

THE ASSESSMENT OF COLLECTIVE SMP

Lessons Learned from the First Round of Market Review

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[Abstract] The legal uncertainty in the application of collective dominance by competition authorities under EU competition law raises an interesting question on how its equivalent concept, collective significant market power, should be employed by the national regulatory authorities in the context of the EU 2003 Regulatory Framework in the electronic communications sector. This article aims to shed some light on the implementation of collective significant market power from an empirical point of view. It will first examine the decisions of the European Commission that involve the assessment of collective significant market power under Article 7 of the Framework Directive in the first round of market review, and then provide a general overview of the application of collective significant market power based on these decisions, following a four-step analysis: (1) conduciveness to tactic coordination, (2) ability and incentives to detect deviation, (3) ability and incentive to retaliate, and (4) an SMP position.

[Keywords] Collective Significant Market Power, Collective Dominance, Electronic Communications Regulation, Competition Law, European Union

1. INTRODUCTION

The 2003 Regulatory Framework bases the main part of its regulation aiming at controlling significant market power (SMP), the so called the SMP regime, on European competition law methodologies and principles. The SMP regime, similar to the dominance regime under Article 82 of the EC Treaty (Article 82), adopts a three step analysis – i.e. defining relevant markets, designating undertaking(s) with SMP, and imposing regulatory remedies – in order for the national regulation authorities (NRAs) to ensure effective competition. At the second step of the SMP regime lies the assessment of collective SMP, or joint SMP, which is a concept equivalent to that of collective dominance, or joint dominance, of Article 82.

The problem, however, is that the underdevelopment of collective dominance in the area of EU competition law could lead to legal uncertainty in the application of collective SMP, despite that Annex II of the Framework Directive¹ provides a set of

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¹ Directive 2002/21/EC of the European Parliament and of the Council of March 7, 2002 on a common regulatory framework for electronic communications networks and services, [2002] O.J. L108/33 (Framework Directive).

criteria to facilitate the analysis of collective SMP and the European Commission (the Commission) summarises the practice of collective SMP in the area of EU competition law in the Guidelines on Market Analysis and the Assessment of Significant Market Power for Electronic Communications Regulation² (the SMP Guideline). This is especially so when one considers that electronic communications regulation and competition law have different objectives and limits (De Streel, 2008).

This article seeks to examine, from an empirical point of view, the assessment of collective SMP enunciated by the Commission decisions based on Article 7 of the Framework Directive (the Commission decisions) which requires the NRAs to notify the Commission of every market review they conduct. To do this, a brief introduction to the practices related to collective dominance under Article 82 will first be given. The next four parts will then attempt to provide an overview of the application of collective SMP, based on the four steps to approaching collective SMP used by the NRAs and the Commission. Finally, the last part will conclude with some remarks on the future development of collective SMP.

2. COLLECTIVE DOMINANT POSITION

Since the concept of collective SMP is equivalent to the concept of collective dominance in the area of competition law, this article will first take a look at the definition of collective dominance, as well as its practices in the competition law area, in order to be able to provide a better overview of collective SMP in Part 3-6. Next, the link between collective dominance and SMP will be established.

2.1 Two elements

Although collective dominance is easily identifiable in the context of Article 82, its definition by the European courts appeared much later. The issue of collective dominance was first raised in the Case *Alsatel casel*³ in 1988. However, a first attempt to *define* collective dominance was made in 1992 by the European Court of First Instance (the CFI) in the *Flat Glass* judgment, where it was put forward that

*“[t]here is nothing, in principle, to prevent two or more independent economic entities from being, on a specific market, united by such economic links that, by virtue of that fact, together they hold a dominant position vis-à-vis the other operators on the same market. This could be the case, for example, where two or more independent undertakings jointly have, through agreements or licenses, a technological lead affording them the power to behave to an appreciable extent independently of their competitors, their customers and ultimately of their consumers.”*⁴

The two elements of collective dominance were already specified in this judgement, though not explicitly. It was in the later Case *Compagnie Maritime Belge* that the European Court of Justice (the ECJ) further clarified the two elements by stating that

² The Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services, 2002/C 165/03, 11.7.2002, C 165/6 (the SMP Guideline).

³ Case 247/86, *Alsatel v Novasam* [1988] ECR 5987.

⁴ Joint Cases T-68, 77, 78/89, *Societa Italiana Vetro SpA and other vs. the Commission*, [1992] ECR II 1403, para 358.

*“for the purposes of analysis under Article 86 of the Treaty, it is necessary to consider whether the undertakings concerned together constitute a collective entity vis-à-vis their competitors, their trading partners and consumers on a particular market. It is only where that question is answered in the affirmative that it is appropriate to consider whether that collective entity actually holds a dominant position and whether its conduct constitutes abuse.”*⁵

Accordingly, the concept of collective dominance comprises of two elements: a collective entity and a dominant position. Given these two elements, the only difference between single dominance and collective dominance lies in single dominance being held by one undertaking, while a collective dominance is held by a collective entity comprising of several undertakings. Furthermore, the assessment of collective dominance should be similar to single dominance, so long as the first element of a collective entity has been established.

2.2 Two Economic Links

However, the analysis of the first element, a collective entity, is rather complicated. This section will give a brief introduction to this concept within the meaning of collective dominance based on several milestone judgements.

In Case *Compagnie Maritime Belge*, the ECJ shed some analytical light on the concept of collective entity:

*“[i]n order to establish the existence of a collective entity, it is necessary to examine the economic links or factors which give rise to a connection between the undertakings concerned. In particular, it must be ascertained whether economic links exist between those undertakings which enable them to act together independently of their competitors, their customers and consumers.”*⁶

Importance is given by the ECJ to the economic links between the undertakings concerned. Nevertheless, economic link is another concept which needs further definition. Alongside this judgement, the European courts have thus made several attempts to clarify this concept. Two scenarios in which economic linking might take place have been indicated by the European courts: structural linking, and an oligopolistic market structure.

2.2.1 A structural link

A structural link refers to a connection between undertakings under consideration, which may flow from the nature and terms of an agreement, a decision or concerted practice between the undertakings in question, or from the way in which they are implemented, provided that the agreement leads the undertakings in question to present themselves, or act together, as a collective entity. “This may for instance, be the case if undertakings have concluded cooperation agreements that lead them to

⁵ Joined cases C-395/96 P and C-396/96 P, *Compagnie maritime belge transports SA, Compagnie maritime belge SA and Dafra-Lines A/S v the Commission*, European Court reports 2000 Page I-01365, para. 39.

⁶ *Ibid*, para. 130.

coordinate their conduct on the market. It may also be the case if ownership interests and other links in law lead the undertakings concerned to coordinate.”⁷

Given that a structural link involves a contractual relationship between undertakings, the application of collective dominance based on structural links may overlap with Article 81 of the EC Treaty (Article 81), which is acknowledged by the ECJ:

*“[t]he applicability to an agreement of Article 85 of the Treaty (now Article 81 of the EC Treaty) does not prevent Article 86 of the Treaty (now Article 82 of the EC Treaty) being applied to the conduct of the parties to the same agreement, provided that the conditions for the application of each provision are fulfilled.”*⁸

Despite of this overlap, collective dominance has added value, in contrast with Article 81, that “collective dominance can be abused when the undertakings’ anticompetitive behaviour is the result of an agreement which has been exempted by Article 81(3) or by a Block Exemption” (Monti, 2001).

2.2.2 An oligopolistic market structure

In the alternative, collective SMP can also be established, without recourse to structural links, by the existence of:

*“a tight oligopoly within which, in a market with the appropriate characteristics, in particular in terms of market concentration, transparency and product homogeneity, those parties are in a position to anticipate one another’s behaviour and are therefore strongly encouraged to align their conduct in the market, in particular in such a way as to maximise their joint profits by restricting production with a view to increasing prices”*⁹.

The comprehensive consideration by the European courts of oligopolistic markets to date has been in the sphere of merger control, as enunciated in the judgements, for example, of *Gencor*,¹⁰ *Airtours*¹¹ and *IMPALA*.¹² In particular, in Case *Airtours*, the CFI set out the three criteria for a finding of collective dominance in an oligopolistic market, which are:

“- first, each member of the dominant oligopoly must have the ability to know how the other members are behaving in order to monitor whether or not they are adopting the common policy. As the Commission specifically acknowledges, it is not enough for each member of the dominant oligopoly to be aware that interdependent market conduct is profitable for all of them but each member must also have a means of knowing whether the other operators are adopting the same strategy and whether they are maintaining it. There

⁷ DG Competition discussion paper on the application of Article 82 of the Treaty to exclusionary abuses, Brussels, December 2005, para 45, available at: <http://ec.europa.eu/comm/competition/antitrust/art82/discpaper2005.pdf>.

⁸ Case *Compagnie maritime*, para 130, *supra* note 5.

⁹ The SMP Guideline, para 91, *supra* note 2.

¹⁰ Case T-102/96, *Gencor vs. the Commission*, II-879, [1999] 4 CMLR 971.

¹¹ Case T-342/99, *Airtours vs. the Commission*, [2002] ECR II-2585, [2002] 4 CMLR 317.

¹² Case T-464/04, *Independent Music Publishers and Labels Association (IMPALA) vs. the Commission*, [2006] E.C.R. II-2289.

must, therefore, be sufficient market transparency for all members of the dominant oligopoly to be aware, sufficiently precisely and quickly, of the way in which the other members' market conduct is evolving;

- second, the situation of tacit coordination must be sustainable over time, that is to say, there must be an incentive not to depart from the common policy on the market. As the Commission observes, it is only if all the members of the dominant oligopoly maintain the parallel conduct that all can benefit. 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;

- third, to prove the existence of a collective dominant position to the requisite legal standard, the Commission must also establish that the foreseeable reaction of current and future competitors, as well as of consumers, would not jeopardise the results expected from the common policy.”¹³

This illustrates another added value of using Article 82 vis-à-vis Article 81: Article 82 can be used to take action against the anti-competitive behaviours of a group of undertakings even when there is no evidence of anti-competitive agreements, decisions or concerted practices (which is one of the crucial conditions of Article 81).

2.3 Four steps for collective SMP assessment

Ex ante assessment of SMP, i.e. the SMP regime, is not conditioned on the existence of anti-competitive agreements, decisions or practices within the meaning of Article 81 at the time of market review. Therefore, collective dominance based on structural links is less relevant than the existence of oligopolistic power to collective SMP assessment.

The three criteria put forward in *Airtours* require the assessment of collective dominance to focus on some market characteristics conducive to tacit coordination. In accordance with the *Airtours* criteria, the Commission thus requires the NRAs, when assessing collective SMP, to analyse

“(a) whether the characteristics of the market makes it conducive to tacit coordination; and

(b) whether such form of coordination is sustainable that is, (i) whether any of the oligopolists have the ability and incentive to deviate from the coordinated outcome, considering the ability and incentives of the non-deviators to retaliate; and (ii) whether buyers/fringe competitors/potential entrants have

¹³ Case *Airtours*, para 62, *supra* note 11.

*the ability and incentive to challenge any anti-competitive coordinated outcome.*¹⁴

According to this wording, the Commission’s recommended analysis comprises of four steps: (1) finding conduciveness to tacit coordination, (2) finding the ability and incentives to detect deviation, (3) finding the ability and incentives to retaliate, and (4) finding an absence of constraints imposed by consumers and potential competitors. The subsequent sections are dedicated to appraising each of these steps in turn.

Table 1: Conditions for the assessment of collective SMP

Two elements	Three criteria	Four steps
1. A collective entity	1. Market Transparency	1. Conduciveness to tacit coordination
	2. Sustainable coordination	2. Ability and incentives to detect deviation
		3. Ability and incentives to retaliate
2. An SMP position	3. Countervailing buying power and potential competition	4. Absence of constraints imposed by consumers and potential competitors

3. CONDUCTIVENESS TO TACIT COORDINATION

3.1 Introduction

As far as the electronic communications markets are concerned, there is a general concern that these markets, especially at the wholesale level, are conducive to tacit collusion. For example, it is of no surprise that there are high barriers to entry, few competitors with similar cost structures, and constant interactions between market players based on agreements of access and interconnection, or infrastructure share of a mobile telephony market. This may lead to two preliminary conclusions: (1) that there is an oligopoly in the mobile telephony market; and (2) that these oligopolistic mobile providers possess the characteristics – and the incentive – necessary to engage in collective dominant actions that could harm consumers (Ryan, 2005). Since a *prima facie* case of collective SMP can be established, the subsequent analysis of collective SMP in practice is nothing more a search for market characteristics that can negate this preliminary conclusion. Annex II of the Framework Directive and the SMP Guidelines lists 16 criteria that can be used in the analysis of collective SMP. These criteria are: market concentration, transparency, mature market, stagnant or

¹⁴ The SMP Guideline, para 96, *supra* note 2.

moderate growth on the demand side, low elasticity of demand, homogeneous product, similar cost structures, similar market shares, lack of technical innovation and mature technology, absence of excess capacity, high barriers to entry, lack of countervailing buying power, lack of potential competition, various kind of informal or other links between the undertakings concerned, retaliation mechanisms, and lack or reduced scope for price competition.

However, two problems remain with this list. First, the criteria are listed for the assessment of collective SMP in general and, accordingly, not all of them are particularly related to the analysis of this step, conduciveness to tacit coordination. The Commission decisions suggest that only 11 criteria are relevant here: market concentration, mature market, stagnant or moderate growth on the demand side, low elasticity of demand, homogenous product, similar cost structures, similar market shares, lack of technical innovation and mature technology, absence of excess capacity, high barriers to entry, and various kind of informal or other links between the undertakings concerned. Concerning the other 5 criteria, transparency is rather relevant to the analysis of the second step; retaliation mechanism and lack of reduced scope for price competition in most cases apply only to the third step; and an effective retaliation mechanism and lack of countervailing buying power and lack of potential competition is more related to the last step.

The second problem is that neither the 2003 Regulatory Framework nor the Commission specifies the methods to assess these criteria; nor is priority given to any criterion, or several of them. The former would lead to evaluating the same criterion in different way between authorities while the latter would render difficulties when the assessment of different criteria indicates in different degrees the existence/absence of collective SMP.

The following sections, while examining how each of these criteria is appraised, will also attempt to attach values to different criteria. After exploring the Commission decisions related to collective SMP, the 11 criteria¹⁵ relevant to the analysis of the first step are divided into three groups: (1) direct market characteristics, (2) important market characteristics, and (3) ambiguous market features on which the Commission and the European Regulators Group (the ERG) hold different views.

3.2 Direct market characteristics

Direct market characteristics can directly counteract the preliminary conclusion of the existence of collective SMP. There are two direct market characteristics: low barriers to entry and asymmetric cost structures.

3.2.1 Low barriers to entry

Since it is generally recognised that collective SMP cannot be sustainable in a market with no high entry barriers (Rey, 2004), a finding of low entry barriers can be evidence of absence of collective SMP.

¹⁵ It should be noted that in the following some criteria will be grouped together because they cannot be evaluated independently.

It should be noted that the electronic communication sector is in general characterised by high entry barriers, which more specifically refer to the legacy infrastructure of the incumbents that is not easily replicable. In the assessment of single SMP, establishment of paralleled infrastructure by alternative operators can be used as evidence of low entry barriers. Nevertheless, the approach does not apply to the assessment of collective SMP, since alternative operators with replicated infrastructure, in most cases if not always, are also suspected of engaging in collective SMP. In this case, the NRAs should examine the possibility of undertakings without fully replicated infrastructure, rather than alternative operators in general, to duplicate the incumbents' infrastructure. If it is the case that costs to build new infrastructure are substantially reduced, the existence of low, and not high, entry barriers can be found. However, this is not the usual case in reality. Furthermore, markets without high entry barriers should be excluded from *ex ante* regulation at the beginning of the three step analysis, according to the Commission Recommendation on relevant markets.¹⁶ Therefore, when moving to the stage of collective SMP assessment, the existence of high entry barriers must be already established.

However, entry barriers may be low in the subsequent two cases. In the first case, some undertakings, which have already fully duplicated the incumbents' infrastructure and nevertheless have not yet provided services to third parties (captive sales), have ability and incentive to serve third parties (merchant sales), provided that the formation of collective SMP in the merchant markets leads to monopolistic profits. This potential competition would easily collapse the collective SMP. For example, in Estonian Market 10,¹⁷ there are only two undertakings actually active in the market for fixed call transit services. Nevertheless, two other operators have already built telecommunications networks relying on trunk segments of leased lines and supplied transit services, although they have not yet actually provided transit services to third parties. These two operators could, however, easily enter this market if they have extra capacity, or the price of transit services is high enough. The barriers to entry in this market are low, and a finding of collective SMP cannot be warranted. Similar method can also be found in other Commission decisions.¹⁸

The second case, which has appeared in several Commission decisions concerning wholesale markets for mobile access and call origination,¹⁹ is that extra frequencies or licenses can be made available for new entrants. However, there is a flaw in this analysis. A simple grant of a license or frequency does not immediately lead to effective competition. It usually takes new entrants years, or at least longer than the period of a market review, to build infrastructure and develop their customer base to the extent of a full-fledged competitor, which can be observed in the development of 3G operators. It is accordingly doubtful that the making available of extra frequencies can be a solid argument for the existence of low entry barriers.

¹⁶ Commission Recommendation of 17 December 2007 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common Regulatory Framework for electronic communications networks and services, 2007/879/EC, 28.12.2007, O.J. L 344/65.

¹⁷ Case EE/2007/0670 (Estonian Market 10), 24/08/2007.

¹⁸ Case CZ/2006/0448 (Czech Market 10), 10.8.2006 and Case SI/2006/0362 (Slovenian Market 14), 21.4.2006.

¹⁹ Case SE/2005/0203 (Swedish Market 15), 15.07.2005; Case LV/2006/0545 (Latvian Market 15), 15/12/2006; Case DK/2005/0243 (Danish Market 15), 21.10.2005; Case CZ/2006/0405 (Czech Market 15), 23/6/2006; Case PL/2008/0756 (Polish Market 15), 26/03/2008.

3.2.2 Asymmetric cost structure

“Similar cost structures would make muted price competition easier, as for a given price level similar costs will produce similar levels of profit. If firms have different marginal cost functions, their individual price preferences will differ at any given output level. This makes agreeing on a common profit-maximising price more difficult.”²⁰

That asymmetric cost structure is an obstacle to the establishment of collective dominance is a view also shared by economists, for example Rey (2004) arguing that “[i]t is easier to collude equals, that is, among firms that have similar cost structure, similar production capacity, or similar ranges of products. Such cost asymmetry has several implications. First, firms may find it difficult to agree to a common pricing policy, since firms with a lower marginal cost will insist in lower prices than what the other firms would wish to sustain. More generally, the diversity of cost structures may rule out ‘focal point’ (which will be discussed subsequently) for pricing policies and so exacerbate coordination problems”.

In practice, asymmetric cost structures are sufficient to prove the absence of collective SMP in the Commission decisions. For example, the Swedish NRA bases its conclusion of the absence of collective SMP in Market 15 mainly on the considerable difference in the cost structures of the market’s three largest undertakings.²¹ In another case concerning Slovakian Market 15, the Commission casted some doubt on the Slovakian NRA’s conclusion of absence of collective SMP because of an absence of pent-up demand, an indicator that will be discussed later. However, the Commission still considered the conclusion to be solid, based on an observation of the significantly different profitability margins between those operators.²² Employing the existence of asymmetric cost structures as a major indicator for the absence of collective SMP can also be frequently observed in other Commission decisions.²³

Moreover, the NRAs employ different methods to evaluate cost structures between undertakings, which are not fixed by the Commission. For example, the Spanish NRA focuses on the proportion between fixed and variable costs;²⁴ the Maltese NRA’s analysis is based on the similar technology and infrastructure coverage of all the

²⁰ The ERG, Revised ERG Working paper on the SMP concept for the new regulatory framework, ERG (03) 09rev3, September 2005, pp 11.

²¹ Swedish Market 15, *supra* note 19.

²² Case SK/2006/0442 (Slovakian Market 15), 10.8.2006.

²³ Case EL/2006/0492 (Greek Market 15), 29.9.2006; Case UK/2003/0001 (UK market 15), 29.08.2003; Slovakian Market 15, *ibid*; and Polish market 15, *supra* note 19.

²⁴ The Spanish NRA believes that Vodafone and Amena have a similar cost structure in terms of distribution between fixed and variable costs, because the proportion of fixed costs in 2004 was 35.56% for Telefonica, 40.29% for Vodafone and 40.73% for Amena. Case ES/2005/0330 (Spanish Market 15), 30.1.2006.

operators;²⁵ and the Polish NRA examines customer acquisition costs and other variable costs.²⁶

3.3 Important market characteristics

Important market characteristics refer to the criteria that are either immeasurable in practice, or are not so relevant to the electronic communications sector, despite their theoretical importance to the analysis of collective SMP.

3.3.1 Market concentration

“Collective dominance is more likely in a highly concentrated market in which a few market players (facilitates co-ordination by reducing transaction and monitoring costs) have a high market share.”²⁷

On the other hand, “collusion is more difficult when there are more competitors” (Rey, 2004). The assessment of market concentration depends on two factors, the number of undertakings and their respective market shares. However, two practical problems remain with the appraisal of each factor.

The first problem is that there is no common practice on a specified number of undertakings in a market where collective SMP can be established *prima facie*. The Commission practice that “[a]pproximately 50% of the Commission’s collective dominance merger decisions concern ‘three-to-two’ mergers” and “[a]pproximately one-third of the Commission collective dominance merger concern ‘four-to-three’ mergers” (Baxter and Dethmers, 2006), may suggest that concerns of collective SMP should be raised more in markets where there are 2 or 3 market players. However, the Commission decisions concerning collective SMP witness frequent appearance of collective SMP concern in markets where there are more than 3 players.²⁸

The second problem concerns the Herfindahl-Hirschman Index (HHI), which is the most used method to evaluate market concentration based on market shares. Concerns are twofold. First, markets where the HHI is between 1000 and 1800 are usually considered to be moderately concentrated, and those for which the HHI is in excess of 1800 are considered to be concentrated. Nevertheless, the HHI values for all the markets involving collective SMP analyses are far beyond 1800. The NRAs evaluate these HHI values in different ways, which makes uncertain the meaning of an HHI to the analysis of collective SMP. For example, the HHI in Czech Market 14 is about 2525, which is probably the lowest in all the Commission decisions related to

²⁵ The Maltese NRA argues that Vodafone and go mobile have a similar cost structure resulting from similar network infrastructure. Both operators have coverage of 99% of the territory of Malta. Although Vodafone has installed a GSM900 network and go mobile a GSM1800 network, the Maltese NRA underlines that both operators use a fairly equal number of base stations and controllers. Case MT/2006/0443 (Maltese Market 15), 10.8.2006.

²⁶ Polish market 15, *supra* note 19.

²⁷ The ERG working paper, pp 10, *supra* note 20.

²⁸ *E.g.*, 10 undertakings in Czech Market 10, *supra* note 18; 6 undertakings in Slovenian Market 14, *supra* note 18; 5 undertakings in Swedish Market 15, *supra* note 19; 5 undertakings in Case NL/2005/0242 (Dutch Market 15), 13.10.2005; 4 undertakings in Case LV/2007/0573 (Latvian Market 14), 29.1.2007; 4 undertakings in Case IT/2005/0259 (Italian Market 15), 9.11.2005; 4 undertakings in Case DE/2007/0627 (German Market 15), 21/05/2007; 4 undertakings in Greek Market 15, *supra* note 23; 5 undertakings in Case AT/2004/0063 (Austrian Market 15), 25.06.2004.

collective SMP. However, it is considered indicating low market concentration, despite that it is still much higher than 1800. Secondly, a comparative analysis of the HHI value in one Member State with those of other Member States does not help either. For example, some NRAs conduct a comparison of the HHI of their own markets with the markets in other Member States. Nevertheless, the Commission contends that the fact that a market in one Member State has a lower HHI score than markets in other Member States is not in itself an indication of its propensity towards, or away from, collective dominance.²⁹

By the reason of these uncertainties, market concentration is not listed as one of the direct market characteristics, despite its importance for the existence or absence of collective SMP.

3.3.2 Mature market and Lack of technical innovation, mature technology

A market is mature when there is no significant growth, or a lack of innovation.³⁰

“[B]ecause of uncertainty over future market conditions, competitors in innovative markets may wish to compete fiercely and gain market share now, in order to have a strong starting position in the next market phase.”³¹

Therefore, an immature market or technical innovation can also be evidence of no collective SMP.

However, the electronic communications markets are, in general, not really innovation-driven. It is perceived in the Commission decisions that mature or old technology is still dominant in most of the relevant markets. Investment in new electronic communications technologies, in most cases, involves large up-front costs and, accordingly, a new technology cannot immediately be turned into a dominant market force. For example, the dominant technology in the mobile market is 2G mobile technology. Although 3G mobile operators are already present in the market, they are nevertheless underdeveloped. The similar situation also occurs in other wholesale markets.

Furthermore, if innovation can constantly take place in a market, the cost structures between undertakings using different technologies would be asymmetric. This would then mean that the market concerned would already meet one of the direct market characteristics, i.e. asymmetry of cost structure, and thereby remove concerns of collective SMP. It suggests that this market feature should be included in the analysis of asymmetric cost structures.

3.3.3 Homogeneous product

“The more similar the products, or the more similar they are perceived by customers, the stronger the potential for price competition between providers and the easier the mutual control; both aspects may increase the incentive and ability to collude. In differentiated product markets, on the other hand,

²⁹ UK market 15, *supra* note 23.

³⁰ Since market growth will be discussed separately in the following subsection, the focus here is only on innovation.

³¹ The ERG working paper, pp 11, *supra* note 20.

*competition does not focus on price alone, but takes place along multiple dimensions, and agreements (tacit or otherwise) are more difficult to reach.*³²

However, the Commission decisions reveal that homogenous products are usually provided by electronic communications operators in each market. Besides, the existence of a homogeneous product should be better taken into account while assessing the asymmetry of costs structures between market players, rather than as an independent criterion.

3.3.4 Similar market shares

As the ERG suggest, “[I]arge imbalances of market shares between suppliers may make collective dominance less likely.”³³ Nevertheless, a practical problem still remains: to what extent market shares between undertakings can be considered similar, given the fact that undertakings are seldom of an identical size. Twenty-six out of forty Commission decisions involving collective SMP assessment actually disclosed information of the market shares of suspected undertakings. Although in eighteen of these Commission decisions,³⁴ the market shares of the first undertakings were less than 1.5 times that of the second undertakings, in eight other cases,³⁵ the first undertakings were more than 1.5-2 times the size of the second undertakings. No clear trend can be observed, however, in the Commission decisions concerning the appraisal of similar market shares.

3.3.5 Various kinds of informal or other links between the undertakings concerned

Evidence of links between undertakings informs on the possibility of collusion. Thus, for example, frequent interaction between the members of an oligopoly facilitates possible collusion. Similarly, collusion is unlikely when firms interact only infrequently, since the short-term gains from undercutting a collusive price can then be “punished” only in the far future (Rey, 2004).

As a matter of fact, there are actually many links between electronic communications undertakings, such as in the form of agreements of access, interconnection, infrastructure sharing and so on, or through “millions of customers and a number of

³² The ERG working paper, pp 11, *supra* note 20.

³³ *ibid.*

³⁴ Maltese Market 15, *supra* note 25; Case IE/2004/0121 (Irish Market 15), 20.1.2005; Case MT/2007/0563 (Maltese Market 12), 29.1.2007; Czech Market 10, *supra* note 18; Case AT/2006/0467 (Austrian Market 14), 25.8.2006; Case CZ/2006/0451 (Czech Market 14), 11.8.2006; Swedish Market 15, *supra* note 19; Italian Market 15, *supra* note 28; Greek Market 15, *supra* note 23; Czech market 15, *supra* note 19; Case BE/2007/0610 (Belgian Market 15), 23/04/02007; Case ES/2006/0460 (Spanish market 17), 24.8.2006; Case SI/2006/0434 (Slovenian Market 17), 7.8.2006; Case PL/2006/0517 (Polish Market 17), 10-XI-2006; Case IT/2006/0393 (Italian Market 17), 7.6.2006; Case IE/2006/0477 (Irish Market 17), 8.9.2006; Case CZ/2006/0452 (Czech Market 17), 10.8.2006; and Case AT/2006/0466 (Austrian Market 17), 25.08.2006.

³⁵ Spanish Market 15, *supra* note 24; Slovenian Market 14, *supra* note 18; Case LT/2006/0406 (Lithuanian Market 15), 28.07.2006; Case SI/2005/0230 (Slovenian Market 15), 26.08.2005; Case LU/2006/0369 (Luxembourgish Market 15), 3.5.2006; Case HU/2004/0096 (Hungarian Market 15), 1.10.2004; Austrian Market 15, *supra* note 28; and Case SE/2006/0496 (Swedish Market 17), 3.10.2006.

‘churning’ customers on the demand side every month”.³⁶ However, the meaning of this criterion is ambiguous, which is acknowledged both by the Commission and the ERG. On the one hand, the SMP Guideline contends that

*“[t]he mere fact, however, that two or more undertakings are linked by an agreement or a concerted practices within the meaning of Article 81 (1) does not, of itself, constitute a necessary basis for such a finding (of collective SMP).”*³⁷

On the other hand, the ERG considers that

*“such evidence (links between undertakings) is not a pre-requisite for finding a collectively dominant position.”*³⁸

Moreover, in practice, no Commission decision has ever based its conclusion on the existence or absence of collective SMP, even partly, on various kinds of informal or other links between the undertakings concerned.

Consequently, various kinds of informal or other links between undertakings concerned may have a collaborating value on the assessment of SMP, but cannot serve as direct evidence of collective SMP.

3.4 Ambiguous market characteristics

Ambiguous market characteristics refer to market characteristics on which the Commission, on one side, and the ERG, on the other, hold contrary views on the appraisal of these market features. Two are discovered: stagnant or moderate growth on the demand side, and low elasticity of demand.

3.4.1 Stagnant or moderate growth on the demand side

Stagnant or moderate growth on the demand side is considered by the Commission as a market characteristic conducive to tacit collusion. However, the ERG holds the exact opposite view: according to it,

*“collusion in a situation with strong demand growth (frequently given in an early market stage) is more likely than in a situation with moderate growth.”*³⁹

The ERG’s view is supported by Rey (2004) who argue that “[c]ollusion is easier to sustain in growing markets, where today’s profits are small compared with tomorrow’s ones. Conversely, collusion is more difficult to sustain in declining markets, where tomorrow’s profits (with or without retaliation) will be small anyway – in the limiting case where the market is on the verge of collapsing, there is almost no ‘future’ and therefore no possibility to induce firms to abide today to a collusive conduct”.

³⁶ Comreg Response to Consultation & Notification to European Commission, Document No 04/118 and 04/118a, 09.12.2004, pp 43.

³⁷ The SMP Guideline, para 93, *supra* note 2.

³⁸ The ERG working paper, pp 11-12, *supra* note 20.

³⁹ *Ibid*, pp 10.

Unfortunately, different positions on appraising growth on the demand side result in contradictory decisions. For example, one of the reasons for why the Irish NRA reaches the conclusion of the existence of collective SMP in its Market 15 is that demand in this market has been steadily increasing.⁴⁰ By contrast, the Hungarian NRA finds that the market players in its Market 15 do not collectively hold a dominant position on the basis that “market demand in terms of minutes has increased by 66% in the past two years, and increase in demand over the next 2-3 years is likely.”⁴¹

3.4.2 Low elasticity of demand

The Commission advocates low elasticity of demand as one of the important criteria to assess collective SMP, whereas the ERG maintains this criterion to be less important. The ERG considers that

*“demand elasticity is an ambivalent criterion in context of the assessment of joint dominance. Both a high as well as a low elasticity of demand can enforce collusion.”*⁴²

Rey (2004) also support this view of the ERG: “[t]he elasticity of the demand has in fact no clear impact on the sustainability of collusive prices ... 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”.

Nevertheless, there are a number of Commission decisions in which low elasticity of demand was considered as one of factors evidencing the existence of collective SMP.⁴³

4. ABILITY AND INCENTIVES TO DETECT DEVIATION

4.1 Common policy

The presence of market features that make a market conducive to tacit collusion does not ensure the existence of collective SMP. Rather, a sustainable collective SMP also requires an effective retaliation mechanism. In order to set up an effective retaliation mechanism, members of a collective SMP must be capable of detecting the deviations of each other. Furthermore, if detection of deviation costs excessive time and effort, this retaliation mechanism would easily collapse. Therefore, the *Airtours* criteria require a common policy or, in other words, a focal point, with which undertakings can easily align their conduct and detect deviation.

By its very nature, the existence of a common policy requires a high level of transparency, which thereby allows the easy detection of deviation. Only when key information about rival firms is transparent can terms of coordination be facilitated.

⁴⁰ Irish market 15, *supra* note 34.

⁴¹ Hungarian Market 15, *supra* note 35.

⁴² The ERG working paper, pp 10, *supra* note 20.

⁴³ Maltese Market 15, *supra* note 25; Case IT/2006/0424 (Italian Market 18), 27.07.2006; Maltese Market 12, *supra* note 34; Slovenian Market 17, *supra* note 34; and Case FI/2005/0304 (Finnish Market 17), 16.12.2005.

Moreover, a common policy is more likely to emerge when it is simple. Finally, symmetry assists in the establishment of a focal point, as it enables rivals to identify variables that, in effect, have similar consequences.⁴⁴

Despite that the selection of a focal point is market-specific, two focal points have been identified within the Commission decisions. The first is price-related common policy. An alternative focal point can be the grant/denial of access to third parties, provided that access to the wholesale inputs is significant for the retail providers.

The subsequent paragraphs examine how market transparency can allow undertakings to detect the deviations of others. Given the two focal points, two kinds of deviation will be examined in detail: (i) price-related common policy and (ii) access-related common policy.

4.2 Price-related common policy

Price, and in particular a decreasing price, is capable of revealing deviation instantly, especially when market players provide homogenous products or services. The difficult issue is how the NRAs can reach a conclusion that members of an oligopoly are able to easily perceive each other's pricing behaviours.

Two practices are observed in the Commission decisions. First, electronic communications undertakings are not assumed to grasp others' pricing behaviours in an unstable market. In particular, an unstable price, namely, a steadily decreasing⁴⁵ or fluctuating⁴⁶ price, is considered to make difficult the monitoring of the other members' behaviour. Secondly, the prices of another member should be accessible via public channels, e.g. published prices in the market or, sometimes, information disclosed in the process of negotiation with customers.⁴⁷ Individual rebates, for example, are not considered as publicly assessable.⁴⁸ Non-transparent pricing can lead to a conclusion of the absence of collective SMP, such as, for example, when Ofcom withdrew its notification on Market 18.⁴⁹

Nevertheless, two practical difficulties prevent undertakings in electronic communications markets from monitoring each other. First, in most cases, the prices at a wholesale level are either not published, or published with rebates frequently given. Markets in this situation are not considered as transparent. In the notifications concerning Market 17, all the NRAs acknowledged that this market is not transparent because discount agreements are frequently made between host mobile network operators and foreign mobile operators, despite the fact that inter-operator tariffs⁵⁰ are sometimes published. In addition, in some Commission decisions concerning Market 15, the NRAs, who find there is indeed a wholesale market for mobile access and call origination (in most cases, the NRAs could not find the existence of a merchant

⁴⁴ Comreg Response, pp 45, *supra* note 36.

⁴⁵ Czech market 15, *supra* note 19; and Danish market 15, *supra* note 19.

⁴⁶ UK market 15, *supra* note 23.

⁴⁷ Maltese Market 15, *supra* note 25.

⁴⁸ Swedish Market 17, *supra* note 35; Polish Market 17, *supra* note 34; and Finnish Market 17, *supra* note 43.

⁴⁹ Case UK/2004/0111 (UK Market 18), 28.01.2005.

⁵⁰ The host MNO charges the foreign MNO when a customer of the latter makes a call on the network of the host MNO. These call origination charges are called inter-operator tariffs (IOTs).

market because all the sales were captive), also conclude that the markets in question are not transparent because “the actual conditions (wholesale prices, discounts, volumes of customers and outgoing minutes, *etc*) remain business secrets.”⁵¹

Second, in cases where there is no merchant market, the NRAs usually use the information from retail markets as a substitute. The Commission accepts this method by stating that, in the case of “no transaction on the merchant market (i.e. no sales to independent third parties)”, “the structure of supply at the wholesale level 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.”⁵² However, the situation in retail markets may be even less transparent than wholesale markets for several reasons. First, if market players offer differentiated products or services, a changed price is not considered to immediately indicate deviation. For example, in Italian Market 15, the Italian NRA concludes that “the continuous introduction of new services and new offers makes very difficult for all operators to monitor in an effective manner the other MNOs’ market conduct.”⁵³ Second, even when undertakings provide homogeneous products or services, different tariff packages might exist, which thereby makes retail markets less transparent. For example, in Market 15, the Irish NRA acknowledges that the apparent complexity of these tariffs could work against the establishment of a consensus position even in a market where all the operators offer broadly the same portfolio services in their retail clusters.⁵⁴

4.3 Access-related common policy

In addition to price deviation, another dimension of deviation may come from granting access to third parties, i.e. retail service providers. This focal point is more visible than price-related deviation because a deviation from the common policy, i.e. not granting access to third parties, must necessarily result in the appearance of a new service provider or an increased output in the related retail markets.⁵⁵

In practice, the analysis of the possibility of access-related deviation is related to the examination of pent-up demand. An oligopoly, once it wishes to pursue monopolistic profits, would restrict their output beneath the competitive level, thereby making the supply below the actual demand. Therefore, if there is a common policy of not granting access to third parties by a collective SMP, it is beyond any doubt that there must be some customers that cannot be served, which is called pent-up demand.

The NRAs frequently employ this method to evaluate the possibility of access-related deviation, in particular in the analysis of Market 15 as well as other relevant markets. There are nineteen Commission decisions concerning Market 15 that involve the analysis of collective SMP (three find the existence of SMP and the other sixteen did not). It is noteworthy that the existence of pent-up demand is found in each of the three collective SMP positive decisions, while in the other sixteen decisions, almost

⁵¹ Polish market 15, *supra* note 19.

⁵² Hungarian Market 15, *supra* note 35.

⁵³ Italian Market 15, *supra* note 28.

⁵⁴ Comreg Response, pp 46, *supra* note 36.

⁵⁵ Spanish Market 15, *supra* note 24; Maltese Market 15, *supra* note 25; Irish market 15, *supra* note 34; and Maltese Market 12, *supra* note 34.

all NRAs found no evidence of any.⁵⁶ In addition, the value of pent-up demand to the assessment of collective SMP is, in particular, witnessed in the Commission decision concerning Belgian Market 15, where the conclusion of an absence of collective SMP is entirely based on absent pent-up demand, without having recourse to any other criterion.⁵⁷

The appraisal of absence/existence of pent-up demand mainly depends on actual complaints about denial of access. In the 3 Commission decisions with the finding of existence of collective SMP, all the 3 NRAs received complaints of refusal to supply on the part of the incumbent mobile network operators. Concerning the conditions under which a complaint of denial of access can be regarded as evidence of pent-up demand, the German NRA considered that a simple complaint of refusal to supply may be not sufficient; and that “denial of access only has to be examined if no offer at all exists on the market.”⁵⁸ In addition, the absence of pent-up demand can be proved either by no complaints of denial of access in the relevant market,⁵⁹ or the incumbent mobile network operators voluntarily granting access to third parties.⁶⁰

However, it should be noted that all the analysis of pent-up demand was based on a backward-looking method in the abovementioned Commission decisions, which are, in other words, based on actual complaints on denial of access. It can be questioned whether NRAs can base the existence of pent-up demand on a forward-looking analysis. The notification of Maltese Market 12 sheds some light on this question. In Maltese Market 15, there are two undertakings, Maltacom and Melita Cable, in the wholesale market for broadband access. Nevertheless, only Maltacom opens its network to third party service providers. Based on the market’s characteristics conducive to tacit collusion, the Maltese NRA reaches a conclusion of the existence of pent-up demand because

“absent the current access obligation, Maltacom would have a strong incentive to discontinue its wholesale offer and take over the DSL broadband lines current provided by third party ISPs, this would lead to a market of only two vertically integrated network operators, both of them maintaining a similar dominant position in the wholesale market and controlling competition in the retail market to ensure a desired profit level in the long-run.”⁶¹

However, the Commission raises serious doubt about this conclusion:

“if Maltacom would cease to provide access to ISPs it may carry the risk of losing wholesale revenue from these operators without a guarantee of gaining

⁵⁶ Only the Dutch NRA did not consider the issue of pent-up demand in its notification concerning Market 15.

⁵⁷ Belgian Market 15, *supra* note 34.

⁵⁸ German Market 15, *supra* note 28.

⁵⁹ Slovakian Market 15, *supra* note 22; Luxembourgish Market 15, *supra* note 35; Italian Market 15, *supra* note 28; Hungarian Market 15, *supra* note 35; German Market 15, *supra* note 28; Greek Market 15, *supra* note 23; and Czech market 15, *supra* note 19.

⁶⁰ Swedish Market 15, *supra* note 19; Lithuanian Market 15, *supra* note 35; Latvian Market 15, *supra* note 19; Danish Market 15, *supra* note 19; Belgian Market 15, *supra* note 34; UK market 15, *supra* note 23; Austrian Market 15, *supra* note 28; and Polish market 15, *supra* note 19.

⁶¹ Maltese Market 12, *supra* note 34.

*the retail customers. These customers may switch to cable or emerging platforms, such as BWA.”*⁶²

Because of this doubt, the Maltese NRA finally withdrew its notification. This decision at least indicates that the standard of proof for the existence of pent-up demand solely based on a forward-looking analysis is very high.

5. ABILITY AND INCENTIVES TO RETALIATE

The CFI *Airtours* judgment holds 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.”*⁶³

Furthermore, it is not necessary to

*“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.”*⁶⁴

A common policy without the protection of a retaliation mechanism, to a certain extent, is not sufficient to sustain tacit collusion. Therefore, the NRAs, when finding the possible existence of a common policy, must evaluate the possibility and the quickness of any possible reaction by other members of the collective SMP group, after a deviation actually takes place, in the form of competition, which would mean that the deviating undertaking gains nothing from the deviation.

The method of retaliation depends on the nature of the common policy concerned. Since only two common policies, price-related and access-related, are indicated in the Commission decisions, the following paragraphs will only examine how each of the two retaliation mechanism is evaluated.

5.1 Price-related retaliation

Price deviation usually takes place at retail level because price at wholesale level is normally not sufficiently transparent for a common policy. Therefore, the Commission places emphasis on the possibility of a price war by non-deviating undertakings in retail markets. Hence, the relevant criterion is the scope for price competition and, more specifically, the competition situation at the retail level. If customers are locked in by their current operators, or if switching costs are relatively high, the scope for price competition at the retail level is limited. In this situation, initiating a price war at the retail level would be not so effective as to deter a

⁶² *Ibid.*

⁶³ Case *Airtours*, para 62, *supra* note 11.

⁶⁴ *Ibid.*, para 195.

deviation.⁶⁵ Furthermore, the scope for price competition is also limited by the maturity of the market. The Commission thus does not believe undertakings would have an incentive to deviate from the common policy through, for example, initiating a price war, because the possible result could be “[m]arket share would remain the same, albeit at lower prices.”⁶⁶

5.2 Access-related retaliation

As regards the retaliatory granting of access to third parties, the Commission focuses on the ability of the retaliating undertakings to immediately conclude an access contract with third parties, taking into account the first-mover advantage of the deviating undertaking.⁶⁷

Two options to retaliate stand before the non-deviating undertaking: (i) to attract the third parties hosted by the deviating undertakings to the network of the non-deviating undertakings, or, (ii) to host other third parties on its network.⁶⁸ Concerning the first option, two factors are decisive: (i) whether the agreements between deviating undertakings and their contracted parties contain no exclusivity clauses, and (ii) whether transaction costs (including costs of negotiations with the non-deviating undertakings) might deter third parties from switching from the deviating host undertaking. Regarding the second option, focus should be given to the time-consuming process of negotiating an access agreement. If the negotiations are too time consuming and, therefore, the first mover advantage of the deviating undertaking is very strong, the effectiveness of a retaliation mechanism is doubtful.

6. SMP POSITION

Based on the analysis of the above four steps, an economic link between undertakings concerned can be established, and these undertakings can accordingly be considered as a collective entity. The subsequent analysis should then be, same as that of single SMP, that the collective entity, considered as a single undertaking, either does or does not have SMP in the relevant market.⁶⁹

A question that can be raised here is why the *Airtours* criteria only mention countervailing buying power and potential competition for the analysis of this step. A simple examination of the criteria for the assessment of single SMP⁷⁰ tells us that all the other criteria have already been examined in the previous three steps. It is therefore not necessary to repeat these analyses at this step.

7. CONCLUSIONS

Collective SMP was not the focus of the first round market review while single SMP was. The Commission decisions in the first round market review reveals that the one-

⁶⁵ Spanish Market 15, *supra* note 24.

⁶⁶ Maltese Market 15, *supra* note 25.

⁶⁷ Spanish Market 15, *supra* note 24.

⁶⁸ Maltese Market 15, *supra* note 25.

⁶⁹ Further reading about the assessment of single SMP can be found (Hou, 2008).

⁷⁰ The criteria to assess single SMP are available at the SMP guideline, para 78, *supra* note 2.

undertaking concentration ratio⁷¹ is, in general, still quite high in a majority of markets in the EU electronic communications sector, for example, Market 1 and 2 ($\geq 80\%$), Market 8 ($\geq 80\%$ except Germany), Market 9 (100%), Market 11 ($\geq 80\%$), Market 12 (majority $\geq 60\%$ and some below 60%), Market 13 (majority $\geq 60\%$ and some below 60%) and Market 16 (100%). By contrast, in the markets involving collective SMP, i.e. Market 10, Market 14, Market 15, Market 17 and Market 18, the one-undertaking concentration ratio is in general less than 60%. The data is on the one hand consistent with the argument that a market share exceeding 60% can be evidence of single SMP, save in exceptional circumstances (Hou, 2008); and, on the other hand, is coincident to the second version of the market recommendation by the Commission that all the markets where the one-undertaking concentration ratio is, in general, more than 60%, remain subject to *ex ante* regulation, and all other markets be removed from the recommended list.⁷²

Furthermore, from a theoretical point of view, when a market review reaches the stage of collective SMP assessment, two issues can already be established: first, there is no single SMP in the market concerned, since an undertaking cannot behave independently of all the other undertakings (single SMP) and, at the same time, is restrained by some undertakings (collective SMP); and secondly, there is already a certain degree of competition, given the fact that the former monopolists can indeed be constrained by alternative undertakings. Hence, collective SMP leads to two concerns. First, the emerging competition in a market involving collective SMP, though in an anticompetitive way, does not cause deregulation but more regulation (more undertakings are regulated under collective SMP than single SMP); and secondly, one of the most important criteria for electronic communications regulation (that regulation should be imposed only where competition law is not sufficient⁷³) is taken into account in the analysis of collective SMP. No further analysis is conducted on the added value to regulate collective SMP in the context of the 2003 Regulatory Framework than collective dominance of Article 82.

Without questioning the feasibility of collective SMP, this article assumes the analysis of collective SMP in the second round market review will continue to appear in more competitive markets. The most likely candidate markets would be Market 12 and Market 13, where the one-undertaking concentration ratio is approaching the borderline between collective SMP and single SMP, i.e. 60%.

⁷¹ The one-undertaking concentration ratio refers to the relative size of the biggest firm in relation to the industry as a whole in terms of market shares.

⁷² It should be noted that no NRA ever conducted collective SMP assessment in Market 3, 4, 5, 6 and 7. Possible explanations for this phenomenon may be either that related wholesale remedies are considered by the NRAs to be sufficient enough to prevent tacit collusion, or that alternative operators are not in the position to restrain the incumbents.

⁷³ Framework Directive, recital 27, *supra* note 16.

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Appendix

Table 2: The relevant market in the first Market Recommendation and the second Market Recommendation

First recom.	description	Second recom.
Market 1	Access to the public telephone network at a fixed location for residential customers.	Market 1
Market 2	Access to the public telephone network at a fixed location for non-residential customers	Market 1
Market 3	Publicly available local and/or national telephone services provided at a fixed location for residential customers	Removed
Market 4	Publicly available international telephone services provided at a fixed location for residential customers	Removed
Market 5	Publicly available local and/or national telephone services provided at a fixed location for non-residential customers	Removed
Market 6	Publicly available international telephone services provided at a fixed location for non-residential customers	removed
Market 7	The minimum set of leased lines (which comprises the specified types of leased lines up to and including 2Mb/sec as referenced in Article 18 and Annex VII of the Universal Service Directive)	Removed
Market 8	Call origination on the public telephone network provided at a fixed location	Market 2
Market 9	Call termination on individual public telephone networks provided at a fixed location	Market 3
Market 10	Transit services in the fixed public telephone network	Removed
Market 11	Wholesale unbundled access (including shared access) to metallic loops and subloops for the purpose of providing broadband and voice services	Market 4
Market 12	Wholesale broadband access	Market 5
Market 13	Wholesale terminating segments of leased lines	Market 6
Market 14	Wholesale trunk segments of leased lines	Removed
Market 15	Access and call origination on public mobile telephone networks	Removed
Market 16	Voice call termination on individual mobile networks	Market 7
Market 17	The wholesale national market for international roaming on public mobile networks	Removed
Market 18	Broadcasting transmission services, to deliver broadcast content to end users	Removed