its decision in relation to the wholesale mobile 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".

3.35 As the cluster of services defined earlier by ComReg can be carried over 2G, 2.5G or 3G, ComReg believes that it is appropriate to include all technologies. Following consultation, ComReg has not included advanced data services at the retail level provided over 3G technology networks because, given their infancy, it would be too speculative for ComReg to do so as regards market definition.

(d) WLAN

3.36 ComReg's preliminary conclusion in consultation was to exclude WLAN from the market definition. There was a mixed response from to the consultation as to whether WLAN should be included or excluded. Having considered the responses, ComReg maintains its view that WLAN services are not an effective substitute for mobile services at this time. WLAN may provide a competitive alternative in certain hotspots, but it does not offer mobility.

Conclusion

3.37 ComReg's view is that advanced mobile data services and WLAN at the retail level should be excluded from the cluster definition. In relation to 3G, ComReg believes that it should be included, consistent with the principle of technology neutrality and the fact that the cluster of basic voice and SMS services can be offered over any technology.

(e) Case precedents

3.38 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.

3.39 Concerning mobile voice telephony markets, the EU 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. [31]

3.40 As regards customer segmentation, the EU Commission has identified an emerging market for the provision of advanced seamless pan-European mobile communications services to internationally mobile customers.[32] Based on the distinguishing factor of mobility, the EU Commission has so far considered that mobile and fixed data services are in separate markets.[33]

[31] 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).

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

[33] 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/.

3.41 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 EU Commission in the *Vodafone/Mannesmann* Decision.[34] International roaming services are not considered to be a substitute given the high prices and limited functionality of international roaming.[35]

Conclusion on Retail Market Definition

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

3.43 ComReg has confirmed its conclusion for the definition of a cluster market at the retail level. Whatever the precise scope of the product market at the retail level, it is important to take into account the fact that ComReg's assessment of the services which are said to fall within that market is only taking place in order to determine whether there exists a market failure at the wholesale level whose effects are being felt at the retail level. It is in this connection that the EU Commission has used the 'level of competition generally observed at the retail level' rather than express reference to a designated 'relevant' market at retail level.

Conclusion

3.44 ComReg concludes that a cluster market exists at the retail level based on the following services, which may be offered over 2G, 2.5G or 3G technologies:

- Mobile access;
- Basic voice services, including international roaming calls;
- Supplementary and value-added voice services; and
- Basic and value added SMS.

Wholesale Market Definition

3.45 ComReg is recommended under 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.

34 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).

35 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).

3.46 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, Mobile Virtual Network Operator ("MVNO"[36]) 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?

3.47 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 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 are in ComReg's view not *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 customers' needs, thus supporting the argument for demand-side substitutability.

3.48 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 a 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 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.

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

3.49 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

[36] MVNO's resale mobile services, typically adding value such as brand appeal, distribution channels and other affinities

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.

3.50 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, before its national roaming agreement with O_2 may be perceived as having a more restricted geographic coverage and might only represent a relatively imperfect substitute. Overall, ComReg's conclusion is that there is a single relevant market that includes all MNOs.

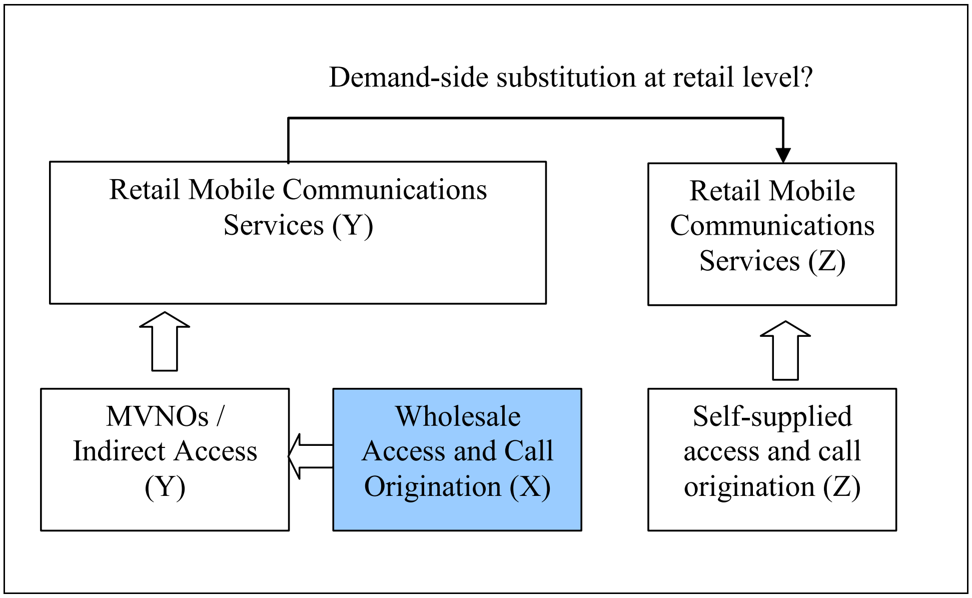
Should self-supply be included in the relevant product market?

3.51 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 provision of wholesale 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 Number Translation codes (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 EU Community administrative practice.[37]

3.52 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:

[37] 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.

Figure 3.3: Access and call origination scenario



Source: ComReg

3.53 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) are 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.

3.54 The EU Commission in its comments to NHH, the Hungarian NRA, pointed out that "*the fact that at the wholesale level no transactions are taking place on the merchant market (i.e. no sales to independent third parties) does not exclude the possibility to analyse the relevant market. In fact, the absence of such transactions merely indicates that all supply on the relevant market, as defined by NHH, is captive, i.e. provided internally by vertically integrated mobile network operators. In such a case the structure of supply at the wholesale level (e.g. market shares of the undertakings active on the relevant market) is derived from supply at the retail level, and the relevant market would need to be analysed on the basis of the competitive conditions at the retail level*".[38]

[38] http://forum.europa.eu.int/irc/DownLoad/kceeAUJ8muGDi4P-LOBBBbEgGV3HjRcGYd1Gj0FcMdvqlobPX4NZP-eSYu3Gd-UsK0ciuHvh2H_3Gx2-t25IhsKDR/SG%20Greffe%202004%20D%20204343%20EN.pdf

3.55 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.

3.56 The balance of historical administrative practice of the EU Commission has been to exclude self-supply for the purposes of determining market definition,[39] but to take it into account at the level of market analysis.[40] Over the years, however, this general principle has been derogated from where the EU Commission has determined that the characteristics of particular markets are such that self-supply could exert competitive pressure on sales to independent third parties.[41]

3.57 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.[42] 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).

3.58 Therefore, ComReg's 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[43] and the EU Commission administrative practice.[44] It is particularly appropriate for ComReg to take into account self-supply at the level of market definition given that there is no third party access being granted at present.

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

40 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.

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

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

43 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).

44 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).

Conclusion on Wholesale Market Definition

3.59 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 view is that the relevant product market consists of:

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

The Relevant Geographic Market

3.60 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.[45]

3.61 On the basis of the above definition, ComReg takes the view that the respective geographical markets for wholesale (self-supplied) access and call origination and retail mobile communications services 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.

3.62 ComReg's concludes that the geographic market for the provision of mobile communications services at the retail level and national level are national in scope.

Conclusions on Market Definition

3.63 The electronic communications sector is characterised by two or more functional levels of competition, namely, the provision of electronic 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).

3.64 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,

45 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.

access by MVNOs and indirect access {i.e., carrier pre-selection).

3.65 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 view 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.

3.66 ComReg has excluded from its market definition advanced data based services 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 for the purposes of determining SMP on any relevant market.

3.67 ComReg's 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.

3.68 ComReg concludes that there exists a cluster market at the retail level based on the following services, which may be offered over any technology:

- Mobile access;
- Basic voice services, including international roaming calls;
- Supplementary and value-added voice services; and
- Basic and value added SMS.

3.69 ComReg concludes that there exists a market at the wholesale level based on the following services:

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

4 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. 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] Recital 27 of the *Framework Directive* provides 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* provides 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.[47]

4.3 In this section ComReg analyses the effectiveness of competition in the relevant market identified. ComReg first addresses whether any authorised undertaking in the relevant market holds a position of SMP equivalent to single dominance. 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, both in terms of an assessment of the level of competition at either functional level of competition and at the level of collecting data regarding the existence of dominance (individual or collective).

Single dominance

Community and Irish Law

4.4 The concept of SMP is synonymous with the concept of dominance under Article 82 EC.[48] The classic legal formulation for single dominance can be found in the case of

46 Regulation 25(2).

47 Framework Regulations, Regulation 25(3).

48 Refer to the SMP Guidelines, para. 70.

United Brands v. Commission,[49] 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 market by affording it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of its consumers."*[50]

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

4.5 In the case where market shares are very high, they serve as a proxy for market power and as such there is a greater likelihood of finding SMP. The European Court of Justice in *Hoffman-La Roche v. Commission*[51] 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..."*

4.6 In competition cases, an undertaking, save in exceptional circumstances, 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.[52] Even a market share as low as 40% might, given the existence of other relevant factors, be supportive of a finding of single dominance.[53] In the absence of any supply to third parties at the wholesale level, ComReg is not able to construct information about market shares for the relevant wholesale market; in the alternative therefore, it uses information about the closely related retail market as a proxy of the relevant market shares of the parties. Absent access, the relationship between retail and wholesale mobile access and call origination is one-to-one, so retail and wholesale shares will be the same. The market share data for the retail market are shown below, using subscribers and revenues as the metric. It can be seen that the share held by Vodafone, the largest operator currently in the retail market, exceeds 50% and has exceeded 50% since January 1999. It can also be seen that the market share of O_2, the second largest operator, has been at or close to 40% since January 2001. These market share data are in ComReg's view *prima facie* suggestive of individual dominance in the case of Vodafone, whose market share exceeds 50%.

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

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

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

52 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.

53 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.

Figure 4.1: Market Share - Subscribers

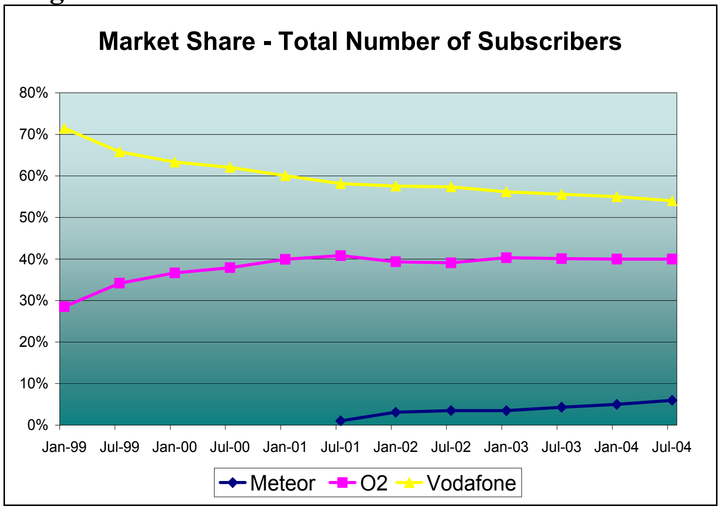
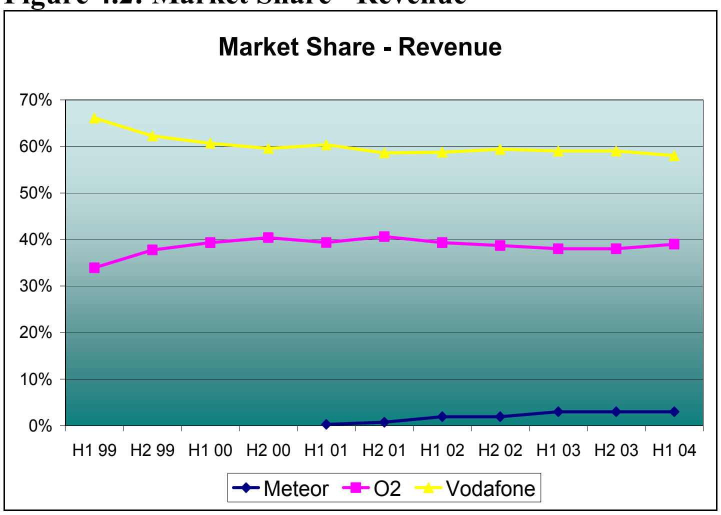


Figure 4.2: Market Share - Revenue



Source: ComReg

4.7 However, despite its relative importance, market share data cannot be relied upon, to the exclusion of other factors, as the basis for possible ex ante regulation to be imposed on dominant undertakings. As the *SMP Guidelines* state:[54] "It is important to stress that the existence of a dominant position cannot be established on the sole basis of large market shares. As mentioned above, the existence of high market shares simply means that the operator concerned might be in a dominant position."

4.8 To assess whether an operator holds a position equivalent to single dominance in the relevant market under review, ComReg needs to take into account a number of additional criteria, including:

- the existence of entry barriers and barriers to expansion (beyond those strategic advantages which amount to a 'first mover' advantage);
- economies of scale and/or scope;

54 Para. 78 Guidelines.

- the size and distribution of competitors, relative to the largest firms;
- the existence of "*deep pockets*" and access to capital;
- significant advantages in terms of advertising spend and other issues relevant to brand image;
- the 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
- the extent of vertical integration, or the monopolisation of routes to market.[55, 56]

4.9 ComReg also notes the EU Commission's veto of the Finnish NRA's finding of single dominance in the mobile access and call origination market, despite the fact that Telia Sonera had a market share in excess of 60%.[57] In the case market dynamics were examined, and in particular, there were ten service providers operational in the market.

4.10 In taking into account other criteria, one should consider Meridian,[58] which came before the Irish courts in 2000. In Meridian the question of whether Eircell (now Vodafone) was in a position of single dominance in the mobile telephony sector was decided by the Irish High Court. Despite Eircell having a market share in excess of 60% at that time, the High Court was not convinced by the available evidence that Eircell occupied a position of single dominance in the market for mobile telephony services in Ireland. The Court rejected the plaintiff's (Meridian) contention that the structural aspects of the market resulted in Eircell being in a single dominant position. In particular, the Court 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 three to four year period, namely, a fall from 100% to 60% from the time when Esat Digifone (now O_2) entered the market in March 1997, and by the low barriers to expansion.

4.11 The High Court, in its conclusion on dominance, stated:

> "The reliance placed on the structural aspects of the market by the plaintiff does not appear justified on an analysis of this particular market. The significance of the large market share of Eircell is greatly diminished in the light of the dramatic decline of such share over such a relatively short period. The significance of the low number of competitors is diminished by the fact that Digifone is a strong company, well placed to exploit any laxity on the part of Eircell. I accept that the size of a competitor is not necessarily a relevant consideration in all cases for determining whether or not the firm can exert competitive restraint on a rival, but in this case, the strengths of

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55 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.

56 The above criteria, to the extent that they are relevant, are also discussed in greater detail in the discussion on collective dominance.

57 http://forum.europa.eu.int/irc/DownLoad/kYecA5JAmmG-fjJTISRQTyGq-sT-0H8WVHgZtMYiKTuSRSUv_h-W14tEcCqc4EoMcfOO1r0N/PhaseII-vetodecision-FI-2004-0082-EN-FINAL-public.pdf

58 Meridian Communications and Cellular Three Limited v. Eircell Limited, High Court, IEHC 195, 5 April 2001.

Digifone are relevant in the assessment of Eircell's capacity to act to an appreciable extent independently of it. The significance of high barriers to entry in the market is vastly reduced by the fact that barriers to expansion are so low. Because of this, Eircell's capacity to act to an appreciable extent independently of its rivals is greatly reduced."

4.12 In Meridian, the High Court appeared to attach considerable significance to the observation that there were low barriers to expansion in the mobile market. This is because low barriers to expansion should constrain to an appreciable extent the ability of a firm with a high market share (in Meridian Case, Eircell) from acting independently of its rivals. ComReg is therefore interested in assessing whether barriers to expansion remain low in this market.

4.13 ComReg notes that the views expressed in the response to consultation of the two largest operators in the Irish mobile market are that barriers to expansion continue to be low. For example, it has been stated that "even if entry barriers are said to exist in this market the effect of those barriers are mitigated by the absence of barriers to expansion",[59] and that "barriers to expansion are low".[60]

4.14 ComReg therefore believes that the low barriers to expansion mean it is not possible for Vodafone to act to an appreciable extent independently of O_2 and, similarly, O_2 is not able to act to an appreciable extent independently of Vodafone. Moreover, as regards <u>all</u> other factors which might otherwise be considered to be indicative or supportive of a single dominance finding, Vodafone is no longer unique in the relevant market in possessing those characteristics listed in para 4.8, above. On the contrary, each of the listed characteristics may equally be considered in relation to O_2. The fact that O_2 has a market share of 40%, and prices which run in a parallel manner to Vodafone, suggests that Vodafone cannot act independently of it.

4.15 In Meridian, the High Court also relied to a large extent on other behavioural evidence, which suggested that Eircell was not then in a dominant position. A fall in prices, 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 conclusion that Eircell's pricing behaviour was strongly constrained by competition from Esat Digifone.

4.16 Although there have been a number of important changes in the Irish market, whether of an economic, commercial or regulatory nature, which run counter to any inference of single dominance since the court delivered its judgment in Meridian, these changes are highly relevant to an assessment of whether or not Vodafone and O_2 together hold a position of collective dominance in the relevant market.

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59 Vodafone response to consultation.

60 O_2 response to consultation.

4.17 ComReg notes that a number of factors demonstrate that there is a *prima facie* case for joint dominance. These are discussed in further detail in this document but, in summary include, evidence that, at the retail level:

- the market is highly concentrated;
- the market shares (in terms of subscribers) held by O_2 and Vodafone are relatively high (40% and 54% respectively at September 2004), and the difference between Vodafone's and O_2's market shares is less today than it was in 2001;
- the market share held by O_2 has been relatively stable at around 40% over the period since the beginning of 2001;
- the market shares of O_2 and Vodafone have been slowly converging since the end of 2001, whereas before this date the difference in their market shares declined appreciably;
- new competition in the form of a third network operator (Meteor), which launched commercially during 2001, has not disrupted the market in terms of its key competitive characteristics, and remains on the fringe of substantial segments within the market;[61]
- evidence is strongest of a lack of competition in the post-paid segment of the market where prices have been relatively high and stable when comparing the pricing practices of Vodafone and O_2;
- there exists high barriers to entry;
- the profitability of O_2 and Vodafone is high; and
- there is evidence of parallel behaviour by O_2 and Vodafone in substantial segments within the market.

4.18 Taken together, 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.

Joint (or Collective) dominance

Introduction

4.19 As stated in the *SMP Guidelines*,[62] "Under Article 82 of the EC Treaty, a dominant position can be held by one or more undertakings ('collective dominance'). Article 14(2) of the *Framework Directive* also provides that an undertaking may enjoy significant market power, that is, it may be in a dominant position, either individually or jointly with others." While it is clear that the European Court of Justice has recognised that "[a] market share of approximately 60% … cannot of itself point conclusively to the evidence of a collective dominant position",[63] it is clear that

[61] The key segments in the retail market are pre-paid and post-paid. Meteor has currently a very low share of the post-paid segment.

[62] Para 86, SMP Guidelines.

[63] France & Ors v. Commission ("Kali und Salz"), Joined Cases C-68/94 and C-30/95.

combined market shares as extraordinarily high as those witnessed in the Irish market will normally be considered to "provide incentives for anticompetitive behaviour". [64]

4.20 A finding of joint dominance under the new regulatory framework should in principle follow the jurisprudence of the European Court of Justice (ECJ) and the Court of First Instance (CFI) in relation to Article 82 of the EC Treaty, as interpreted and implemented by the EU Commission under its administrative practice. This is because the analysis under the new regulatory framework to be undertaken by ComReg should be based on a finding of collective dominance (*i.e.*, an existing lack of effective competition), as occurs under Article 82 of the EC Treaty, which is expected to continue for the lifetime of the review (the *ex ante* element). As is explained by the EU Commission in its *SMP Guidelines*, however, in applying the notion of collective dominance, NRAs "may also take into consideration decisions adopted under the Merger Control Regulation in the electronic communications sector".[65] Clearly, ComReg is to be guided primarily by the jurisprudence of the European Courts regarding the finding of collective dominance under Article 82, and this approach is to be supplemented by recourse to merger precedents wherever appropriate.

4.21 According to the case-law, a finding of collective dominance may be based upon the existence of "structural links" between the impugned collectively dominant firms, whose effect may facilitate the alignment of incentives among those coordinating firms. In the alternative, a finding of collective dominance can also be made in relation to an oligopolistic market whose structure is conducive to coordinated effects (*i.e.*, anti-competitive behaviour) on the relevant market, without recourse to the existence of certain structural links.[66]

4.22 In interpreting the concept of "structural links" to the electronic communications environment, ComReg is mindful of the EU Commission's *Access Notice*, where it was stated that: "This lack of competition may in practice be due to the fact that the companies have links such as agreements for cooperation, or interconnection agreements." [67] In the mobile sector, those links manifest themselves in a number of forms, including agreements for the termination of voice and data traffic, roaming relationships and participation in the GSM Europe trade association. [68] According to

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64 See, for example, Rhodia/Donal Chemie/Albright & Wilson, Case IV/M. 1517, at para. 61.

65 Para 102, *SMP Guidelines*.

66 Para 94, SMP Guidelines.

67 Para 79, Commission's Access Notice

68 In this regard, refer to the structural effects identified in the cases of *Flat Glass*, *Compagnie Maritime Belge* and *Gencor* . Refer respectively to: Cases T-68, 77 & 78/89 *Societa Italiano Vetro SpA v. Commission* [1992] ECR II-1403; Joined Cases C-395/96 P and C-396/96 P, *Compagnie maritime belge and others v. Commission* [2000] ECR I-1365; Case T-102/96., *Gencor v. Commission* [1999] ECR II-753. Although structural links are not a precondition for a finding of collective dominance, their existence increases the likelihood that suppliers "become aware of common interests and, in particular, cause prices to increase without having to enter into agreement or resort to a concerted practice (*see* Case T-102/96 above). The Commission's analysis in *Price Waterhouse/Coopers & Lybrand,* where it concluded that accountancy firms' participation in self-regulatory, industry-wide bodies could "contribute to the creation of oligopolistic dominance", suggests that many "links" may be considered material (*see* Case IV/M.1016, Commission Decision of May 20, 1998 (1999 O.J. L50/27), para. 101.

the EU Commission and the ECJ and CFI, however, neither economic theory nor Community law implies that such structural links are legally necessary for a position of joint or collective dominance to be found to exist. According to the EU Commission: "*It is a sufficient economic link if there is a kind of interdependence which often comes about in oligopolistic situations. There does no seem to be any reason in law or economic theory to require any other economic link between jointly dominant companies*."[69] ComReg is of the view that, given the overall structure of mobile markets in Ireland at both wholesale and retail levels, the existing levels of concentration in those markets, and the underlying commercial indicators discussed below, the existing structural links between Vodafone and O_2 facilitate the tendency towards coordinated effects.

4.23 In addition to the definition of collective dominance or SMP at Community level, Regulation 25 of the *Framework Regulations* provides guidance in relation to 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, <u>even in the absence of structural or other links between them</u>, 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 …"*[70]

4.24 Even in the absence of structural links, ComReg is of the view that a number of other characteristics of the market under review are conducive to coordinated effects, consistent with the jurisprudence of the European Courts in *Gencor* and *Airtours.*[71] One important characteristic is the fact that the market is oligopolistic, as there are only four authorised undertakings. An oligopolistic market is more likely to have a structure which is conducive to coordinated effects, because firms are likely to become aware of their common interests and to anticipate one another's behaviour.[72] As a result, where the economic circumstances facilitate such conduct, firms in a tight oligopoly may be strongly encouraged to align their conduct in the market in a way that seeks to maximise profitability. In short, interdependence among the competing firms in an oligopoly can give rise to coordinated effects.

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69 Para 79, Commission's Access Notice.

70 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. Emphasis added.

71 See Gencor v. EC Commission, Case T-102/96 [1999] ECR II – 753; cf. *Airtours plc v. EC Commission,* Case T-342/99, [2002] SCMLR 317.

72 For example, see Ivaldi *et al.* March 2003.

4.25 Hence, ComReg has sought to investigate in greater detail in this section the particular characteristics of the market and to assess whether these are conducive to producing coordinated effects. In this exercise, ComReg is guided in part by Annex II of the *Framework Regulations,* which provides for a test of joint or collective dominance that is focussed on whether the structural characteristics of the relevant market encourage parallel or aligned anti-competitive behaviour.[73] The criteria 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 could be used to support assertions concerning the existence of joint dominance". The list of criteria is further repeated and elaborated upon in the *SMP Guidelines*. This list reflects a broad range of issues that have been considered in the developing case-law. Much of this case-law was also reviewed by the High Court in its 4 October 2000 Judgment in Meridian. 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.

4.26 In accordance with the jurisprudence of the European courts and, taking utmost account of the *SMP Guidelines*, ComReg's investigation of collective dominance focuses on whether the market structure is such that O_2 and Vodafone, 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.[74]

4.27 In this regard, ComReg's analysis is based primarily on a review of the framework outlined below, which brings together the essential elements of economic analysis, jurisprudence of the European Courts and EU Commission administrative practice, as reflected in the *SMP Guidelines*:

A. The degree of market concentration: in particular, 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 to coordinate: whether O_2 and Vodafone have an incentive to align their conduct in the market in particular, in such a way as to elevate their joint profits by restricting production with a view to sustaining prices above those which would otherwise prevail.

C. The ability to coordinate: Whether O_2 and Vodafone have the ability to coordinate by aligning their conduct so as to establish a consensus position (focal point).

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73 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.

74 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.

Where an incentive for coordination exists and undertakings are able to establish a consensus position, the following basic conditions must be fulfilled for coordination to be sustainable over time,[75] namely:

D. The ability to detect cheating: 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

E. Enforceability of compliance: 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.

F. 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.

4.28 An assessment of the existence of joint or collective dominance in this market will need to take into account the overall impact of all these criteria, rather than confine itself to an analysis of any single indicator of collective dominance.

4.29 The criteria will be assessed primarily in the context of evidence available from the workings of the retail mobile communications market because, in the absence of transactions at the wholesale level,[76] the retail level will primarily provide the available competitive indicators to ComReg's analysis regarding the failure of market mechanisms to deliver any meaningful form of third party access at the wholesale level.

4.30 The absence of merchant transactions at the wholesale level means that there exists primarily only a notional market at this functional level of competition, and access is only relevant insofar as it can be seen as the basis of delivering downstream retail services. The absence of transactions at the wholesale level is arguably itself a legitimate cause for competitive concern in electronic communications markets as regards any assessment of collective dominance, and will be examined separately.

A. The Degree of Market Concentration

4.31 ComReg is of the view that the retail mobile communications market is highly concentrated in Ireland and that a small number of undertakings account for a

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

76 Indirect Access via NTCs and national roaming is offered in the market. Indirect Access via NTCs accounts for a negligible part of the wholesale mobile access and call origination market. A national roaming agreement was concluded between O_2 and Meteor largely due to regulatory pressure. No wholesale access has been offered commercially to independent service providers in the market although there is evidence of demand for wholesale airtime resellers and MVNOs (see Annex D). This is the form of access to which ComReg is referring.

disproportionately large share of the market.

4.32 There are currently four licensed vertically integrated mobile operators in Ireland, namely: ‘3’, O_2, Meteor and Vodafone. Vodafone launched its digital GSM service in July 1993, O_2 launched its service in March 1997 and Meteor launched its service in February 2001. ‘3’ launched its service in September 2003 but has yet to appeal to the mass market. Currently, independent mobile service providers do not operate in Ireland.[77]

4.33 O_2 and Vodafone had a 94% share of subscribers in the retail market for mobile communications in September 2004, despite the presence of a third operator, Meteor, which entered in February 2001. To date, however, Meteor has had little impact on the market share of the established operators, and currently largely concentrates on the pre-paid segment of the market.

4.34 ComReg, in accordance with the *SMP Guidelines*, needs to adopt “a forward looking, structural evaluation of the relevant market, based on existing market conditions. NRAs should determine whether the market is prospectively competitive, and thus whether any lack of effective competition is durable.”[78] Thus, if the high degree of concentration in this market reflects any lack of effective competition, ComReg should address the possibility of whether any likely prospective competition might lower the degree of concentration.

4.35 To assess the likelihood of the concentration level falling significantly over a reasonable period. ComReg needs to assess the impact the current fringe competitors may have on the market. These issues are detailed at section “F” below. ComReg concludes that fringe competitors will not significantly impact the high levels of concentration in this market over a reasonable period. Thus, ComReg believes that there will remain a high degree of concentration in this market at least over the period of this review.

B. The incentive to coordinate

4.36 A firm in an oligopolistic market has an incentive to align its conduct with other firms within the oligopoly if this would result in a profit that exceeds the level associated with pursuing its own self-interest. The benefits of aligning conduct are enhanced in those oligopolistic markets where there are entry barriers. In this market, there are considerable costs associated with entry.

4.37 However, while coordination offers a firm a higher profit at any moment in time, complying with a coordinated outcome means that a firm forgoes any profit that would accrue through deviating from the conduct associated with the coordinated outcome.

77 An independent mobile service provider is defined here to mean a firm that offers its own brand of mobile telephony service in the market. This could occur via the purchase of unbranded airtime from a mobile network operator, or it could occur through a mobile virtual network.

78 Para. 20, *SMP Guidelines*.

4.38 As competition in this market is not episodic, but is repeated over time, the value associated with a deviation in conduct to a firm is diminished as rivals would be expected to change their behaviour in response to a deviation.

4.39 Hence, the incentive to coordinate is largely based on assessing the merits of 'going it alone' versus 'aligning behaviour'. It is the case that incentives for coordination are likely to be stronger when there are:

- few firms in an oligopoly, and
- the key competitive indicators of those firms are relatively symmetric.

(i) Few firms in an oligopoly

4.40 As the number of firms in an oligopoly sharing the collusive profit increases, it is clear that each firm gets a lower share of the "pie". A firm deviating would be able to obtain a large gain in profit by capturing a substantial share of the market. Consequently, there is a diminished incentive to coordinate as the number of firms increases in a market.

4.41 In the market under review there are four firms, which in economic terms is generally regarded as few, rather than many.[79] Furthermore, there seems to be little prospect of entry between now and the period of the next review (see section F below). More significantly, two of the firms, O_2 and Vodafone, command 94% of the market (in terms of subscribers), and ComReg takes the view that the structure of the market is such that ComReg believes it is conducive to the alignment of behaviour involving these two firms.

(ii) Firms are relatively symmetric

4.42 O_2, with the lower share of the market at 40%, rather than Vodafone at 54%, would face a greater incentive to deviate from any aligned behaviour aimed at enabling a collusive outcome. However, for deviation to be attractive the profit associated with a deviation would need to be relatively large or, if relatively small, durable. However, ComReg believes that Vodafone is in a position to react relatively quickly to a deviation by O_2 (deviations are discussed in more detail below). Given that O_2 has a relatively large share of the market, if it were to deviate it would sacrifice the excess profit from its existing customer base within a relatively short period of time due to the reaction of its larger rival Vodafone.

4.43 It is clear that the similarity or proximity in market shares between members of an oligopoly can be a very helpful indicator of joint dominance. However, it is also clear that a relative symmetry of market shares is merely one corroborating factor in a finding of joint dominance.[80] The issue of the relative symmetry of market shares enjoyed by Vodafone and O_2 needs to be seen in its broader context. ComReg is of the view that, while the market shares of O_2 and Vodafone are not identical, the size of

79 R. Selten (1973) "A simple model of imperfect competition where four are few and six are many", *International Journal of Game Theory*, vol. 2, pp. 141-201.

80 See *Gencor*, op. cit.

O_2's share of the market, especially given the overall size and structure of the market, is sufficiently large to indicate that it has an incentive to engage in behaviour that gives rise to coordinated effects.

4.44 Moreover, when one is faced with a duopoly and the smaller of the two duopolists is already at such a market share level as to otherwise justify an enquiry into single dominance,[81] the concept of "symmetry" should not be interpreted in a formalistic way which is equivalent to "identical", as this would be unrealistic from a commercial standpoint. This is also borne out by the EU Commission's views on this particular issue, as set forth in a Position Paper submitted to the OECD in 1999: "*Symmetry of market shares can be an indication of similarity of incentives and of similarities in the scope for retaliation. However, market shares do not need to be completely symmetric in order for oligopolistic dominance to take place. It is quite conceivable that a merger will lead to one or more oligopolists being stronger than the other members in the oligopoly. In some situations there may even be a leader in the oligopoly. The important issue in the assessment of the symmetry of market shares is whether the market shares indicate a sufficient degree of similarity of incentives and retaliation possibilities. This can only be determined on a case by case basis.*"[82] On balance, the proximity in market shares between Vodafone and O_2 relative to other competitors and in light of the maturity of the market, and especially given the existence of so many other factors facilitating coordinated effects, suggests that the conditions conducive to the alignment of commercial behaviour are very much in evidence.

4.45 The difference in market shares between O_2 and Vodafone would be more relevant, for example, if it were shown to also reflect more profound underlying asymmetries, such as in costs. Vodafone and O_2 have similar portfolios of mobile network infrastructure and services in Ireland and have a 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 highly comparable.

4.46 A number of other factors also play a role in affecting the incentive to coordinate behaviour in this market.

(iii) <u>Interactions</u>

4.47 The incentive to coordinate is also known to be easier where there is frequent interaction between the firms in an oligopolistic market. There is frequent interaction between the firms in this market where there are millions of individual consumers and a number of 'churning' customers on the demand side every month. This interaction also has a structural dimension, insofar as Vodafone and O_2 frequently interact with one another through their common participation in various practices common to a networked industry (refer back to discussion on 'structural links').

[81] See *United Brands*, op. cit.

[82] European Commission paper presented at OECD: *"Oligopoly", Best Practice Round Table*, October 1999, DAFFE/CLP [99] 25, p.218.

(iv) Demand

4.48 The incentive to coordinate is also enhanced where the market demand for a product is expected to remain at current levels or grow. By contrast, if the market were expected to collapse, a firm aligning its behaviour would find it much more appealing to deviate, as any reaction by its rivals in the future would be largely meaningless as the market would not exist. ComReg does not believe that the market demand for mobile telephony services is likely to collapse or even to decline significantly over the duration of this review.

4.49 ComReg also does not believe that the macroeconomy will cause the market demand to fluctuate substantially over the period of this review. Relative stability in market demand is another factor favourably affecting the incentives to align behaviour. Furthermore, ComReg believes that total market demand for mobile telephony services in Ireland has not been subject to much unexplained variability over the period 1993-2003. The time path of demand, as measured by subscriber numbers, over the period 1993-2003, has steadily increased and has followed a shape in form similar to a logistic distribution curve.[83] Known seasonal factors have tended to result in demand peaks and troughs within a year, with the final quarter in each calendar year notably generating the greatest additions in subscriber numbers.

4.50 In relation to demand elasticity, Ivaldi *et al* show in their article on tacit collusion that "it has no impact on the sustainability of collusion. This comes from the fact that demand elasticity (and more generally, the shape of consumer demand) affects in the same way both the short-term gains from undercutting rivals and the long-term cost of foregoing future collusion."[84] "Demand elasticity and buying power reduce the profitability of collusion; in addition, large buyers have more latitude to break collusion." Short term gains may be high (low) if demand elasticity is high (low), but also has a similar impact on the effect of the response (retaliation) on the part of the rival. Elasticity is relevant for absolute profitability, but not for the incentive/ability of collusion.

(v) Innovation

4.51 Another factor that could in theory undermine the incentives to coordinate behaviour is innovation. ComReg accepts that there is a steady flow of new products and services flowing into the Irish mobile market. However, these are largely incremental and 'generational' technological developments directed towards the provision of services that typically complement the services in the existing, mature, retail cluster. ComReg believes that the pattern of innovation affecting the Irish market is not unique, and is typical of developments occurring in most mobile communications markets worldwide. ComReg sees no evidence of likely 'drastic' innovations[85]

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83 See "The diffusion of mobile telecommunications services in the European Union" by Harald Gruber and Frank Verboven, *European Economic Review*, 2001, 45(3), pp. 577-88, for a discussion on the logistic distribution and time profiles of demand growth in European mobile communications markets.

84 The economics of tacit collusion, Ivaldi et al http://idei.fr/doc/wp/2003/tacit_collusion.pdf

85 A drastic innovation occurs when a firm produces an innovation that leads to either a significant ('drastic') reduction in its costs, thus conferring it a permanent

favouring one mobile operator which might undermine the incentive for coordination. On the contrary, the source of those innovations is an equipment industry whose own economic incentives are to disseminate those 'innovations' over the whole mobile industry, which operates in Europe to common standards.[86]

4.52 Thus, innovations tend not to favour one firm in the market for any particular duration because the most important innovations in the mobile sector are coordinated at an industry level, as evidenced by the introduction of 3G services. This has been acknowledged by the mobile operators in their responses, one of whom states that innovations tend to be transient and usually copied within a relatively short period of time.

4.53 In this sense, the Irish mobile communication market cannot be considered to be a market driven by one-sided (i.e. single operator) innovation, and therefore it is unlikely that innovation would adversely affect the incentives for co-ordination. If there were evidence of potential drastic innovations, co-ordination might unravel over the lifetime of this review. However, ComReg believes that innovation will not provide a substantial competitive advantage to any operator in the Irish market during the lifetime of this review.

4.54 Accordingly, ComReg believes that there exist sufficient incentives on the part of Vodafone and O_2 for them to coordinate behaviour in the market for wholesale mobile access and call origination in Ireland.

C. The ability to coordinate

4.55 Even where there is an incentive to align behaviour so as to enjoy higher profits, it is important to assess whether O_2 and Vodafone have the ability to coordinate by aligning their conduct so as to establish a consensus position (also known as a focal point). By its very nature, the existence of a consensus position or focal point requires a high level of *transparency*. Where key information about rival firms, such as their conditions and prospects, is transparent this may facilitate reaching terms of co-ordination.

4.56 Furthermore, a consensus position is more likely to emerge where the focal point is *simple.* For example, if the rival firms sell a similar portfolio of products, retail prices for these products could comprise a focal point. Finally, *symmetry* assists in the establishment of a consensus position, as it enables rivals to identify variables that have in effect similar consequences.

4.57 ComReg believes that O_2 and Vodafone have a focal point in this market that has two dimensions and that these are closely related. One dimension is price and the other is denying access to independent entities to upstream elements, such as wholesale

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advantage over rivals in a market, or to a significant improvement in quality (or some other strategic variable).

86 The only form of firm-led 'innovation' which is taking place concerns the customised branding of equipment for particular mobile operators, which does not impact on technological advantage whatsoever.

airtime. Each dimension is discussed in turn below.

(i) Price

4.58 The first and most important dimension of the focal point is believed by ComReg to be price. The ability to coordinate behaviour by focussing on price is likely to be enhanced if O_2 and Vodafone offer a similar portfolio of products. Where firms offer highly differentiated products it would make little sense for the firms to coordinate their behaviour. ComReg believes, however, that O_2 and Vodafone offer broadly the same portfolio of services in their retail clusters. This is due largely to the high degree of standardisation in the mobile industry. While there is clearly brand differentiation, ComReg does not believe that the products offered by firms in this market are sufficiently differentiated to undermine the ability of O_2 and Vodafone to reach a consensus position on price.

4.59 Above ComReg noted that a focal point is more likely to emerge when it is simple. However, ComReg acknowledges that there are many tariff packages offered by O_2 and Vodafone in this market, and that the apparent complexity of these tariffs could work against the establishment of a consensus position. A method used to simplify the array of tariffs in a mobile market involves constructing user categories, which classifies mobile customers into particular profiles according to usage patterns and then applies operator tariffs to these profiles.[87] For each user profile it is possible to calculate the optimal pre-pay or post-pay tariff for each network operator. The optimal tariff on a particular network for a user profile can be used to compute the Minimum Monthly Bill ('MMBs'),[88] the least cost monthly tariff. ComReg has been informed by one of the mobile operators in its response to the consultation that Minimum Monthly Bills (MMBs), are constructed and used to monitor tariffs offered by rivals. The similarity of products offered and the transparency (see below for further discussion on transparency) of tariffs enables O_2 and Vodafone to apply methods using profiles to simplify underlying complex tariff packages.

4.60 ComReg has analysed the price data over the last three to four years, as summarised in MMBs shown in Appendix B, and notes that the MMBs indicate relatively stable mobile pricing behaviour at the retail level by Vodafone and O_2 for high volume users and for those who benefit from being on post pay tariffs. The relative stability of prices is both favourable for the establishment of a consensus position, and for the sustainability of such a position. The behaviour of prices in the retail market, as proxied by MMBs, are examined further below.

4.61 A necessary condition for price to be a focal point is transparency: in particular the tariffs of each operator need to be visible. ComReg believes that the retail tariffs for voice telephony services and SMS text messages offered by O_2 and Vodafone to the vast majority of their customers are transparent, as they are published on the operators' websites. However, there are a few customers (typically large corporates) that are able to negotiate directly with the operators, and it could be argued that tariffs

[87] For example, Oftel consulted with the mobile industry in 1999 (see http://www.ofcom.org.uk/static/archive/oftel/publications/market_info/mobile1003.pdf) and has applied a method using user profiles to monitor mobile prices.

[88] Appendix B describes how MMBs are constructed and used in this review.

are not sufficiently transparent for price to form a focal point. Although the prices established with a few large customers are determined on a bespoke basis, the ability for these customers to negotiate across networks makes it highly likely that terms will be disclosed about operators' tariffs during negotiations. ComReg therefore believes that prices are transparent in the retail market.

4.62 Finally, the relative symmetric positions of O_2 and Vodafone are helpful with regard to focussing on price. This is because the operators are likely to share similar characteristics and be exposed to the same factors influencing market demand and supply.

4.63 ComReg believes that O_2 and Vodafone are able to focus on price because: (i) products offered are very similar; (ii) tariffs are transparent, and (iii) methods can be, and are, applied to simplify underlying tariff schemes.

(ii) Denying access to independent entities to upstream elements

4.64 An inevitable consequence of focussing on the retail price to support coordination is the need to focus on closely related variables that can affect the retail price. ComReg believes therefore that the other dimension of the firms' focus involves the denial of access to upstream elements (at reasonable terms) that would enable independent entities to undercut O_2 and Vodafone. For example, this involves the denial of access of wholesale airtime to independent mobile service providers, and in the past has involved the denial of national roaming to the then new entrant mobile network operator Meteor.

4.65 Where a mobile network operator grants access to independent service providers of wholesale airtime, or offers national roaming to a new entrant mobile network operator, the retail terms offered by the independent service provider or new mobile network operator are crucially dependent on the terms of the wholesale access.[89] Hence, by denying access to independent service providers of wholesale airtime, this effectively has the potential to lessen competition in the retail market (which amounts to vertical foreclosure).

4.66 Denial of access may be constructive, through the setting of terms that make it commercially unattractive to an independent service provider to buy wholesale airtime.

4.67 The denial of access to wholesale airtime as a focal point is both simple and transparent. It is simple because the variable is binary: access is either granted or denied. It is transparent because each firm is able to see whether the other firm has

[89] Where roaming is offered to a mobile network operator that is well established, say to fill in holes in its network coverage, the terms offered in the agreement are much less likely to impact on the retail tariffs of the operator receiving the roaming wholesale service. This is because its customers will only be out of coverage occasionally. The tariffs offered by a new mobile network operator, on the other hand, are much more likely to be influenced by wholesale roaming costs.

granted access.

4.68 Currently in Ireland there is an absence of independent service providers in the retail mobile market, though ComReg is aware of the existence of several entities seeking to offer an independent service. The fact that there are no independent mobile service providers may be due not to denial of access by O_2 and Vodafone, but because the MNOs are more efficient in retailing and prices are at competitive levels. As a consequence the margins available to independent service providers would be insufficient to generate a return to cover costs – assuming access were made available on reasonable terms. However, ComReg believes that O_2 and Vodafone enjoy high profitability, which suggests that the terms available to the downstream affiliates of O_2 and Vodafone are not made available to independent service providers. It is also interesting to note that independent service providers operate in a number of competitive mobile markets elsewhere in Europe, in some cases without the need for regulatory intervention, and it seems improbable that such entities could not operate in the Irish market even if it were competitive.

4.69 It is also interesting to note that the granting of access to upstream elements to independent entities is much more likely to occur in a market that is effectively competitive. If, for example, O_2 and Vodafone were not tacitly colluding, then there would be a strong incentive to offer access to an entity capable of delivering higher profits to the access provider. ComReg believes that this incentive mechanism was a key factor behind the emergence of MVNOs in the United Kingdom, where the national regulator authority Ofcom has not found any mobile network operator to have SMP in the mobile access and call origination market. The absence of MVNOs and other independent service providers in Ireland therefore suggests a market that is not effectively competitive.

4.70 Neither O_2 nor Vodafone have concluded a national roaming agreement with a new mobile network operator in the absence of a regulatory obligation to do so. However, ComReg notes that O_2 signed a roaming agreement with Meteor in the summer of 2004, which provides Meteor with national coverage. This roaming agreement does not permit Meteor to materially affect retail tariffs, because customers on the Meteor network will only occasionally roam into areas not covered by the Meteor network. [Confidential information omitted] (This is discussed further below in section F). Moreover, this agreement may not have been concluded in the absence of the regulatory pressure exerted by ComReg in the context of this market review.

4.71 ComReg notes that 3 Ireland is able to avail of national roaming under the 3G licence terms offered to O_2 and Vodafone. The effect such roaming may have on the market is examined below in the section looking at actual and/or potential competition. Consequently, the issue national roaming is not considered further in the context of the focal point.

Countervailing Buyer Power

4.72 The ability to coordinate behaviour is also dependent on the position of customers in the market, and in particular whether a significant group of customers could exercise countervailing buyer power. Countervailing buyer power exists where large customers have the ability within a reasonable timeframe to resort to credible alternatives (*e.g.*, not to purchase) if a supplier decides to increase prices or to deteriorate the conditions of supply. ComReg's view is that there exists insufficient countervailing buyer power. The absence of independent service providers means that countervailing buyer power cannot be exercised at the wholesale level. At the retail level, as regards outbound mobile calls made in Ireland, there is no evidence to suggest that large (i.e. business) customers have been able to exert pressure on either Vodafone or O_2 that to the extent of impacting on the price levels charged by the two main operators (and which would be reflected in changes to profitability and ARPU figures). Furthermore, the pricing graphs in Appendix B show that O_2 and Vodafone have consistently maintained higher prices than Meteor for high volume users.

4.73 If those entities currently demanding access to mobile call origination and access services at the wholesale level were to enter the wholesale market, it could establish some degree of countervailing buyer power. In the Finnish market, the European Commission has noted that "*the fact that SPs ask for competing offers from different MNOs, supports the view that SPs and MVNOs possess a significant degree of bargaining power vis-à-vis MNOs*."[90]

4.74 Given all of the above, ComReg believes that Vodafone and O_2 have the ability to co-ordinate their behaviour in the Irish marketplace.

D. The ability to detect cheating

4.75 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. This section discusses whether the informational structure of the market provides incentives for O_2 and Vodafone to deviate. If this were the case, then tacit collusion would be unlikely to be an issue in this market. Two possible forms of deviation can arise, each occurring along a specific dimension of coordination: (i) price; (ii) access to upstream wholesale elements.

(i) Price deviations

4.76 As stated above, ComReg believes that price is a dimension of the focal point and that user profiles can be used and are used to construct summaries such as MMBs to monitor prices. A deviation (or cheating) along the price dimension would amount to a firm lowering prices directed towards acquiring a significant increase in customers to boost profitability. Such a deviation must therefore involve a reduction in MMBs (via

90 http://forum.europa.eu.int/irc/DownLoad/kfeZAUJSmRGHy5gfzqpw_FFcHfP4j-xIwZ4EoMcfOO-RP-apeSGGkeZOpHxZgEoGdihH-25QCyLoHVOfqSeMxd5HqFcqOIJR/PS-d/PhaseII-vetodecision-FI-2004-0082-EN-FINAL-public.pdf

restructured tariff packages[91] that may involve lower prices).

4.77 ComReg believes that movements in MMBs are readily observable to all firms in the market. Therefore deviations are able to be detected by firms in the market. However, falls in MMBs can also arise because of tariff changes that are not the result of cheating.

4.78 For tacit collusion to be sustained when price is a focal point, firms must be able to distinguish between price changes that constitute cheating and price changes that are compatible with the tacit arrangement. ComReg believes it is possible for O_2 and Vodafone to distinguish between price changes that represent deviations and price changes that are compatible with tacit collusion. There are two circumstances in this market that can give rise to lower MMBs that are compatible with tacit collusion.

4.79 First, where cost movements across firms are positively correlated and the cost drivers are transparent, this can facilitate movement in the focal point. For example, if equipment costs in the industry were to fall, there would be a common incentive for each firm in the tacit agreement to lower tariffs. ComReg believes that some costs in the industry satisfy these criteria. However, it is acknowledged by ComReg that variability in correlated costs is unlikely to bring about swift changes in the focal point (i.e. prices) where firms tacitly collude.[92]

4.80 Secondly, price changes that lower MMBs can also arise when firms' vary their tariffs to boost ARPUs rather cut prices with the expressed intention of attracting subscribers from rival firms.[93] For example, in Appendix B the MMBs show a reduction for Vodafone across a number of user categories occurring in September/October 2001. This reduction was as a result of Vodafone restructuring its Pay Monthly Options tariffs. While this may be perceived as a deviation along the price dimension, it is clear from the company's statements at the time that the restructuring was not designed to acquire an increase in customers. The company signalled very clearly to the market that the "New Pay Monthly Options are in line with the company's overall corporate strategy of focusing on customer retention rather than concentrating on

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91 MMBs may fall or increase as a result of tariff restructuring that amends quantity variables in tariff packages. For example, where an operator increases the number of SMS in the monthly bundle of a pre pay package, this could result in a decline in the MMB for certain user profiles.

92 This issue has been addressed in paper by Joseph Harrington and Joe Chen "Cartel pricing dynamics with cost variability and endogenous buyer detection", September 2004, mimeo Department of Economics, John Hopkins University, available at http://www.econ.jhu.edu/People/Harrington/detectiondynamics9-04.pdf

93 It may seem odd to suggest that price changes which have the effect of lowering MMBs can boost ARPUs and hence, by implication, profitability. However, MMBs are constructed using profiles that have fixed quantity components. When a firm changes a tariff structure, there will be both substitution and income effects on demand that result in changes in the proportion of consumers across different user profiles. A tariff restructuring that boosts ARPUs effectively migrates customers onto higher MMB user profiles, by promoting increased demand for services via lower prices.

programmes for customer acquisition".[94] The then CEO of Vodafone, Mr. Chris Gent, also stated publicly that its strategy had changed: "we have moved our strategy from increasing customer numbers to a more targeted approach, focusing on the highest revenue and profit contributors". This announcement is viewed by ComReg as a signal by Vodafone to others in the market that its tariff restructuring programmes applied from late 2001 onwards will not be designed to acquire significant numbers of customers from rival networks.

4.81 The charts shown in Appendix B also show some changes in the MMBs across different categories of users on the O_2 and Vodafone networks. ComReg believes that the changes affecting medium to high volume users and post-paid customers, are also examples of changes motivated by the desire to boost ARPUs. In support of this view ComReg notes that the operators' ARPUs for both pre-paid and post-paid customer segments in Ireland have steadily increased since 2002. For example, the blended ARPU for Vodafone Ireland was €523 for the twelve months up to the end of June 2002, but by the end of June 2004 it had increased to €591.[95] In the case of O_2, its blended ARPU has increased from €545 at the end of March 2003 to €556 at the end of June 2004.[96]

4.82 The data show that since late 2001 growth in subscriber numbers has been broadly similar for O_2 and Vodafone, and ARPUs at each operator have been increasing. This suggests to ComReg that price changes by O_2 and Vodafone occurring over the period 2001-04 have not been aimed at acquiring significant customers from rivals in the market. If a price deviation had occurred, or were to occur, ComReg believes, due to transparency in the retail market, that it would be readily identifiable as it would lead to a reduction in demand at the firm not deviating and be associated with an increase in demand with the firm deviating.

4.83 It could be argued that the firms are not able to detect cheating that might take place in the corporate market segment, where bespoke deals are often negotiated. However, the number of corporate clients negotiating such deals in Ireland is relatively small, and each operator would notice immediately if it started to lose key corporate accounts. Furthermore, each operator should be able to identify without much difficulty the operator attracting its former corporate clients. Furthermore, the countervailing buyer power held by large corporate customers would also facilitate the transmission of information across the firms about prices.

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94 Eircell Introduces a New Suite of Pay Monthly Plans Providing Significant Savings and Improved Customer Value (http://www.vodafone.ie/aboutus/company/press/archive/release240901.jsp), 24 September 2001. as reported to the press on 4 October 2001, see Vodafone continues focus on higher value customers. (http://www.vodafone.ie/aboutus/company/press/archive/release041001.jsp)

95 Key Performance Indicators, 30 September 2004, Vodafone available at www.vodafone.com.

96 MMO2 Press PR0423, 2004, available at www.mmo2.com.

4.84 All the above factors suggest that cheating would be detected swiftly, even in the market segment serving corporate clients in which prices are not always publicly transparent.

(ii) Deviation by granting access to upstream wholesale elements

4.85 The other dimension of the focal point is the denial of access to upstream wholesale elements to independent entities. A deviation might therefore take the form of offering wholesale access to an independent service provider on terms that would enable the service provider to acquire significant numbers of customers. Such a deviation would be immediately visible – both from the appearance of new service provider in the retail market, and by the fact that the new service provider would be offering prices to customers below the tacitly agreed position. Overall the market impact of granting access to independent service providers would be manifested in practice in its effect on retail competitiveness.

4.86 ComReg has considered whether any deviation would be rendered ineffective, in terms of raising profitability, due the presence of customer switching costs.[97] Customer switching costs are those costs borne by customers when moving from one operator to another. These costs are largely those associated with the porting of a number, handset related costs and penalty clauses on contracts held by post pay customers.

4.87 While it is the case that a substantial number of consumers would face switching costs if they moved from their current operator to a different network operator, there exist at any moment in time another substantial number of consumers with negligible or even non-existent switching costs. On average, around 250,000 customers each quarter 'churn' in the Irish market. The presence of a significant number of churning customers, in addition to the existence of a substantial number of non-churning out-of-contract post pay customers, suggests that the profitability associated with a deviation is likely to be high. In the next section, ComReg discusses why, despite the attractiveness of these profits, a deviation has not occurred.

E. Enforceability of compliance

4.88 The CFI 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 a dominant oligopoly must be aware that a highly competitive action on its part designed to increase its market share (a deviation) would provoke identical action

[97] The Competition Authority in Ireland has noted recently that switching costs are a factor important to the functioning of markets: "The ability of consumers to observe price variations in the market and to switch supplier in response to a lower price is key to driving competition in all markets. Not only does consumer responsiveness to price cuts stimulate rivalry among existing players; it also makes it easier for efficient new entrants to win business quickly." Para 2.60 in Consultation on a Declaration in the Cylinder LPG Market, September 2004.

by the others, so that it would derive no benefit from its initiative.[98] It is also an established economic principle that coordination between undertakings will be easier to uphold if deviations from a coordinated 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. This raises the issue of the enforceability of compliance, or alternatively the framework for deterring deviation or cheating.

4.89 In the CFI *Airtours* judgment it was pointed out that "*the Commission must not necessarily prove that there is a specific 'retaliation mechanism' involving a degree of severity, but it must none the less establish that deterrents exist, which are such that it is not worth the while of any member of the dominant oligopoly to depart from the common course of conduct to the detriment of the other oligopolists"*[99].

4.90 The issue of deterrence in the context of the mobile communications sector is best assessed by reference to whether the members of the collectively dominant position would revert to the normal conditions of competitive behaviour that would otherwise prevail in the absence of their parallel conduct.[100] 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.

4.91 The idea of retaliation, or deterrence, where tacit collusion may arise in telecommunications markets has been articulated by the economist Patrick Rey:

> "Indeed, a simple form of retaliation consists in the mere breakdown of collusion and the restoration of "normal" competition and profits. Firms then anticipate that collusive prices will be maintained as long as none of them deviates, but if one attempts to reap short-term profits by undercutting prices, they will be no more collusion in the future, at least for some time. Firms may then abide to the current collusive prices in order to keep the collusion going, in which case collusion is self-sustaining. This form of collusion has a simple interpretation: firms trust each other to maintain collusive prices; but if one of them deviates, trust vanishes and all firms

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98 "The notion of retaliation in respect of conduct deviating from the common policy is thus inherent in this condition. In this instance, the parties concur that, for a situation of collective dominance to be viable, there must be adequate deterrents to ensure that there is a long-term incentive in not departing from the common policy, which means 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 (see, to that effect, *Gencor* v *Commission*, paragraph 276)", para. 62, *Airtours* CFI Judgment (emphasis added).

99 Para 195, Judgement of the Court of First Instance (Fifth Chamber, Extended Composition), 6 June 2002

100 In economics, in order for deterrence to be effective it needs to be credible. This means that, where a deviation occurs, the other firms in the (tacit) agreement would find it individually rational to apply sanctions (retaliate). Retaliation is understood here to mean a reversion to the conditions of normal competition.

start acting in their short-term interest."[101]

(i) Price

4.92 It was argued above that no deviation by O_2 or Vodafone along the price dimension appears to have occurred since 2001. ComReg believes that a major factor deterring the use of price as an instrument of deviation is the threat of retaliation (or the common understanding that following a deviation normal competitive conditions emerge). If one firm sought to acquire a significant increase in customers by lowering price, this would result in the other firm reacting with an identical response. The deviation would result in a breach of trust, and a new market equilibrium featuring lower prices would emerge.[102]

4.93 ComReg is of the view that Vodafone and O_2 could respond to a price deviation by lowering retail prices, or by offering wholesale airtime on terms that enable independent service providers to offer lower retail prices. One or other, or both, responses would be rational, if the other firm undertook a course of action which reduced the retail price of services provided over its network.[103]

4.94 ComReg believes, however, that the most likely retaliatory response to a deviation along the price dimension, which would be immediately transparent, is via a reduction in price, as this can be effected swiftly. As noted by the Competition Authority, Ireland, "retaliation needs to be swift, efficient and specific in order to discourage deviations from any collusive agreement".[104]

(ii) Access to upstream wholesale elements

4.95 If O_2 or Vodafone were to deviate by offering access to wholesale elements that permitted an independent service provider to acquire significant numbers of customers in the retail market, retaliation would feature a reversion to normal competition. As stated above in the context of a price deviation, the non-deviating firm could respond by lowering its prices and/or by granting access to upstream wholesale elements.

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101 "Collective dominance and the telecommunications industry", mimeo 7 September 2002, University of Toulouse. As has been borne out in the EU Commission's administrative practice, retaliation need not necessarily take place in the same product market as the deviation. See EU Commission Horizontal Mergers Guidelines, para. 55, where it is stated that: "If the coordinating firms have commercial interaction in other markets, these may offer various methods of retaliation".

102 If the firms choose price as the strategy variable, the new equilibrium would be a Bertrand equilibrium.

103 Retaliation could also occur in direct interaction between Vodafone and O_2 (e.g., in relation to the setting of termination rates, if that market were unregulated).

104 Para. 2.67 in the LPG consultation, *op cit*.

4.96 Overall, ComReg believes 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.

4.97 ComReg believes that the most effective retaliatory mechanism is price, as this can be changed quickly and targeted in such a way as to optimise punishment (*e.g.* it can be directed towards particular customer segments or types of customers).[105]

F. Actual and/or Potential Market Constraints

4.98 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, which is an important part of the forward looking aspect of this review.

F.1 Fringe competitors - Meteor

4.99 The presence of a competitive fringe will, in theory, tend to limit the scope for co-ordination, particularly where such competitors may be considered a "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 while the presence of a competitive fringe may erode dominant firms' market power; it need not necessarily eliminate it completely.

4.100 Meteor's past record in attracting subscribers, traffic and revenues seems to demonstrate that it is currently unable to pose a serious competitive threat to Vodafone and O_2 and is unlikely to be able to adopt successfully 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 particularly in the post-paid market. Meteor has only managed to gain a 1% share of the post-paid market since it launched over three years ago, while it has an 8% share of the pre-paid market. The post-paid market in Ireland is more lucrative with both Vodafone and O_2 earning three times more revenue from their post-paid subscribers than from their pre-paid subscribers.[106] Although Meteor has 6% share of the market in terms of subscribers it only accounts for 3% of the market in terms of revenue.

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[105] See, for example, Danish Crown/Vestjyske Slagterier, Case IV/M. 1313, Commission Decision of March 9, 1999.

[106] Vodafone and O_2 financial results to the year ended 31/03/04 reported ARPUs of €1,123 and €1,061 for their post-paid subscriber's compared to €361 and €357 for their pre-paid subscribers.

4.101 While there is some evidence that Vodafone and O_2 decreased their prices prior to market entry by Meteor,[107] 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 (until recently, see below) 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. As the price charts in Annex B reveal, this level of market share is low given the aggressive pricing practised by Meteor. This suggests that Meteor has not been a significant constraining influence on O_2 and Vodafone. Indeed, as the price charts in Annex B also reveal, O_2 and Vodafone have not apparently adjusted prices in response to changes and reductions by Meteor in the post-paid segment.

4.102 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's national roaming agreement with O_2 concluded as a result of the regulatory pressure exerted under this review, should, over a period of time, address this deficiency.

4.103 Meteor also has a 'late mover' disadvantage, having entered the marketplace considerably later *vis a vis* third entrants in other EU Member States. Meteor entered after the period of rapid expansion in the market. In particular, it appears that the earlier 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.[108] 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 reinforced by the fact that both Vodafone and O_2 benefit from having a significant amount of advertising available on Irish TV through the re-transmission of UK-origin TV broadcasts, significant purchasing power in obtaining handsets at attractive prices, pan-European branding, and the ability to shift costs offshore to their respective UK operations for certain types of "back-office" functions.

4.104 ComReg has been recently presented with evidence in the response to consultation that Meteor's current performance, post end-2003, has been improving and that, according to one respondent, it will have a market share of 10% of subscribers during 2005. However, it is difficult to see how even this market share can translate into effective market pressure in the absence of Meteor entering the lucrative post-paid market, where it has only gained a 1% share in nearly four years of operation. ComReg believes that the national roaming agreement entered into between Meteor and O_2 might pave the way for potentially more effective competition in the market, but believes that over the lifetime of this review it will not provide a sufficient constraining effect on O_2 and Vodafone in the wholesale market, and in particular on

107 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.

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

indirect access.

4.105 ComReg's conclusion is 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 demonstrates 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 (if not as between the two major mobile operators).

4.106 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 Hutchinson 3G (Ireland) Limited ('3') over the timeframe of this review. 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. Moreover, it is arguable that, in the absence of Meteor having a 3G licence; it otherwise will be difficult for it to sustain any market momentum that might derive from its recently concluded roaming agreement with O_2.

F.2 Potential competition and barriers to entry/exit

4.107 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.

4.108 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.

4.109 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.

4.110 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'

4.111 '3' has just entered the Irish market, and its impact has yet to be measured. However, ComReg is of the view that the arrival of '3' is unlikely to have an immediate and effectively disruptive effect on the behaviour of Vodafone and O_2.

4.112 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. National roaming is likely to stimulate competition in the short run by improving network quality and coverage and by promoting timely 3G deployment. '3' has signed a heads of terms agreement with Vodafone for national roaming.

4.113 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.

4.114 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. Furthermore, 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.

4.115 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 2G customer bases, '3's subscriber acquisition costs are likely to be high considering its "late mover" disadvantage. Given the market evidence in the UK, which clearly indicates that the majority of traffic over 3G networks continues to be voice traffic, it is very difficult to envisage how '3' can realistically make a significant market impact over the life of this market review.

4.116 ComReg welcomes the entry of '3' into the Irish mobile market and hopes that, over time, it might become an effective competitor against the operators currently in the market. On balance, however, ComReg does not believe that '3' will be able to exert sufficient competitive restraints over O_2 and Vodafone during the life of this market review. Unlike the UK where '3' had first mover advantage over the incumbent operators, in Ireland it is likely '3' will launch after Vodafone and O_2 for 3G services.[109] In any event, even with the benefits of '3's aggressive pricing and first mover advantage in the UK, this has only resulted, since March 2003 in '3' acquiring a little under a 2% share of subscribers in the UK market.[110]

(ii) Potential 2G/3G network operators

4.117 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 (e.g. site acquisition, planning permission etc.) and the development of a subscriber base from a "late mover" position.

4.118 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.

4.119 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, 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 view that these entry barriers may deter potential 2G/3G network operators from effectively constraining Vodafone and O_2's joint dominance in this market over the life of this review.

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109 Vodafone launched its 3G service on the 10th November 2004.

110 "The Communications Market" Ofcom Quarterly Update, October 2004.

(iii) Other potential entrants

4.120 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. Indirect access is unlikely to happen because of the denial of access at wholesale level by Vodafone and O_2.

4.121 As part of the 3G competition, for example, all applicants for the "A" licence were invited to offer a voluntary binding commitment relating to the provision of access ('MVNO access')[111] 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 however it is not expected that any MVNO entering the market with '3' will impact upon this market within the timeframe for this review.

4.122 A possible revenue stream for MNOs 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. This experience is contrary to may other EU Member States, where wholesale access has been negotiated both on commercial terms or on the basis of historical regulatory obligations.

4.123 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, where the initial financial requirements should be lower. Overall, ComReg is of the view that other potential entrants will not be able to act as an effective competitive constraint on Vodafone and O_2 within the timescale of this market review.

4.124 Because of high entry costs associated with infrastructure, ComReg believes that other potential 2G or 3G MNOs would not be able to constrain O_2 and Vodafone in the retail market over the lifetime of this review. Further, ComReg believes that the MVNO, as specified in the terms of 3's licence would also not be able to constrain O_2 and Vodafone in the retail market over the lifetime of this review.

[111] 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.

Pent up Demand

4.125 ComReg takes the view above that denial of wholesale access to service providers like MVNOs is a feature of the tacit arrangements to sustain high prices at the retail level. ComReg has evidence of service providers seeking access to MNOs networks (see Annex D).

4.126 The demand for indirect access to the MNOs networks detailed in Appendix D, shows that the companies seeking access offer efficiencies through economies of scope as they are, in some cases, also offering services in the fixed markets and in some cases complementarities in that they are leveraging cost advantages in other industries in offering services in the retail mobile market. In many cases the access seekers can operate profitability in the Irish market, because of efficient cost structures, at ARPU levels well below ARPU levels prevailing in the Irish market.

4.127 The EU Commission notes, in its FICORA Decision, that: "Further to vertically-integrated MNOs there are over 10 Service Providers('SPs') in the market which altogether increased their market share to more than 10% of all mobile subscribers by mid 2004. At least three MVNO agreements have been concluded between SPs and MNOs. The fact that one SP has concluded an MVNO agreement with two MNOs suggests that these agreements may not be exclusive and therefore permit SPs to buy capacity from different MNOs.

4.128 Even though there is currently no regulatory obligation for MNOs to provide access, both SPs and MVNOs have been able to conclude agreements on a commercial basis with each of the three nationwide-operating MNOs in the relevant market, enabling them in turn to provide mobile services to their own customers in the Finnish retail mobile market. On the basis of the information available in the notification documents and the submissions of third parties, it is apparent that there are economic incentives for MNOs to provide access to SPs, mainly due to the fact that they seek to increase traffic on their networks in order to improve capacity utilisation ratios.

4.129 Whereas previously 100% of the retail market was supplied by vertically-integrated MNOs, this has changed considerably following the market entry of the first SPs in 2000. The recent developments in the retail market indicate that SPs and MVNOs, on the basis of their wholesale agreements with MNOs, have succeeded in gaining subscribers from the retail arms of the vertically integrated MNOs. In particular, two SPs have increased their market shares over the past 18 months to a considerable extent. One of these SPs has recently succeeded in concluding MVNO agreements with network operators. In this market, where approximately 90% of the retail market is supplied by vertically integrated MNOs, the dynamics observed in the retail market are likely to have a significant impact on the competitive conditions of the relevant wholesale market, due to the strengthened position that SPs thereby achieved on the demand side of the relevant market."

4.130 ComReg therefore concludes with the evidence of pent up demand for indirect access, and the ability of the access seekers to offer innovative services at competitive prices which benefits both the host network and the Irish consumer, that it is rational to allow access and therefore denial of access in this instance sustains the case for tacit collusion.

Conclusions

4.131 ComReg believes that the mobile market in Ireland has a structure that is conducive to coordinated effects. In practice, ComReg believes that the evidence supports the view that O_2 and Vodafone are tacitly colluding in this market. In the following section ComReg outlines some evidence that supports this claim.

Evidence indicating tacit collusion

4.132 The analysis above has concentrated on the structural characteristics of the market, with ComReg concluding that it believes the market is conducive to coordinated effects. In this section ComReg addresses the evidence that indicates that the market structure is giving rise to tacit collusion. Four pieces of evidence are considered in turn:

(i) Price trends;

(ii) Absolute price levels;

(iii) Profitability measures of Vodafone and O_2; and

(iv) Denial of access to upstream wholesale elements (access to wholesale airtime).

(i) Price trends

4.133 It can be seen in Annex B, particularly for the post-paid tariffs, that over the last three years there is little significant downward movement in the monthly minimum bills, and there appears to be a high degree of parallel behaviour on the part of O_2 and Vodafone. The charts also show little evidence of competitive leapfrogging.

4.134 The Low User MMB charts show little variation in the O_2 and Vodafone tariffs. (Note that the tariffs captured in the MMB analysis for Low users are largely pre-paid tariffs). There occurred near simultaneous reductions by O_2 and Vodafone at the end of 2000, but since then the most significant price reductions were by O_2 in November 2003 and Vodafone in June 2004.

4.135 As noted earlier, an important dimension of tacit collusion is the focus on price. The data on MMBs, which show that some price reductions have occurred (discussed above), also show that retaliation has not occurred.

4.136 Another factor that probably explains some of the changes in MMBs are changes to costs. Where costs change, and where these costs are observable, the equilibrium prices in the market would also change. Given the symmetric position of the firms, it is highly likely that changes in costs at one operator would also occur at the other operator.

4.137 It is noticeable that in the more profitable segments of the market used by High Users, and Very High Users, there has been less downward price activity. ComReg believes that tacitly agreeing on prices particularly in the post-paid segments used by high users, makes sense for the impugned duopolists, as this segment of the market is less vulnerable to competition from the fringe operator Meteor.

4.138 The data reveals a lack of downward movement in high user segments, little or no leapfrogging, and a high degree of parallel behaviour. Together with other structural factors in the market, and the observed high profitability and high prices, ComReg remains convinced that these pricing data indicate a lack of effective competition in the retail market.

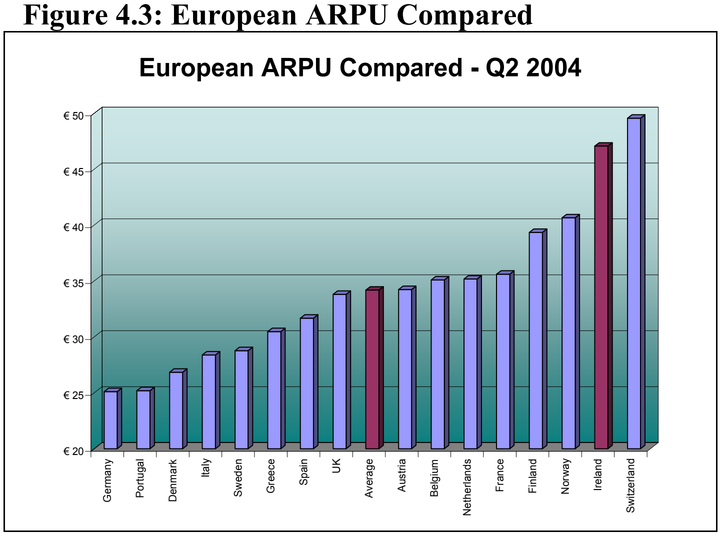
4.139 It is also clear that despite the significantly lower prices offered by Meteor in these segments, this has not resulted in its acquisition of a significant customer base. Meteor's inability to acquire significant customers suggests that its prices do not effectively impact on Vodafone and O_2 and that these operators are able to set prices to an appreciable extent independently of their nearest competitor.

(ii) Absolute Price levels

4.140 The interim results of Vodafone and O_2 show similar ARPUs, respectively €582 and €559, for the 12 months period to 31st March 2004.[112]

4.141 Figure 4.3 shows that the Irish mobile operators' ARPU is €47 per month. This is the highest ARPU in the EU, while the EU average is €34 per month. High ARPU can be a result of high prices or high usage, or a combination of both.

Figure 4.3: European ARPU Compared



[112] Vodafone and O_2 Group Interim Results, respectively, for the period ended 31st March 2004.

Source: The Yankee Group

4.142 As regards prices, ComReg believes that despite some absolute reductions, Irish mobile retail prices on average remain high by European benchmark standards. 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). It is the post-pay segment of the market which is almost completely dominated by Vodafone and O_2, and where a lack of price competition is most apparent. In terms of usage, the MNOs claim that high ARPUs in Ireland are driven by high minutes of use ("MOU").[113]

4.143 Given the above arguments, there remains the issue whether high ARPUs in Ireland are due to high minutes of use or other reasons. In essence, it is difficult to conclude on this issue 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 notes however that Ireland's MOU is not the highest in the EU and other EU markets demonstrate an ability to have higher usage and lower ARPUs.

4.144 Furthermore, "high usage" arguments need to be assessed against the backdrop of comparatively high post-pay tariffs, where Vodafone and O_2 face negligible competition. A finding of joint dominance does not require a positive finding of market failure across the full range of services contained in the relevant product market. On the contrary, it is clear that the fruits of market failure in one segment of the market can subsidize competition in another segment of the market where the impugned duopolists actually face some, albeit limited, degree of competition.

(iii) Excess Profitability

4.145 Persistent supernormal profits are a sign of the absence of effective competition. Although both the ECJ and the EU Commission have been historically reluctant to endorse high profitability as an indicator of dominance, it is a legitimate indicator of market power in the economics literature, particularly in the context of network industries.[114]

4.146 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

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113 Vodafone and O_2's submission to the Joint Oireachtas Committee on Communications, Marine and Natural Resources, October 14th 2003 and November 23rd 2004.

114 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. Note, also, that European Courts have also been reluctant to deduce that an undertaking is unlikely to be dominant simply because it is not profitable; cf. United Brands, supra.

exceeds the cost of capital might indicate that prices charged by that particular MNO are higher than would be found in an effectively competitive market.

4.147 This ratio can be calculated in a number of different ways. In this case ComReg has excluded most of the goodwill 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 Incremental Cost numbers.

4.148 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 therefore excluded cash from the 2003 ROCE figures for O_2.

4.149 It should be noted that the ROCE figures are calculated in relation to the business as a whole and include 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 of the overall mobile market (e.g. retail or wholesale).

4.150 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 now virtually aligned with 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 corporate groups of Vodafone and O_2.

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

4.151 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. 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 indicates that competition for the overall business at the retail level and wholesale level is not yet fully effective.

4.152 ComReg has also carried out a Discounted Cash Flow (DCF) analysis which supports its conclusion on the profitability of Vodafone and O_2.

(iii) Denial of access to upstream elements (wholesale airtime access)

4.153 At the wholesale level, there are no merchant transactions with independent service providers for wholesale mobile access and call origination products in the market.[115] 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 retail level through denial of access to wholesale products will inevitably dampen the effects of competition at the retail level in a highly concentrated market. As ComReg's analysis has demonstrated, the overall assessment of the level of competition at the retail level, especially as regards the post-pay segment, is insufficient. Moreover, as ComReg's analysis has also shown, there are a number of characteristics consistent with a market being 'managed' by the impugned duopolists, with little evidence available to dispel the view that the market is characterised by the existence of joint dominance.

4.154 Denial of access can occur when an operator refuses to supply a product or service, but may also occur as a consequence of access being 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 of the EC Treaty are generally characterised by cases involving denial of access or the sharing of markets.[116] As has been clarified under EU case-law, (e.g. in *Magill,[117])* undertakings can be found to have abused their dominant 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 by their refusal to license that copyright to

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115 As has been clarified by the Commission in its comments pursuant to Article 7(3) of Directive 2002/21/EC, in Case IV/2004/0096, "the fact that at the wholesale level no transactions are taking place on the merchant market (*i.e.,* no sales to independent third parties) does not exclude the possibility to analyse the relevant market. In fact, the absence of such transactions merely indicates that all supply on the relevant market, as defined by NHH, is captive, i.e. provided internally by vertically integrated mobile network operators. In such a case the structure of supply at the wholesale level (e.g. market shares of the undertakings active on the relevant market) is derived from supply at the retail level, and the relevant market would need to be analysed on the basis of the competitive conditions at the retail level.

116 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).

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

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.

4.155 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. Requests have been made by a variety of operators in the electronic communications sector, whether keen to take advantage of their economics of scale, their customer loyalty, the international scope of their operations or their well known brand. Although these requests for access might arguably not lead to qualitatively different services to those already provided by Vodafone and O_2, it would be inappropriate for ComReg to presume what services would be provided at the retail level once access was made available.

4.156 At the wholesale level, since the consultation[118], a national roaming agreement between O_2 and Meteor has been signed. Having been delayed entering the market because of legal challenges to the licence competition, Meteor has faced significant difficulties rolling out its network. The roaming agreement between O_2 and Meteor is a temporary measure to allow Meteor to compete with national coverage while continuing to roll out its network. ComReg notes that Meteor, despite repeated efforts to conclude a roaming agreement in 2003, was unable to reach an agreement with either Vodafone or O_2. An agreement was only reached following ComReg's consultation on this market which recommended mandating national roaming for Meteor.

4.157 ComReg is aware that a national roaming agreement has yet to be concluded between Vodafone and '3'. However, ComReg would point out that this agreement is mandated as part of the 3G licence conditions.

4.158 It remains the case that an MVNO access provider does not yet operate commercially in Ireland, and one respondent claims it has not received commercial terms from any network operator following inquiries regarding an MVNO.

4.159 ComReg is aware of a number of MVNO negotiations that have either failed or have not yet materialised in an MVNO offering in Ireland. One of the mobile operators is claiming that the non-appearance of MVNOs does not constitute entry denial, but it is rather symptomatic of an effectively competitive retail market.

4.160 ComReg has also identified that the allocation of E.164 numbering resources and mobile network codes (MNC) are required by prospective MVNOs.[119] A number of prospective MVNOs have been allocated MNCs by ComReg, with a view to these

[118] ComReg doc no 04/05, Market Analysis Wholesale Mobile Access and call origination, 27 January 2004

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

organisations concluding commercial agreements with the MNOs. However, no MVNO currently exists in the Irish mobile market.

4.161 ComReg does not accept the position that the retail market is effectively competitive. As stated above, prices are relatively high in Ireland and profitability is also relatively high. ComReg believes that the non-existence of an MVNO reflects the constructive denial of entry to the wholesale market by O_2 and Vodafone. ComReg believes that Meteor has not attracted any MVNO requests because of its inferior geographic coverage to date, and possibly because of investment reluctance to accommodate an MVNO at this stage in the development of its business.

4.162 The claim that in the past there were too few bidders for licences means that there cannot be 'pent-up' demand for wholesale access is also not accepted by ComReg. Economic conditions prevailing in the mobile communications market in 1998 and 2002 are different to those prevailing today.

4.163 In light of the above, ComReg is of the view that there has been, and continues to be, pent-up demand for wholesale mobile access and call origination services in Ireland. ComReg believes that competition can be made more effective in the Irish mobile market by promoting more service-based competition. An important role in service led competition can be played by MVNOs, which require less infrastructure to enter the market than an MNO.

Conclusions on Market Analysis and Joint Dominance

4.164 ComReg's firm view is that the essential conditions warranting a finding of collective dominance, as set out in the judgments of the European Courts in relation to Article 82 of the treaty, as interpreted by the EU Commission in its *Access Notice* and in its *SMP Guidelines,* and also in light of the criteria discussed by the CFI in *AirTours,* are satisfied in relation to the relevant market for wholesale mobile access and call origination.

4.165 Applying the traditional approach in accordance with the jurisprudence relating to Article 82 of the EC Treaty, ComReg is of the view that the existence of a number of structural links between Vodafone and O_2, given the nature of the mobile communications sector in Ireland, increases the likelihood that Vodafone and O2 are aware of their common interests in ways which are conducive to the creation and maintenance of a position of collective dominance on the market for wholesale mobile access and call origination in Ireland, without the need for the parties to enter into an agreement or to resort to a concerted practice in order to cause prices to align or to deny access. This approach can be supplemented by a consideration of the more salient factors considered in *Airtours*. In the alternative, ComReg could appraise joint dominance in light of the three-pronged test established in *Airtours*[120] alone.

[120] Namely: (1) the existence of sufficient market transparency; (2) incentives for sustaining cooperation between the collectively dominant firms beyond the short term, which can be policed through an appropriate retaliatory mechanism; and (3) the inability of customers and existing/future competitors to affect the tacit coordination through their market behaviour.

4.166 Adopting the approach of the CFI in *Airtours,* the structure of the Irish market has many of the characteristics that would give rise to coordinated effects. The combination of these factors makes the Irish market particularly susceptible to ex-ante collective dominance and this is likely to continue in the absence of appropriate regulatory action by ComReg and competition law alone is not sufficient to address the problems identified. 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.

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

- their size relative to each other, and relative to other market actors in Ireland;
- their control of essential infrastructure which is unlikely to be economically duplicated over the life 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.

4.168 More importantly, however, there are strong indications that the aligned or consciously parallel behaviour identified by ComReg at the retail level, in addition to the behaviour identified at the wholesale level, is reflected in the unsatisfactory level of 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 and these operators have yet to conclude any indirect access, wholesale minutes/ capacity, MVNO with service providers. Furthermore, alternative sources of market entry appear to be also unlikely to be able to exert sufficient competitive pressure on Vodafone and O_2 during the period.

4.169 ComReg believes that the market for wholesale mobile access and origination market and the retail mobile communications are not effectively competitive.

Conclusion

4.170 ComReg concludes that, on the basis of its analysis of the market characteristics, there is evidence of the existence of a jointly held position of market dominance between Vodafone and O_2 in the Irish retail mobile market, and that this position of joint dominance is reinforced and sustained by the refusal, constructive or otherwise, on the part of the coordinating undertakings O_2 and Vodafone to grant wholesale access to wholesale airtime or to a more sophisticated form of access, such as an MVNO, and by a refusal to grant roaming access to a mobile network operator with limited coverage. Both Vodafone and O_2 have a strong incentive to converge to a coordinated market outcome and refrain from reliance on competitive conduct. This is the case because these parties are aware that the long-term benefits of their tacit coordination outweighs any short-term gains resulting from deviation.

4.171 ComReg concludes that O_2 and Vodafone each hold a position of dominance jointly with the other in the market for wholesale mobile access and call origination in Ireland.

5 Designations of Undertakings with Significant Market Power

5.1 Having regard to the foregoing, ComReg , in accordance with the *Framework Regulations*, that:

- Vodafone should be designated as having SMP jointly with O_2 on the market for wholesale mobile market for access and call origination in Ireland; and

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

6 Market Remedies

Summary of the market remedies

6.1 Having concluded that the market for wholesale mobile access and call origination is not effectively competitive, this section addresses the question as to what remedies are appropriate for imposition on the SMP operators. ComReg proposes to impose the following obligations:

1. An obligation to provide network access on foot of a reasonable request by an access seeker;
2. An obligation of non discrimination;
3. An obligation of price control to be implemented by way of cost orientation;
4. An obligation to prepare separated accounts; and
5. An obligation to implement appropriate cost accounting systems.

6.2 ComReg proposes to *impose* all of these remedies as of the effective date of the decision. However, ComReg draws a distinction between the obligations labelled 1 and 2 above and the other obligations. ComReg will allow a period of time for SMP operators to meet their obligations regarding access and non discrimination before requiring that the obligations numbered 3, 4 and 5 above should be *implemented*. During this period commercial negotiations should be conducted in good faith. ComReg will require regular progress reports from SMP operators. If ComReg decides that commercial negotiations are unlikely to be successful on a timely basis, or if it decides that circumstances otherwise warrant it, ComReg will further direct SMP operators to *implement* the obligations relating to price control and cost orientation, accounting separation and cost accounting systems by way of a Direction.

6.3 The obligation in relation to network access includes an obligation to provide national roaming to other network operators who have built out at least 20% of their networks.

6.4 ComReg will not prescribe in advance the precise form of access but will interpret the non discrimination obligation as meaning that SMP operators must not offer different terms and conditions to different undertakings for equivalent services unless there are objectively justified reasons.

6.5 ComReg believes that in the event that regulatory intervention becomes necessary, interim measures regarding prices may be required. Such measures may include a retail minus price structure, or benchmarking or modelling exercises independent of SMP operators' accounts.

6.6 In order to encourage parties in negotiations to behave reasonably, ComReg signals in advance that it reserves the right, when intervening, to impose the terms proposed by one or other of the parties if it believes that such terms are reasonable.

Remedies

6.7 Following ComReg's identification of the relevant market as the market for wholesale mobile access and call origination over all mobile networks in Ireland, and its subsequent 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 out ComReg's proposal regarding the market remedies to apply to all undertakings listed as having SMP in Section 5 of this document.

6.8 ComReg takes the view that the 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 remedies are aimed at removing any distortions that are occurring in the relevant market, such as the collective ability to exclude alternative providers of mobile services, which can result in prices to end users above the competitive level.

6.9 In ComReg Document 04/05, ComReg proposed that the remedies most appropriate to apply in this market are wholesale mobile access remedies via national roaming and service provider access. In addition, ComReg outlined a number of supporting obligations which may also be appropriate to ensure that wholesale access to mobile networks is provided on fair and reasonable terms, such as, transparency, non discrimination, price control, accounting separation and cost accounting systems. In light of the market analysis the remedies appropriate to this relevant market are now outlined.

The need for ex-ante regulation

6.10 According to *the SMP Guidelines*,[121] 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. Having found Vodafone and O_2 to have SMP ComReg is obliged therefore by the *Framework Regulations* to impose appropriate obligations on them.[122]

The nature of the Potential Competition Problem

6.11 ComReg has highlighted in Section 4 that the failure of Vodafone and O_2 to conclude access agreements has limited competition at both the wholesale and retail level.

[121] 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.

[122] 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'.

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. Overall, such behaviour is not beneficial to the market and retards competition at the wholesale and retail levels.

ComReg's Objective

6.12 Foremost, ComReg's objective is to take steps to enhance competition in this market. In pursuing this objective, ComReg aims to influence the behaviour of operators such that the market becomes more competitive. In that regard, ComReg believes that the regulatory measures imposed should be such as to move this market to a more optimal level of industry development, in particular, to advance competition beyond the *de facto* duopoly that currently exists. ComReg has clearly indicted that it wishes to encourage entry in to the mobile market through MVNOs, for example, the MVNO access obligation in '3's 3G licence.[123]

6.13 In principle, ComReg favours MNOs entering into commercial agreements with other market participants or prospective entrants with a view to promoting competition in this market. However, experience to date suggests that this will not happen without regulatory intervention.

6.14 Potential entrants are required to invest substantial funds and other resources in order to enter and compete in this market. As discussed in Section 4, a number of structural barriers to entry and expansion in this market appear to exist, including:

- The leading positions of the two largest MNOs;
- the difficulty in achieving commercially negotiated access including favourable commercial terms; and
- High capital expenditure requirements.

6.15 Given the leading market position held by Vodafone and O_2, it is likely to prove difficult for competitors to make inroads into this market. The combined 94% market share represents an obstacle to any market participant or prospective entrant. Potential new entrants to the Irish mobile sector face a number of challenges when entering the mobile sector ranging from the ability to attract mobile customers from the more established MNOs to the large capital expenditure required to finance a new operation.

6.16 ComReg believes that given developments to date in this market and the entrenched positions of Vodafone and O_2, competition will continue to be weak without an access requirement to the more established mobile networks. ComReg believes that consumer welfare would be enhanced by further competition in the wholesale mobile access and call origination market.

6.17 ComReg proposes to impose regulatory remedies to correct for the enduring market failure in wholesale mobile access and call origination. ComReg believes that the current lack of competition in the market justifies the imposition of such remedies.

123 See ComReg Document 04/16.

The following sections set out in more detail why ComReg believes the remedies outlined will address the key problem identified and are therefore appropriate and proportionate to this market.

Principles to be applied when selecting Remedies

6.18 When selecting appropriate remedies to address the competition problems identified in this market, ComReg must 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.

6.19 Competition problems in this market are primarily structural in nature, suggesting that some form of mandated access to network infrastructure is a proportionate remedy to increase competition at both the wholesale and retail level. ComReg is aware that any 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[124].

6.20 While ComReg is obliged to impose the least burdensome and most effective remedy or remedies to address the competition problems in this market, the interplay of a number of remedies might often be necessary. Therefore, the remedies available to ComReg in the *Access Regulations* and *Universal Service Regulations* can be seen as a complementary suite of remedies that support and reinforce each other.

Potential Regulatory Remedies

6.21 ComReg is obliged by the *Framework Regulation* to impose obligations on undertakings with SMP.[125] Possible obligations are outlined in the Access Regulations and the Universal Service Regulations.[126] Regulations 10 to 14 of the *Access Regulations*,[127] are as follows:

- Obligation of transparency;
- Obligation of non-discrimination;
- Obligation of accounting separation;
- Obligation of access to, and use of, specific network facilities; and

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

[125] 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'.

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

[127] Regulation 9(1) of the Access Regulations.

- Price control and cost accounting obligations.

Existing SMP Obligations at the Wholesale Level

6.22 Under the old framework, (Regulation 8(1) of the Access Regulations) [128] both Vodafone and O_2 have been designated with SMP in both the mobile public telephony networks and services market and in the national market for interconnection.[129] In summary, those obligations imposed on Vodafone and O_2 as organisations designated with SMP in the mobile market included:

- the obligation to meet all reasonable requests for interconnection;
- the requirement to adhere to the principle of non-discrimination with regard to interconnection offered to others;
- the requirement to make available all necessary information and specifications on request to organisations considering interconnection;
- the requirement to provide copies of all interconnection agreements to ComReg; and
- the requirement to ensure the confidentiality of information received from an organisation seeking interconnection.

Existing non SMP Obligations at the Wholesale Level

6.23 Currently, there are a number of non-SMP access obligations included in the 3G licences. Vodafone and O2 have an obligation to negotiate an agreement with a new market entrant to provide national roaming services,[130] while '3' has an obligation to negotiate an agreement with an MVNO to provide MVNO access priced at least 35% below retail. 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.

Choosing Market Remedies to Enhance Competition

6.24 The aim of this section is to choose appropriate remedies for this market, outlining why imposing such remedies or combination of remedies are necessary and justified. In accordance with Regulation 9(6) of the Access Regulations, the obligations imposed on the SMP operators shall be based on the nature of the problem identified, proportionate and justified. In that regard, ComReg will endeavour to set out why the particular remedies and any combination of those remedies are appropriate to address the core competition problem identified in this market.

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128 Obligations under the current framework flow from a number of former EU Directives establishing the Open Network Provision (ONP) framework and the corresponding regulations transposing them into Irish legislation.

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

130 Currently, '3' is the only operator that qualifies as a new market entrant under Vodafone and O_2's 3G licences.

6.25 ComReg views the key problem in this market as the joint dominant position held by Vodafone and O_2, and the maintenance of this position of joint dominance by the constructive refusal, in the absence of regulatory pressure, on the part of the coordinating undertakings O_2 and Vodafone, to grant wholesale access to wholesale airtime or to a more sophisticated form of access, such as an MVNO.

6.26 The submissions of the respondents to the earlier consultation[131] have been considered in formulating the market remedies discussed below. In replying to that consultation, the respondents proposed a number of reasons why ComReg should forbear from imposing remedies in this market. These respondents argued that the existing 3G licence provisions are sufficient to instil competition in this market. In addition, if remedies are to be imposed on this relevant market, a number of the respondents submit that a national roaming obligation by itself is a sufficient measure to enhance competition, making alternative service provider access unwarranted. Such issues are considered by ComReg in the discussion below.

Forbearance

6.27 In the consultation, some respondents commented that the wholesale mobile access and call origination market is competitive which would make any regulatory intervention in this market unnecessary. ComReg, however concludes that Vodafone and O_2 hold a joint dominant position in the wholesale mobile access and call origination market in Ireland. ComReg is obliged therefore by the Framework Regulations to impose appropriate obligations on them.

6.28 Having concluded that Vodafone and O_2 hold a joint dominant position in this relevant market, ComReg also considered the ability of Meteor and '3' to significantly erode the jointly held position of market dominance. Certain respondents suggest that as the 3G framework and the recent introduction of a national roaming agreement are sufficient to enhance competition, forbearance is a more appropriate approach. ComReg believes that although the national roaming agreement entered into between Meteor and O_2 might pave the way for potentially more effective competition in the market eventually, over the lifetime of this review it will not provide a sufficient constraining effect on O_2 and Vodafone in the wholesale market. ComReg is also of the view that the arrival of '3' is unlikely to have an immediate and effectively disruptive effect on the behaviour of Vodafone and O_2. As a 3G operator new to Ireland '3' would be expected to take longer to establish initial market share particularly in the untried 3G market. Experience from other markets show that new 3G entrants have struggled to gain market share.

6.29 When considering the appropriate *ex-ante* SMP remedies to impose, it is also necessary to take account of the impact of any non-SMP obligations which are separate to any remedies that can be imposed via an SMP review.[132] The market analysis has also taken into account the MVNO access obligation in '3's 3G licence. It is envisaged that the entry of MVNOs has the potential to enhance competition at the retail level however it is not expected that any MVNO entering the market with '3'

131 ComReg Document 04/05.

132 Currently, there are a number of non-SMP access obligations included in the Access Regulations, Universal Services Regulations and in the 3G licences.

will impact upon this market within the timeframe of this review. The MVNO obligation in '3's 3G licence is limited to a specific type of MVNO and '3' are to a large degree an unproven entity in the Irish mobile market place.

6.30 In light of the market analysis, ComReg believes that the collectively dominant group of undertakings will not be subject to significant competitive pressure, either from existing smaller 'fringe' competitors or potential new entrants over the timescales of this review. ComReg believes that *ex ante* regulation in the market for wholesale access and call origination is appropriate and justified in light of the foregoing market analysis and the competition problems identified.

<u>Mandating Wholesale Mobile Access</u>

6.31 ComReg believes for reasons outlined in this section that imposing mandatory access under Regulation 13 of the Access Regulations is the corner stone of the effective set of remedies. Access has not been secured to date despite the advantages and economic incentives for mobile network operators. By establishing the obligation to meet reasonable requests for access, ComReg hopes to restore proper incentives for mobile network operators to compete against each other while also stimulating competition through alternative access seekers.

6.32 ComReg has considered the potential for commercial negotiation in respect of access. Experience suggests that commercial negotiation on its own, without a regulatory mandate, is unlikely to be successful. The position of joint dominance is reinforced and sustained by the refusal, constructive or otherwise, on the part of the coordinating undertakings O_2 and Vodafone to grant wholesale access.

6.33 A national roaming agreement was concluded between O_2 and Meteor largely due to regulatory pressure. Meteor, despite repeated attempts to conclude a roaming agreement in 2003, was unable to reach an agreement with either Vodafone or O_2. An agreement was only reached following ComReg's consultation on this market which recommended mandating national roaming for Meteor. Although there is demand for wholesale access to mobile services, ranging from airtime resale, to MVNO access, to national roaming agreements, this demand has not been met (see Annex D). One respondent claims it has not received commercial terms from any network operator following inquiries regarding an MVNO. ComReg is also aware of a number of MVNO negotiations that have either failed or have not yet materialised in an MVNO offering in Ireland. ComReg is aware that a national roaming agreement has yet to be concluded between Vodafone and '3'.

6.34 ComReg believes that competition can be made more effective in the Irish mobile market by promoting more service-based competition. An important role in service led competition can be played by MVNOs, which require less infrastructure to enter the market than a mobile network operator. As outlined previously, ComReg is not convinced that national roaming by itself will solve the structural problems in this market over the period of the review. In light of the prevailing market conditions and the considerable risk of delay in the conclusion of wholesale access agreements, ComReg considers that, at a minimum, an obligation on SMP mobile operators to negotiate access agreements with access seekers on request and on non discriminatory terms from the date of the Decision is warranted.

Remedies for the wholesale access and call origination market

6.35 ComReg recognises that regulatory measures should be kept to a minimum and address the market failure identified. As stated above, there are a range of potential remedies available to ComReg, including retail remedies, to address the competition problems in this market. While ComReg can potentially impose remedies at the retail or wholesale level to stimulate competition, the fact that competition problems in this market appear to be predominantly structural in nature, leads ComReg to the view that remedies at the wholesale level, rather than at the retail level, are the most appropriate to address competition problems in this market.

6.36 ComReg has taken into account the views of respondents and believes that direct retail price control should only be considered where the specific market characteristics mean that other measures are unlikely to overcome the market failure. ComReg maintains its view that remedies at the wholesale level, rather than at the retail level, are the most appropriate to address competition problems in this market. Retail price controls are not a tenable option at this time but ComReg may reconsider the issue of retail price control in future periods if appropriate. Requirements however relating to information which will monitor any potential margin squeeze are discussed later.

6.37 In the context of the core competition problem identified in this market which is lack of access to mobile network infrastructure on commercial terms and conditions, ComReg believes that the appropriate wholesale remedies for this relevant market are:

- An obligation to provide access on reasonable request;
- An obligation of Non Discrimination;
- An obligation of Price control viz Cost Orientation;
- An obligation of Accounting Separation; and
- An obligation of Cost Accounting Systems.

6.38 Mandated access on non discriminatory terms to the mobile network of SMP MNOs is the cornerstone remedy required to increase competition at both the wholesale and retail level. In order to ensure adequate access, ComReg is imposing a combination of other obligations i.e. cost orientation, accounting separation and cost accounting systems. While all obligations are proposed to be *imposed* as of the effective date of the direction, ComReg proposes to defer *implementation* of obligations regarding cost orientation, accounting separation and cost accounting systems, in order to allow time for commercial negotiations regarding the terms and conditions of access to take place. However, if negotiations fail or if circumstances otherwise warrant it, ComReg will proceed to direct that the latter obligations will be *implemented*. The specific details of each obligation are set out below. The following section outlines a clear and predictable basis for wholesale access to SMP mobile network infrastructure.

Wholesale network access and general process regarding ComReg's Intervention

6.39 All of the obligations outlined above will be placed on the SMP operators from the date of the Decision. Effective from the date of the Decision, Vodafone and O_2 as SMP mobile operators must meet reasonable requests for access on their networks. Negotiations regarding terms and conditions, including price, must be carried out in good faith. SMP operators are required not to withdraw access services already provided to a third party, in particular, access to national roaming services. ComReg notes the lack of access offerings by MNOs despite the wholesale opportunities they represent and believes that commercial negotiations should be underpinned by the regulatory obligations on SMP operators as outlined.

6.40 ComReg will forbear from implementing the remedies that support the SMP access obligation, i.e. Cost Orientation, Accounting Separation and Cost Accounting Systems in favour of commercial negotiation in the first instance. However, if ComReg believes that commercial negotiations are unlikely to result in the conclusion of access agreements on a timely basis, it will intervene to bring about such agreements and will proceed to implement these obligations. In that case, ComReg will intervene to ensure that appropriate and acceptable terms and conditions, including, an appropriate price is finally reached. Negotiation of access agreements can be facilitated by ComReg setting down certain conditions with respect to wholesale network access. In order to encourage parties in negotiations to behave reasonably, ComReg signals in advance that it reserves the right, when intervening, to impose the terms and conditions offered by one or more of the parties if it believes that such terms are reasonable.

6.41 In pursuit of the objectives set out in Section 12 of the Communications Regulation Act 2002, Article 8 of the Framework Directive and the ministerial directions, through the conclusion of access agreements, ComReg will intervene, where appropriate and justified, on the basis of either its own initiative powers or via a dispute resolution process as set out in ComReg Document 03/89. The extent to which commercial negotiations have already taken place between the access seeker and the SMP MNO will be considered by ComReg when deciding upon the appropriate level of any required regulatory intervention. In light of the market analysis, this approach outlined above is the most appropriate, proportionate and effective means of remedying the lack of effective competition found in this relevant market. The following sections detail these relevant obligations.

Access Obligation

6.42 Under the new regulatory framework, Regulation 13 of the Access Regulations sets out the obligation of access to and use of specific network facilities that may be *impose*d on an SMP operator. In principle the undertakings should themselves negotiate in good faith their access agreements.[133] However in the past, wholesale mobile access has been denied, constructively or otherwise. Experience shows that in the absence of mandatory wholesale network access, potential access seekers have found it difficult to negotiate with MNOs.

[133] See recital 5 and 6 of the Access Directive.

6.43 In the context of the core competition problem identified in this market such as the collective ability of SMP operators to prevent access seekers from finalising commercial agreements, ComReg believes in line with Regulation 13 of the *Access Regulations* that mandated access to SMP mobile network infrastructure is necessary and appropriate to increase competition in this market. Such an obligation will require SMP operators to meet reasonable requests for wholesale mobile access from the date of the Decision. In addition, SMP operators are required not to withdraw access services already provided to a third party, in particular, access to national roaming services.

6.44 As part of the access obligation, SMP operators will be obliged to submit to ComReg a progress report on commercial negotiations with respect to access. This report should be submitted to ComReg one month after the effective date of the SMP Decision and every two months thereafter. SMP operators are also obliged to submit to ComReg any access agreement concluded or amendments to these agreements with one week of these agreements being signed. The purpose of submitting these agreements to ComReg is to allow ComReg monitor the compliance of the SMP operators with any obligations set out in the Decision. In addition, these access agreements will assist ComReg if regulatory intervention is required in the setting of non discriminatory terms and conditions.

6.45 Regarding the scope of the access obligation being imposed on the SMP operators, ComReg believes that the scope of the wholesale products included in this access obligation is defined by the wholesale market definition set out in this document and the interpretation of the access definition[134] covered by the Access Regulations. The scope of the access obligation includes, at a minimum, access for mobile operators to national roaming services and can include the various forms of wholesale service provider access such as independent service provision on the basis of wholesale airtime resale, indirect access providers and MVNOs. ComReg's consultation document split its discussion of access remedies into two separate areas; remedies designed to enhance competition via mobile operators (e.g. national roaming) and remedies designed to enhance competition via service provider access (e.g. MVNOs, Indirect Access Operators and Independent Service Providers). ComReg considers in turn below each of these elements as they pertain to the scope of the SMP access obligation.

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[134] "access" means the making available of facilities, services or both facilities and services, to another undertaking, under defined conditions, on either an exclusive or non-exclusive basis, for the purpose of providing electronic communications services. It covers, inter alia, access to network elements and associated facilities, which may involve the connection of equipment, by fixed or non-fixed means (in particular this includes access to the local loop and to facilities and services necessary to provide services over the local loop), access to physical infrastructure including buildings, ducts and masts, access to relevant software systems including operational support systems, access to number translation or systems offering equivalent functionality, access to fixed and mobile networks, in particular for roaming, access to conditional access systems for digital television services, access to virtual network services; access does not include, apply or refer to access by end users;

National Roaming

6.46 In the consultation document, ComReg proposed an obligation on the SMP MNOs to meet reasonable requests for access to and to provide national roaming services on its mobile network to non-SMP MNOs. ComReg believed that this was an appropriate and justified remedy and that it had the potential to increase competition at both the retail and wholesale levels. ComReg believed that wholesale national roaming access on 2G networks for an appropriate period had the potential to improve the non-SMP MNOs' ability to compete with Vodafone and O_2, by allowing them to offer nationwide services as they build out their networks. Additionally, ComReg believed that a national roaming obligation may also 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 access seekers.

6.47 Since ComReg's consultation, two developments have occurred in this market in relation to national roaming. The first development relates to Vodafone and '3'. On the 28th January 2004, 3 Ireland and Vodafone Ireland signed a Heads of Terms for a national roaming agreement on Vodafone Ireland's 2G (GSM) network in the Republic of Ireland.[135] ComReg recognises that this is not legally binding document and thus is not a guarantee that a national roaming agreement will be signed between these two parties. However it shows that some degree of progress has been made.

6.48 The second development relates to Meteor and O_2. On the 10th August 2004, Meteor and O_2 announced that they had signed a National Roaming agreement.[136] This agreement will allow Meteor to offer its customers national roaming services in specific areas of the country where Meteor does not have full network coverage as yet.[137] Meteor will continue to build out its own network and as a result it is envisaged that the roaming services will be discontinued on a gradual basis over the duration of the agreement as Meteor completes its own network build and introduces its own coverage.

6.49 Given the progress made by the two non-SMP operators in relation to the national roaming developments outlined above, ComReg believes that these developments support its view that the ability to obtain national roaming services is of key importance to the non-SMP operators. While the developments above give varying degrees of certainty to the non-SMP operators that they will be able to obtain national roaming services, ComReg believes that given the importance of this remedy to the market, it is proportionate to mandate access to national roaming services for MNOs over SMP mobile networks, as part of the SMP access obligation.

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135 http://www.vodafone.ie/aboutus/company/press/2004/release280104c.jsp

136 http://www.meteor.ie/about/press/aug10_04.html

137 Including Counties Kerry, Donegal, Mayo, Cavan, Sligo and Leitrim, parts of counties Limerick, Galway and Cork, and parts of Roscommon, Longford, Clare. This agreement will run for 30 months beginning on September 1st 2004, with coverage services being introduced gradually throughout the geographic roaming areas over the following weeks. National roaming services will be available on both 2G and 2.5G networks, covering voice calls, SMS and GPRS services including multimedia and photo messaging.

6.50 ComReg believes that an access obligation to provide access to national roaming services on non discriminatory terms is not a burdensome obligation to place on the SMP operators as the national roaming developments outlined above would seem to indicate. Given this progress it may be the case that over the lifetime of this review, direct regulatory intervention by ComReg may not be required in order for Meteor and '3' to gain access to national roaming services. However, to provide regulatory certainty to non-SMP operators that their national roaming agreements and negotiations are underpinned by a regulatory obligation, national roaming at a minimum forms part of the SMP access obligation effective of the date of the Decision. It is also possible that between now and the date of the next market review a new mobile network operator may enter the Irish market and which may require regulatory certainty that it can negotiate a national roaming agreement with one of the SMP mobile operators. An access obligation on SMP operators to provide access to national roaming services if appropriate on non discriminatory terms will provide such regulatory certainty. The provision of national roaming services to other network operators may be available to those who have built out at least 20% of their networks.

6.51 ComReg stated in its consultation, that the proposed national roaming obligation, by itself, may not be sufficient to create an effectively competitive retail market. ComReg indicated that it was 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, independent service providers on the basis of wholesale airtime resale; indirect access providers; and MVNOs.

Mobile Service Provider Access

6.52 Concerning the scope of the SMP access obligation and in particular whether to limit it to particular form(s) of service provider access, ComReg understands that it is necessary to consider whether the particular form(s) of service provider access encourages efficient investment in infrastructure, promotes innovation, efficiency and sustainable competition. ComReg recognises that the form of service provider access can affect the potential benefit that service provider access can bring to the market.

6.53 Responses to ComReg's consultation were consistent with its view that a full MVNO has the potential to be of greater benefit to the market than the other forms of service provider access. However, a drawback of the full MVNO model is that, compared to the other forms of service provider access, it requires a significant financial commitment in order set up its operations. Furthermore given the greater infrastructure requirements of a full MVNO relative to other forms of service provider access, it is likely that a full MVNO may require more time before it can enter the market. On balance, ComReg believes that each form of service provider access has varying advantages and disadvantages which can have a large impact upon the viability of its business plan and its ability to effectively compete in the market.

6.54 Considering the potential for all forms of mobile service provider access to increase competition to the benefit of consumers, and that the ability of a mobile service provider to effectively compete in the market depends upon its form of access, ComReg does not consider it appropriate to *a priori* limit the SMP access obligation to one particular form of access. To do this could potentially limit the effectiveness of the access remedy. Given the complexities of the mobile market and the varying needs of potential access seekers ComReg is minded at this time not to overly prescribe how access is to be achieved. However, to provide regulatory certainty to undertakings in their negotiations with respect to access, all forms of wholesale service provider access that can increase competition in the mobile market may form part of the SMP access obligation effective of the date of the Decision. Should commercial negotiations fail, ComReg proposes to deal with critical access issues on a case by case basis. Any intervention will be supported by the *implementation* of the obligations of cost orientation, accounting separation and cost accounting systems.

6.55 ComReg believes that there is further scope for competition with the introduction of wholesale mobile access for alternative access seekers. Commercial practice elsewhere in Europe demonstrates an increasing number of instances of mobile operators granting access to their networks without the need for regulatory intervention. ComReg believes that it is justified in intervening in this market in order to restore the proper incentives for the mobile operators to compete against each other. In placing an access obligation on the SMP operators, however, ComReg recognises the need to safeguard competition in the long term by balancing the rights of the SMP operator against the rights of the access seeker. In principle, ComReg believes that effective network competition should be a priority as this can encourage MNOs to minimise their costs and maximise their efficiency, enabling them to pass on these saving to both their direct customers and to access seekers including MVNOs.

6.56 On the one hand, requiring access could create a platform for new competition at the product level: on the other, requiring access could reduce the incentive for firms to develop innovative products and services in the first instance. Pursuing its objective of increased competition, ComReg has taken a longer term view particularly with respect to investment incentives and the possibility that access requirements could hinder future innovation and investment. In that regard, ComReg has taken in to account the views of respondents when evaluating the competitive consequences of the access requirements, including price (terms and conditions) of that wholesale mobile network access.

6.57 ComReg notes that a number of the respondents replying to the consultation agree that both a national roaming and a service provider remedy have the potential to increase competition in the market. However, ComReg also notes that a number of other respondents have argued that service providers would not bring any benefit to the market and that a service provider remedy could result in a distortion of investment incentives in the market. The following is a list of the key points raised by these respondents:

- Mandated service provider access is inconsistent with EC Case Law;
- It is not clear that there is (a) unmet demand and (b) whether this unmet demand would not be met on a commercial basis;
- Regulated access may undermine service provider access being agreed on a commercial basis thus impacting a commercial opportunity for operators, particularly late entrants;
- The mobile operators most affected would be ‘3’ and Meteor;

- o Regulated terms of access, including price would affect the incentive for infrastructure investment.

6.58 As outlined earlier, 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. In line with Regulation 13 of the Access Regulation ComReg is permitted to mandate access where justified as a means of increasing competition in the Irish mobile market.

6.59 In relation to the other points raised by these respondents, ComReg is not convinced that the introduction of mandated access will undermine the incentive for operators to agree such deals commercially or negatively affect the incentive for infrastructure investment. With regards to the claims that the operators Meteor and '3' will be the operators most affected by a mandated access obligation covering service provider access, ComReg believes that there is nothing preventing the non-SMP operators from negotiating and agreeing commercial service provider access agreements in order to gain wholesale revenues, even if there is an access obligation on the SMP operators. It is apparent that there are economic incentives for such deals, mainly due to the fact that they seek to increase traffic on the network in order to improve capacity utilisation ratios. ComReg would expect therefore mobile operators, in particular SMP operators to conclude such agreements on a commercial basis and negotiate in good faith. Where this is not the case then ComReg will intervene directly.

6.60 Finally, ComReg understands that the terms and conditions, including in particular the access price, associated with any access agreement is a very important factor in finalising an access agreement. Such issues are addressed below in the discussions as to appropriate supporting remedies to the core access obligation. ComReg believes that this access obligation is the cornerstone to addressing the competition problems in this market, ComReg does not believe that this obligation by itself is sufficient to ensure that the terms and conditions are set on a fair and reasonable basis. To achieve this, further supporting obligations are necessary.

Non Discrimination Obligation

6.61 ComReg may, in accordance with the provisions of Regulations 9 and 11 of the Access Regulations, impose a non-discrimination obligation on the SMP operators in relation to interconnection, access, or both interconnection and access.

6.62 In order to be an effective remedy, ComReg believes that the obligation imposed on SMP operators to meet all reasonable requests for access needs to be combined with an obligation of non discrimination in relation to that access. In light of the market analysis, a non-discrimination obligation can ensure that a vertically integrated SMP operator is prevented from acting in such a way as to have a materially adverse effect on competition. For example, a non-discrimination obligation can prevent an SMP operator from discriminating between the quality of service of wholesale products offered to itself and to competing access seekers. In the absence of a non discrimination obligation there is a risk that an SMP operator will through the use of discriminatory practices when offering access place an access seeker at a competitive disadvantage. Fair, proportionate and non discriminatory conditions for access, including price, are key factors in fostering competition in this market.

6.63 Having been designated with SMP, Vodafone and O2 must adhere to the principle of non discrimination with regard to access offered to others. ComReg believes that it is appropriate to impose an obligation on the SMP operators not to discriminate in order to ensure that the SMP operator applies equivalent conditions in equivalent circumstances to other undertakings providing equivalent services. In addition, this obligation will ensure that the SMP operator provides services and information to others under the same conditions and of the same quality as the SMP operator provides own services or those of its subsidiaries or partners.

6.64 ComReg is aware that an obligation of non discrimination can be problematic if applied in a strict sense, i.e. identical terms and conditions including price must be offered to all parties. Due to the varying needs of access seekers and to avoid a 'one size fits all' offering which may offer limited value to potential access seekers and ultimately consumers, ComReg recognises that in justified circumstances an SMP operator may offer different terms and conditions, including a price, to different access seekers.

6.65 Competition law has traditionally interpreted the principle of non-discrimination as providing operators with a degree of commercial freedom to be able to differentiate in their commercial agreements with customers and competitors insofar as such differentiation is based on objectively justified commercial grounds. In that regard, ComReg believes it appropriate to interpret the concept of non discrimination as meaning that SMP operators, when granting wholesale access to network infrastructure, must not offer different terms and conditions to different undertakings for equivalent services unless there are objectively justified reasons. It follows that it may be possible in this market for an undertaking in a dominant position to differentiate between its customers provided there is an objective justification for such treatment.[138]

6.66 This non discrimination obligation will be used by ComReg, if appropriate, to ensure that SMP operators justify any difference in terms and conditions in relation to access offered to others so that potential anti competitive discrimination can be prohibited. It will be effective from the date of the Decision, the aim of which is to support the access obligation, to provide access on non discriminatory terms.

Price Control viz Cost Orientation Obligation

6.67 Section 5 of this document has designated O_2 and Vodafone with SMP in the wholesale mobile access and call origination market in Ireland. This position of joint dominance is reinforced and sustained by the refusal, constructive or otherwise to grant wholesale mobile access. In principle, the undertakings should themselves

138 The distinction between commercial differentiation and illegal discrimination has been developed and refined by the European Commission and the European Courts in, inter alia, cases involving alleged abuses through the practice of price discrimination. In the context of telecommunications, discrimination can occur, among others, through pricing, delays, technical access and routing. However, discrimination may also be objectively justified, for example, on the basis of cost or technical considerations or where the users are operating at different functional levels of the market (see the Access Notice, OJ 98/C 265/02).

negotiate in good faith their access agreements including the price of such access agreements,[139] the imposition of price control obligations may prove appropriate where the market analysis reveals that competition is inefficient and insufficiently strong to prevent excessive pricing.[140]

6.68 In light of the key problem identified by ComReg in this market, ComReg has considered the risk as to the delay in agreement over negotiation of price. ComReg notes that although a number of potential access seekers have had discussions with the MNOs, to date there are no mobile service providers in the market. This suggests to ComReg that agreeing terms of access, including charges, is one of the issues preventing service providers from entering the market. Direct regulatory intervention therefore may be required in order to finalise an access agreement. On that basis, ComReg believes that a price control via a cost orientation obligation should also be imposed to encourage operators to commercially negotiate an access price in the first instance. As discussed below, ComReg will allow operators an opportunity to reach a commercial solution with respect to price before proceeding to implement this remedy. The manner in which ComReg will intervene is set out below.

6.69 The failure by the MNOs to offer mobile access and call origination services (*e.g.* national roaming, MVNO access, indirect access) on a commercial basis 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. Overall, such behaviour is not beneficial to the market and retards competition at the wholesale and retail levels. The collective ability of Vodafone and O_2 to exclude alternative access and call origination operators may be viewed as a strategy to disadvantage rivals costs and the costs associated with potential entry. Market participants and prospective entrants may be handicapped by the reluctance on the part of incumbent networks, to provide access to its network and at a reasonable price. If access requirements are freely negotiated, leading mobile operators will have an incentive to delay indefinitely the finalising of an access agreement. Similarly, if access is mandated but each operator is free to set its access charge, leading mobile operators have an incentive to set the access charge at a prohibitive level again raising rivals costs.

6.70 In the absence of a cost orientation obligation, SMP MNOs may have an incentive to delay or obstruct access to mobile network infrastructure. The main stumbling block to an agreement with respect to wholesale mobile access may be price and the criteria for determining price. From the responses to the original consultation, it is clear to ComReg that the terms and conditions, including the access price, is one of the key elements in an access agreement. To support and reinforce the access obligation outlined above, ComReg believes that it is also appropriate to *impose* a price control viz a cost orientation obligation on SMP MNOs from the date of the SMP Decision. Such an obligation will require SMP MNOs to follow the principle of cost orientation with respect the price for wholesale network access. A cost orientation obligation on the dominant operators is appropriate and justified as the market power enjoyed by Vodafone and O_2 is unlikely to be eroded in the time period of this review.

[139] See recital 5 and 6 of the access directive.
[140] See recital 20 of the access directive.

6.71 However, ComReg will allow SMP operators the opportunity to negotiate the price and other terms and conditions of wholesale access to mobile networks in good faith and on commercially agreed terms before proceeding to *implement* this remedy. Negotiation allows the market itself to set the appropriate terms and conditions for access and may reach more favourable commercial agreements for those parties to the negotiations. Should commercial negotiations fail, ComReg will intervene via the cost orientation obligation to ensure that appropriate and acceptable terms and conditions, including, an efficient price is finally reached. Where required, ComReg will implement this obligation by way of a Direction to an SMP MNO. The extent to which commercial negotiation has taken place in good faith between the access seeker and the SMP MNO will be considered by ComReg when deciding upon the appropriate level of any required regulatory intervention.

Setting the access charge

6.72 In accordance with Regulation 9 and 14 of the Access Regulations, where joint dominance at the wholesale level persists, ComReg may intervene to set an efficient price for wholesale mobile access to open the retail market to competitors and bring prices down to a competitive level. In that regard, ComReg may use a variety of techniques depending on the circumstances and the information available and taking into account a reasonable rate of return on capital employed. The aim of this is to ensure that wholesale mobile access charges follow the principle of cost orientation.

6.73 ComReg is of the view that pricing should tend towards cost orientation as this gives maximum benefits to end users and encourages competition. However, ascertaining the costs of specific activities or services provided by a vertically integrated operator is a complex task that can be approached in a number of different ways. Moreover, underpinning these considerations is a requirement for robust costing systems to ensure that pricing methodologies promote efficiency and sustainable competition.

6.74 Following the principle of cost orientation, ComReg needs to consider what mechanism to use to set the efficient charge if appropriate. Alternatives may include setting the target ‘efficient charge’ level on the basis of costs, benchmarking or some combination of those. A “retail-minus” price may restrict the competitive pressures which an access seeker 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 access charge, but it may be a good starting point to be used before other detailed cost based information is available. 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 access seeker’s ability to compete in the retail market. The judgement between these alternative pricing methods or combination of 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.

6.75 The implementation of Accounting Separation and Cost Accounting Systems will take time. If ComReg intervenes it will need a price setting mechanism quickly. Benchmarking or a ‘retail minus’ approach or a combination of those might be considered as a starting point in the absence of detailed costing data. 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. Going forward, ComReg believes that a more detailed calculation will be required. Such detailed calculations would be best made using the support of Cost Accounting Systems and Accounting Separation measures.

6.76 In the setting of the access price, ComReg will consider the need to provide incentives for competition in infrastructure to emerge. The initial availability of the SMP operator's infrastructure at cost orientated prices would make it easier for alternative operators to enter the market and develop a customer base. Equipped with a customer base, uncertainty is reduced and the operator may then be ready to make further investments. However, ComReg is aware that wholesale access remedies imposed, including, in particular, a price obligation, must facilitate further competition by providing access on terms and conditions that promote efficiency and sustainable competition (e.g. by incentivisng the climb up the "ladder of investment"), while being mindful of the need to encourage efficient investment in infrastructure and promote innovation.[141] In any such price determination, therefore, ComReg will endeavour to ensure that a sufficient return on capital is allowed to encourage innovation in the network area.

6.77 Any price set must be such that market participants and potential entrants are able to compete with the dominant operators. In that regard, ComReg will also take into account potential differences in the manner and the point in time of market entry by alternative access seekers as well as general investment conditions. There is a range of potential wholesale offerings. The challenge due to the varying needs of access seekers is to avoid a 'one size fits all' offering which may offer limited value to potential access seekers and ultimately consumers. Where an access price is set, ComReg believes that this price should only incorporate the elements required for the particular form of wholesale access. This may differ between the various forms of access seekers, for example, MVNOs may require different network elements to indirect access providers.

6.78 In addition, when determining access issues such as price, ComReg believes that the collective impact of other market and regulatory developments need to be taken into account, e.g. national roaming agreements and changes in mobile termination rates. The availability of national roaming should help increase the overall competitiveness of the mobile sector. ComReg believes that regulatory certainty is provided via the price control, viz cost orientation obligation set out above which will be used if appropriate to establish a price for access to network infrastructure. The objective of such a price obligation is to ensure that in the absence of commercial agreement that efficient appropriate and acceptable wholesale access prices (terms and conditions) are reached in a timely and effective manner.

6.79 ComReg believes that an access obligation supported by the price control viz cost orientation, and non-discrimination obligations will begin addressing the competition problems in this market. However, ComReg believes that further supporting remedies may be required to support these obligations, in particular, where ComReg is required

141 Access Regulations Regulation 13 (2), Access Directive recital 19.

to determine an access price based on actual cost. These supporting remedies are accounting separation and cost accounting obligations.

Cost Accounting Systems Obligation

6.80 In the absence of commercial agreement with respect to the access price, ComReg believes that a more detailed calculation will be required. In order to calculate an efficient wholesale access price, ComReg will need information about the dominant undertakings' costs. Cost orientation requires the linking of prices to cost information derived from cost accounting models/systems such as, e.g., LRIC (Long Run Incremental cost) or FDC/FAC (fully distributed /allocated costs). Ascertaining the costs of specific activities or services provided by a vertically integrated operator is a complex task that can be approached in a number of different ways. Underpinning these considerations is a requirement for robust costing systems to ensure that pricing methodologies promote efficiency and sustainable competition.

6.81 ComReg believes that it is necessary and appropriate to impose a cost accounting systems obligation on the SMP operators from the date of SMP designation in order to be able to determine a wholesale access price, if appropriate, or to resolve any conflict between parties with respect to determining an appropriate access charge. 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. Should commercial negotiations fail with respect to access including the price (terms and conditions) of that access, ComReg would use such an obligation to underpin any determination of a cost based price where appropriate and justified. Where required, ComReg will implement this obligation by way of Direction to the SMP MNO. ComReg will consult with the market on cost accounting issues and how this particular remedy would be implemented if appropriate.

6.82 As stated earlier, ComReg believes that setting access charges to the correct level is a key enabler of effective and sustainable competition to the benefit of consumers. ComReg notes that the error cost in setting an incorrect price could be high; if the price is too low it could discourage investment; if the price is too high it would discourage competition and possible not enable benefits to be passed onto consumers. It is appropriate and proportionate therefore to impose a cost accounting systems obligation on the SMP operators to acquire the best possible information about cost in order to inform ComReg in any determination with respect to wholesale access charges.

Accounting Separation Obligations

6.83 In the absence of commercial agreement with respect to access and the access price (terms and conditions), ComReg believes that further supporting remedies may be required to ensure the conclusion of an access agreement on non discriminatory terms. Should commercial negotiations fail with respect to access including the price (terms and conditions) of that access, ComReg would use such an obligation to underpin any determination of a cost based price where appropriate and justified. This obligation would also be used to monitor compliance with the obligation of non discrimination.

6.84 ComReg believes that it is necessary and appropriate in the absence of successful commercial negotiations to impose an accounting separation obligation on the SMP operators in order to, for example, be able to separate parts of retail from any or all of the wholesale elements and derive the wholesale cost base by specifying the format and accounting methodology to be used. This information would most likely be Profit and Loss and ROCE information which could take a variety of forms. Such information requirements will be the subject of further consultation Accounting Separation and cost accounting issues where appropriate. Transparency and publication issues with respect to the Accounting Separation and Cost Accounting Systems will also be dealt with in any consultation.

6.85 Having identified SMP operators in this market, there is an incentive by dominant operators to set the wholesale mobile access price at a level that is to the detriment of competition in the mobile market. Where regulatory intervention is required to set the terms and conditions of an access agreement, the accounting separation obligation can support, if appropriate, the implementation of the cost orientation and cost accounting obligations set out above. Where required, ComReg will implement this obligation by way of Direction to the SMP MNO. On balance, ComReg believes that the benefits of an accounting separation obligation outweigh the costs, and such an obligation is a necessary and appropriate obligation to support the core SMP obligation

Conclusion

6.86 As discussed above, ComReg believes that the necessary obligations to be imposed on Vodafone and O_2 from the date of the Decision to address the competition problems in this market are:

1. An obligation to provide network access on foot of a reasonable request by an access seeker;
2. An obligation of non discrimination;
3. An obligation of price control to be implemented by way of cost orientation;
4. An obligation to prepare separated accounts; and
5. An obligation to implement appropriate cost accounting systems.

6.87 Mandated access on non discriminatory terms to the mobile network of SMP MNOs is the cornerstone remedy required to increase competition at both the wholesale and retail level. All of the obligations outlined above will be placed on the SMP operators from the date of the Decision. Effective from the date of the Decision, Vodafone and O_2 as SMP mobile operators must negotiate with access seekers wholesale mobile access on reasonable request and on non discriminatory terms. The implementation of the remedies that support the SMP access obligation, such as, cost orientation, Accounting Separation and Cost Accounting Systems, will depend on the outcome of commercial negotiations. If appropriate, ComReg will implement the latter obligations by way of Direction to the SMP MNO.

6.88 ComReg believes that the obligations set out in this section are the minimum necessary to ensure that access to the mobile networks on non discriminatory terms and conditions can be obtained and by regulatory means, if necessary. In selecting the appropriate remedies for this market ComReg has abided by its principles to be applied for selecting remedies, as outlined above. As such ComReg believes that the remedies put forward in this section are in line with Section 12 of the Communications Regulation Act 2002, Article 8 of the Framework Directive and the ministerial directions, and that these remedies foster investment, promote choice and competition, and safeguard end-user interests where market forces do not.

7 Regulatory Impact Assessment

Legislative basis

Summary of consultation issue

7.1 The Ministerial Direction (issued by the Minister for Communications Marine & Natural Resources in accordance with S13 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."

7.2 Regulation 9(1) of the Access Regulations states that: "Where an operator is designated as having significant market power on a relevant market as a result of a market analysis carried out in accordance with Regulation 27 of the *Framework Regulations*, the Regulator shall impose on such operator such of the obligations set out in Regulations 10 to 14 as the Regulator considers appropriate". Furthermore, paragraph 21 of the *SMP guidelines* says, "if NRAs designate undertakings as having SMP, they must impose on them one or more regulatory obligations, in accordance with the relevant Directives and taking into account the principle of proportionality." ComReg is therefore compelled to impose at least one obligation where an undertaking is designated to have SMP.

7.3 ComReg can impose any or a combination of obligations from those obligations listed in Regulation 10 to 14 of the *Access Regulations*[142]. Under Regulation 9(6) of the *Access Regulations*, obligations shall be 'based on the nature of problem identified; be proportionate and justified in the light of the objectives laid down in section 12 of the Act of 2002 and only be imposed following consultation in accordance with Regulations 19 and 20 of the *Framework Regulations'*.
The regulatory impact assessment is required to assess whether the range of obligations proposed are proportionate and justified and meet ComReg's objectives in terms of the promotion of competition, the development of the internal market and the promotion of the interests of end-users.

7.4 In considering these issues, the principles proposed in "Regulating Better: A Government White Paper setting out six principles of Better Regulation"[143], provide useful assistance. The criteria to be considered when undertaking a regulatory impact assessment include:

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142 European Communities (Electronic Communications Networks and Services) (Access) Regulations 2003, S.I No. 305 of 2003.

143 Regulating Better: A Government White Paper setting out six principles of Better Regulation". Appendix 1 – Regulatory Impact Analysis.

- Identification or quantification (where possible) of impacts
- Structured consideration of alternatives to regulation and of different regulatory approaches
- Built-in comprehensive, consultation processes
- Formal consideration of compliance issues

7.5 The remedies selected are as follows:

- An obligation to provide wholesale network Access on reasonable request
- Non Discrimination
- Cost orientation
- Accounting Separation; and
- Cost Accounting Systems.

7.6 ComReg believes the market analysis process represents a comprehensive review of the market under consideration and is approximate to a regulatory assessment as considered by the Ministerial Direction quoted in 7.1 above.

7.7 Furthermore, ComReg has attempted to uphold the principles outlined in the Government White Paper of Better Regulation[144]. These considerations are explained below. The impact and alternatives have been discussed throughout this consultation process; a review of the market and the implications of regulatory compliance have been considered.

7.8 ComReg has attempted to adhere to the guidance of the *Recommendation on Relevant Markets*; Annex II of the *Framework Directive*; and the relevant competition case law. The scope of the review extends to incorporate the views and suggestions of respondents, wherever possible. ComReg has liaised with the CA through out the process of this review and ComReg notes the view of the CA that regulatory intervention on the basis of market failure is justified in this market. ComReg is satisfied that this review has been carried out comprehensively and that the implications for regulatory intervention have been considered.

7.9 The impact of the remedies proposed has been assessed throughout this market review. ComReg has given structured consideration of alternatives to regulation and of different regulatory approaches, in light of the competition problems identified. Indeed, ComReg has been guided by the principle of minimal intervention, when selecting the remedies to address the market failure. As part of the market analysis and to assess the impact of regulation, a strategic review of the market was

[144] Regulating Better: A Government White Paper setting out six principles of Better Regulation". Appendix 1 – Regulatory Impact Analysis.

undertaken. This has assisted ComReg in its regulatory decision making. This was incorporated in the market analysis and the selection of the proposed remedies.

7.10 ComReg has considered the impact of regulation in this market and deems that it is both appropriate and justified, in light of the market analysis and the competition problems identified. In a market where there is SMP, an access obligation would enable entry for other service providers and stimulate more competitive activity and ultimately lower consumer prices. Ultimately, regulation of the market will promote more sustainable competition in the long run which will benefit end users and the internal market.

7.11 At the outset, ComReg has considered the appropriateness of the regulation proposed and the alternative forms of regulation to address the specific competition problems. Where there is SMP the new regulatory framework obliges ComReg to impose appropriate, proportionate and justified regulation. In this market for wholesale mobile access and call origination where no service provider access agreements exist, despite evidence of demand for such agreements, ComReg considers that it is necessary to impose obligations and has selected the appropriate level of regulation.

7.12 Under the regulatory framework, ComReg does not have the legal discretion to forbear from intervention once a finding of SMP has been made. ComReg has established that the market for wholesale mobile access and call origination is not effectively competitive and as outlined ComReg is compelled to impose some form of regulation.

7.13 The cost of compliance and implementation has been considered and ComReg has proposed a regime which enables SMP operators to avoid certain costs of compliance and implementation by pursuing a market based solution.

7.14 ComReg has concluded that the market is not effectively competitive and that there is joint dominance in this market. The structural characteristics of the market are such that require a stimulus to encourage competition. Through the remedies imposed ComReg aims to engender competition in retail prices; the most effective way of achieving this is to encourage market entry. ComReg proposed two remedies in its original consultation, to address the structural issues identified in the market and the lack of access agreements. Firstly, ComReg proposed mandating national roaming and secondly mandating wholesale service provider access. ComReg welcomes the national roaming agreement which was reached between O_2 and Meteor, following ComReg's consultation. The agreement assists Meteor to compete more effectively by offering comparable coverage to the other operators. The agreement has the potential to increase competition in the market[145].

7.15 ComReg is not convinced however that national roaming alone will solve the structural problems in the market and for that reason ComReg had also considered mandating wholesale service provider access in the original consultation. ComReg believes there is further scope for competition and the introduction of service providers would benefit end users in terms of increasing choice and price.

7.16 ComReg considers that despite the roaming agreement with O_2, perceptions on national coverage will take time to impact customers. Meteor's ability to be disruptive, particularly in the post paid market segment where it currently holds 1% of the market, will be hampered by its inability to match the customer acquisition and marketing spend of the main two operators.

7.17 ComReg has considered the impact fringe competition on the collective dominance position of Vodafone and O_2 and assessed the impact Meteor and 3 will have on the market in the coming years. It is ComReg's view that Meteor will benefit from national roaming and is likely to increase its market share in the coming years however with national roaming Meteor would be expected to compete more aggressively in the post paid market space particularly for the SME and corporate segment in the market. Currently, they have a very small share, less than 1%, of that market and will therefore take longer to establish a credible market alternative to the established operators in the post-paid market. The entry of 3 into the market is a further source of potential competition. It is expected 3 will offer commercial services in 2005. As a 3G operator new to Ireland 3 would be expected to take longer to establish initial market share particularly in the untried 3G market. Experience from other markets show that new 3G entrants have struggled to gain market share. In the UK for example 3 was the first to launch 3G services and had first mover advantage yet its market share is approx 2%. It would be expected that 3 in Ireland will not have first mover advantage and would therefore from the outset face competition for new business.

7.18 In formulating the regulatory approach, ComReg has looked at other markets where service provider access has been available. ComReg has identified that the competition problem on the market for wholesale mobile access and call origination, is denial of access and hence market foreclosure. The most appropriate remedy is to mandate access to the market. Enabling access seekers to enter the market should address the existing pent up demand and pave the way for more competition. It is notable particularly in Denmark and the UK that the introduction of service providers has led to more price competition and choice for the consumer.

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145 Indirect access providers, as distinct from mobile network operators (MNOs), do not own their own mobile networks. However there is great variety in the types of indirect access which may be provided and there is increasing focus on brand rather than technical infrastructure. In their more extensive form, Mobile Virtual Network Operators (MVNOs) provide access and origination and termination, but also buy the interconnection which allows their customers to make complete calls. The most common form of indirect access is provided by resellers who typically bulk-buy minutes from MNOs. In this paper the term indirect access will be used to denote both MVNOs and resellers.

7.19 While MNOs have traditionally acquired licences to operate a new mobile network, indirect mobile service providers have entered markets by means of commercial negotiation with existing mobile network operators and/or regulatory intervention by a National Regulatory Authority (NRA).

7.20 In some cases regulatory intervention, either in the form of mandated network access or specific legislation has helped create the conditions for entry by indirect access players. This is particularly evident in Denmark; in 1996 the Danish NRA mandated that access be provided to MVNOs by MNOs under Act number 468, which states that MNOs are required to meet all reasonable requests for establishing or modifying interconnection agreements on national roaming. Service providers can complain to the regulator in the event that commercial negotiations breaking down.

7.21 However the majority of market entry in this market in the EU has occurred as a result of inter-operator commercial negotiation, either using a wholesale model based on retail-minus pricing, or a joint-venture, such as that between Virgin Mobile and T-Mobile in 1999.

7.22 The success of this entry strategy hinges on the willingness of MNOs to enter commercial negotiations with indirect access providers. Analysis of a number of European markets has established that the newest and/or smallest MNOs have been most inclined to offer indirect access on their network, however this is not always the case. The table below illustrates the range of agreements which have been struck by MVNOs in Europe:

Country	MVNO	Host MNO	MNO status
Belgium	United Telecom	BASE	3rd entrant
	Scarlet Telecom	BASE	3rd entrant
	Euphony	Mobistar	2nd entrant
	Transatel	BASE	3rd entrant
Denmark	Telmore	TDC	Incumbent
	CBB Mobil	Sonofon	2nd entrant
	Debitel	TDC	Incumbent
	Tele2	Sonofon	2nd entrant
Finland	Saunalahti	TeliaSonera	Incumbent
	ACN	TeliaSonera	Incumbent
France	Debitel	SFR	Incumbent
	Ryanair	Bouygues	3rd entrant
Germany	Tchibo	**O_2**	4th entrant
Netherlands	Scarlet Telecom	Orange Netherlands	4th entrant
	Tele2	Telfort	3rd entrant
Sweden	Sense	TeliaSonera	Incumbent
	Unity Mobile	TeliaSonera	Incumbent
UK	Virgin Mobile	T-Mobile	4th entrant
	Tesco Mobile	**O_2**	2nd entrant
	Carphone Warehouse	T-Mobile	4th entrant
	Sainsbury's Mobile	**O_2**	2nd entrant
	BT Mobile	**O_2 originally, Vodafone from November '04**	2nd entrant

MVNO activity in Europe

Country	MVNOs
Belgium	12
Denmark	20
Finland	5
France	2
Germany	1
Netherlands	4
Norway	14
Sweden	8
United Kingdom	5

7.23 As part of this regulatory impact assessment, ComReg has examined the impact of regulation on the SMP operators and on the market as a whole. ComReg favours the least interventionist form of regulation and would prefer that any access agreement be agreed within the scope of commercial negotiations.

7.24 ComReg notes that in a competitive market there are several incentives for network operators which may make it attractive to offer wholesale access to indirect service providers.

7.25 Network operators have spare capacity or spectrum on their networks. By encouraging indirect access they can boost usage of their networks without the upfront costs of having to acquire these additional customers themselves. It is estimated that the average mobile network operator's costs are split between retail costs (billing, customer care etc.) and network costs, 45% and 55% respectively. By maximising the use of their mobile networks, MNOs can potentially generate higher returns on the capital employed on their network. Moreover, indirect service providers can be effective at targeting untapped segments of the market and in fact absorb the customer acquisition cost in the process.

7.26 Moreover, indirect service providers can deliver more efficient customer management and retail channels. Many indirect access providers target niche markets such as youth segments (e.g. Disney, ID&T in the Netherlands), immigrant communities (e.g. Transatel in the Netherlands and Belgium) or historically low-ARPU segments such as the over 55s age group. In doing so they can grow the market and absorb the customer acquisition costs in the process. This allows the mobile network operator to focus on their existing markets while still enjoying some of the network and economic benefits (including the potential for entry to new markets) of those niche users via the indirect access partner.

7.27 Furthermore, by growing the number of indirect users and hence traffic to their networks, existing MNOs can benefit from increased revenues via interconnect payments from the indirect access provider. Network operators, as owners of their own network and with deeper pockets to spend on these networks, can differentiate themselves from indirect service providers by competing on innovative and higher value services rather than price.

7.28Notwithstanding the benefits that more competition brings to the market, such as lower prices and greater choice, the experience in other markets for MNOs has in general been positive. The market share attracted by the MVNOs and service providers has generally been 10%. The viability of the MVNO model has been shown in the UK, where the success of Virgin Mobile, which enabled it to launch an initial public offering this year.

7.29ComReg considers the option to impose a remedy or suite of remedies which is intended to have the least impact on the SMP operators. However, the obligation must be appropriate to address the competition problems identified. In the case of a dispute, commercial terms should take precedence over intervention and ComReg will ask assess if operators and access seekers are negotiating in good faith. ComReg has outlined its preferred level of intervention and has attempted to ensure that the remedies are proportionate, appropriate and justified.

7.30 The alternative forms of regulation and the overall impact have been considered and the views of respondents to the consultation have been taken on board. While the repercussions of the competition problems manifest at both a wholesale and a retail level, ComReg seeks to address these problems through regulation at the wholesale level only. It is not clear to ComReg, given the competition problems that any other remedy other than access could address the competition problems. While retail price control and supporting remedies could be put in place, the remaining remedies would not address the unmet demand for access. For this reason ComReg is of the view that the appropriate suite of remedies has been selected for this market. However, it should be noted that ComReg has made every attempt in its selection of remedies and of the detail of how the remedies should be implemented, to be proportionate and enable the solutions to be agreed commercially. Furthermore, the issue of compliance and the cost of regulatory implementation has been given due consideration and ComReg has proposed a regime which gives the opportunity to SMP operators to avoid certain costs of compliance and implementation by pursuing a market lead solution.

7.31 ComReg launched its consultation process on the market for wholesale access and call origination in document number 04/05 on 27 January 2004. This response to consultation has taken on board all of the responses to consultation, which have informed the findings of this market review.

7.32 ComReg, taking account of its obligations under Section 12 of the Communications Act 2002 and the Directives and Regulations of the New Regulatory Framework believes the remedies listed in Section 6 are proportionate and justified.

Respondents' views

7.33 One respondent commenting on the national roaming remedy proposed in the consultation that it was inconsistent with the principles set out in Article 8 of the Framework Directive and article 12 of the access regulations. This respondent argued that ComReg was negatively impacting future investment, investment in maintenance of networks and investment in new technologies.

7.34 O_2 expressed concern that ComReg had failed to carry out a Regulatory Impact Assessment (RIA) in advance of the consultation. O_2 believes it is critical for ComReg to conduct a RIA in advance of introducing any of the remedies proposed.

7.35 Meteor expressed strong disapproval of the service provider obligations proposed in the consultations and added that there is an incentive on Meteor and 3 with national roaming agreements, to provide wholesale access services on commercial basis to service providers.

ComReg's position

7.36 ComReg notes the respondents' comments and thanks all respondents for their input. ComReg acknowledges the respondents' comments and notes that in the first instance, the purpose of carrying out a RIA is to assess the impact on the overall market. This impact analysis, which has been incorporated into the market analysis and is summarised in this section, takes into account the current need for regulation and prospective developments in the market, as outlined above.

7.37 Following the assessment of the market and having noted the views of respondents, ComReg continues to believe that there is failure in the market and hence that regulatory intervention is necessary to safeguard sustainable competition.

7.38 In the first instance this implies that ComReg is obliged to impose some form of regulation and this should be appropriate to the competition problem it seeks to address. Forbearance by ComReg would not be a regulatory option.

Conclusion

7.39 The impact and appropriateness of regulation has been examined comprehensively and strategically; ComReg has carried out a thorough review of the market and is convinced of the need for regulation at the wholesale level. The remedies proposed are both proportionate and justified as they encourages market solutions and only *trigger* intervention where this cannot be achieved. Compliance costs can be avoided by pursuing a market based solution. The impact of regulation has been considered, not only with a view to the SMP operators, but also taking into consideration the development of the market as a whole. For these reasons, ComReg believes that the remedies are appropriate and justification. The appropriateness, proportionality and justification of remedies have been specifically examined in Section 6 of this paper.

7.40 ComReg concludes therefore that mandating access is proportionate in terms of ComReg's objectives of promoting the interests of end users and promoting competition. Indirect access providers generally offer lower prices and introduce more price competition in segments of the market, they also benefit mobile network operators in terms of efficient use of networks and market positioning and innovation.

8 Submitting Comments on the draft Direction

8.1 All comments 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 9th December to 20th January 2005 during which ComReg welcomes written comments on the question below.

Question 1: Do respondents believe that the draft text of the proposed Decision set out in Annex C is, from a legal, technical and practical perspective, sufficiently detailed, clear, precise and intelligible with regard to the specifics of the remedies proposed? Please elaborate on your response.

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 the response. Such information will be treated as strictly confidential.