

COLLECTIVE DOMINANCE WITHIN THE CONTEXT OF EU ELECTRONIC COMMUNICATIONS REGULATION

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Abstract

The Regulatory Framework concerning electronic communications networks and services in the European Union transposes the concept of collective dominance under Article 82 of the EC Treaty into electronic communications regulation as collective significant market power. However, it is of academic and also practical interest to see how the regulatory authorities to apply this concept under the regulatory regime, given a fact that collective dominance is still developing in the area of competition law. This article empirically examines the application of collective dominance by the national regulatory authorities based on the European Commission decisions according to Article 7 of the Framework Directive, with an aim to interpret the four economic factors to assess collective dominance, i.e. (1) oligopolistic market characteristics conducive to coordinate, (2) incentives to coordinate, (3) abilities to retaliate, and (4) abilities to resist market constraints, by concrete legal examples.

Keywords: collective dominance; collective significant market power; electronic communications regulation; competition law

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1. INTRODUCTION

One of the most striking features of the Regulatory Framework concerning electronic communications networks and services (the Regulatory Framework) in the European Union lies in its methodological alignment with the EC competition law, in particular Article 82 of the EC Treaty. In order to regulate this sector, the National Regulatory Authorities (NRAs) should first define a relevant market, secondly designate an undertaking or undertakings with significant market power (SMP), and thirdly impose appropriate regulatory remedies only on undertaking(s) with SMP, which is so called the SMP regime. As far as SMP is concerned, the Regulatory Framework links its definition to that of dominant market position under Article 82 of the EC Treaty. However, while single dominance, or individual dominance, (only one undertaking is dominant), is relatively legally certain, collective dominance, or joint dominance, (more than one undertaking are jointly dominant), is still developing in the area of competition law. An interesting question may thus be raised how the NRAs apply collective dominance in the context of electronic communications regulation.

The article aims for an empirical research on the application of collective dominance by the European Commission (Commission) and the NRAs in the context of electronic communications regulation, i.e. collective SMP¹, based on the relevant Commission decisions under Article 7 of the Framework Directive² (Commission decisions). In the following, after giving an overview of the assessment of collective SMP (the second part), the subsequent four parts examines how the NRAs in practice evaluate the four economic factors to assess collective SMP: (1) oligopolistic market characteristics conducive to coordinate, (2) incentives to coordinate, (3) abilities to retaliate, and (4) abilities to resist market constraints. Finally, the last part presents some conclusions.

2. COLLECTIVE SMP: AN OVERVIEW

According to Article 14(2) of the Framework Directive, an undertaking should be deemed to have SMP if, either individually or *jointly with others*, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the

¹ In this article, collective dominance, collective SMP and tacit collusion are used as synonymous.

² According to this provision, the NRAs should notify the Commission of every draft measure that they decide to impose on an electronic communications market. After evaluating those draft measures the Commission adopts a decision to confirm, or sometime veto, each of the NRA's notifications. A Commission decision usually comprises two parts: a summary of the notifications of the NRA concerned and comments (if any). This article assumes that the Commission agrees with the NRAs where it does not make comments. Therefore, when the article does not specifically indicate otherwise, the reference to the NRAs' opinions within the Commission decisions should mean that the Commission did not make any comments. All the Commission decisions can be found at the Commission's website (http://ec.europa.eu/information_society/policy/ecomm/implementation_enforcement/article_7/index_en.htm).

power to behave to an appreciable extent independently of competitors, customers and ultimately consumers.³ Thus it adapts the concept of collective dominance under Article 82 of the EC Treaty for electronic communications regulation. The Framework Directive in its annex provides a list of criteria for collective SMP assessment. These criteria, distilled from the case law of the European Court of Justice (ECJ) and Court of First Instance (CFI) in the area of competition law, include market concentration, transparency, mature market, stagnant or 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.⁴ It should be kept into mind that this list is neither exhaustive nor cumulative.

In order to lubricate the methodological alignment of electronic communications regulation with competition law, the Commission furthermore adopts a guideline on market analysis and the assessment of SMP⁵ (the SMP Guideline). As far as collective SMP is concerned, the Commission first gives an overview of the ECJ/CFI's jurisprudence concerning collective SMP with a focus on three milestone cases, Case *Compagnie maritime belge*⁶, Case *Gencor*⁷ and Case *Airtours*;⁸ and then maintains that collective SMP assessment should be comparable to collective dominance assessment. In particular, four factors can be disentangled from the Commission's statement that the NRAs must comply with in assessing collective SMP:

- (1) oligopolistic market characteristics conducive to coordinate;
- (2) incentives to coordinate;
- (3) abilities to retaliate; and
- (4) abilities to resist market constraints.⁹

In order for the following research as to how the four factors are empirically appraised, this article collects all the Commission decisions involving the analysis of collective

³ See, Article 14(2) of 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.

⁴ *Ibid*, Annex II.

⁵ See, Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services, 11.7.2002, O.J. C 165/6 (SMP Guideline).

⁶ See, Joined cases C-395/96 P and C-396/96 P, *Compagnie maritime belge and others v Commission* [2000] ECRI-1365.

⁷ See, Case T102/96, *Gencor v Commission* [1999] ECR II-753.

⁸ See, Case T-342/99 *Airtours/Commission* [2002] ECR II-0000.

⁹ See, SMP Guideline, para 96, *supra* note 5.

SMP since 2003 until March 2009, a full list of which is contained in the Annex¹⁰; and then it examines the NRA's practice concerning each of the factors. The subsequent four parts report the evaluation of the four factors respectively.

3. OLIGOPOLISTIC MARKET CHARACTERISTICS CONDUCTIVE TO COORDINATE

3.1. INTRODUCTION

The abovementioned list of the criteria for collective SMP assessment provided by the Framework Directive in principle describes the core features of an oligopolistic market conducive to coordinate. However, two problems remain with this list. First, since this list is drafted for analysing the four factors as a whole, not every criterion is pertinent to the analysis of the first factor. In fact the relevant criteria here only include (1) market concentration, (2) mature market, (3) stagnant or moderate growth on the demand side, (4) low elasticity of demand, (5) homogenous products, (6) similar cost structures, (7) lack of technical innovation and mature technology, (8) similar market shares, (9) high barriers to entry, and (10) various kind of informal or other links between the undertakings concerned.¹¹

The second problem stems from the fact that no priority is given to any criterion. After attaching those criteria to the four factors respectively, it is found that this non-prioritised list would not raise serious problems with the analysis of the second, third and fourth factor simply because of the limited number of criteria there. Nevertheless, it may raise a problem concerning the first factor which involves 10 criteria: in cases where the appraisal of different criteria leads to different, or in extreme cases even contradictory, conclusions on the presence or absence of collective SMP, the NRAs would be confronted with difficulty to reach a final conclusion. Given this problem, the following sections, while investigating how each of those criteria is appraised, attempt to hierarchise them into three different categories due to their different values as to the assessment of collective SMP, *i.e.* (1) direct market characteristics, (2) important market characteristics, and (3) ambiguous market characteristics.

¹⁰ Abbreviations of Commission decisions will be used in order to save space in the main text. See the full information in the Annex.

¹¹ With regard to the other 6 criteria, transparency (1) is related to the analysis of the second factor, incentives to coordinate; retaliation mechanism (2) and lack or reduced scope for price competition (3) are relevant to the third factor, abilities to retaliate; and lack of countervailing buying power (4), lack of potential competition (5) and absence of excess capacity (6) are used to assess the last factor.

3.2. DIRECT MARKET CHARACTERISTICS

Direct market characteristics refer to market features that are significant to collective SMP for two reasons. First, they are necessary (*not sufficient*) to the establishment of collective SMP. Secondly, direct market characteristics are also easily identifiable in practice, which makes them different from the second-category market features that will be discussed in section 3.3. Three direct market characteristics are observed: (1) stable market shares, (2) high barriers to entry and (3) similar costs structures. Since they are necessary to the formation of collective SMP, negative evidence related to the direct market characteristics can immediately exclude collective SMP concern.

3.2.1. *Stable Market Shares*

Collective SMP is formed in order to eliminate the extent of competition between members of the “club”. Therefore, when a collective SMP club is established, the most distinct feature in the market must be that market shares of the members should be maintained relatively stable in a certain time period. Non-stable market shares instead imply competition and accordingly can immediately remove concern of tacit collusion. The analysis of the development of market shares should be not static but forward-looking. In other words, even if market shares have been maintained stable in the past, it can be considered as non-stable if a change is foreseen to take place. When non-stable market shares are observed, collective SMP concern can be immediately removed.

3.2.2. *High Barriers to Entry*

It is generally accepted that collective SMP is non-sustainable when entry barriers are absent or low. Under this situation any attempt to maintain supra-competitive prices would trigger entry of new competitors in a short time, which endangers the sustainability of collective SMP (Rey, 2004). Therefore, once entry barriers are found low in the market concerned, collective SMP concern can be eliminated. In practice the assessment of entry barriers highly depends on the costs to replicate the infrastructure of former monopolists. More specific information is nevertheless not available within the Commission decisions concerning the extent to which the costs of investment can be considered low.

3.2.3. *Similar Cost Structure*

While similar cost structures facilitate undertakings to achieve tacit collusion, undertakings with different cost structures will find it more difficult to maintain their

tacit collusion.¹² Therefore, when the NRAs observe asymmetric cost structures among undertakings, concern of collective SMP can also be eliminated instantly. For instance, some NRAs base their conclusions of absence of collective SMP mainly on the considerable differences in cost structure of the undertakings active on the markets.¹³ Nevertheless, the method to evaluate cost structures between undertakings has not been harmonised by the Commission and therefore NRAs employ varied methods for their analyses. For example, the Spanish NRA takes a look at the proportion between fixed and variable costs.¹⁴ The Maltese NRA's analysis is based on the similar technology and infrastructure coverage of all the operators.¹⁵ The Polish NRA focuses on customer acquisition costs and other variable costs.¹⁶

3.3. IMPORTANT MARKET CHARACTERISTICS

Important market characteristics refer to market features that are of theoretical importance and nevertheless are lack of practical guidance in implementation, taking into account the market features in electronic communications markets. Important market characteristics include market concentration, similar market shares, mature market, lack of technical innovation, mature technology, homogenous product, and various kinds of informal or other links between the undertakings concerned.

3.3.1. *Market Concentration*

High market concentration in theory is an important factor to appraise collective SMP. The evaluation of market concentration has two branches: the number of undertakings (tacit collusion is more difficult when there are more competitors) and their respective market shares (collective dominance is more likely formed in a highly concentrated market where a few market players have a high market share).¹⁷

However, two practical problems are associated with the examination of this criterion. First, with regard to the first branch, i.e. the number of undertakings, there is no general tendency on a minimum number of market players active on a market above which the market can be considered less concentrated. The Commission practice in the area of merger control may provide some hints. In merger cases, “[a]pproximately 50% of the Commission’s collective dominance merger decisions concern ‘three-to-two’

¹² See, Revised ERG Working paper on the SMP concept for the new regulatory framework, ERG (03) 09rev3, September 2005 (ERG working paper on SMP).

¹³ See, Case Sweden Market 15, Case Greece Market 15, Case UK Market 15, Case Czech Market 15 and Case Poland Market 15.

¹⁴ See, Case Spain Market 15.

¹⁵ See, Case Malta Market 15(1).

¹⁶ See, Case Poland Market 15.

¹⁷ See, ERG working paper on SMP, pp 10, *supra* note 12.

mergers. Approximately one-third of the Commission collective dominance merger concern ‘four-to-three’ mergers” (Baxter & Dethmers, 2006). Correspondingly, in all the four notifications that find collective SMP and are approved by the Commission, the numbers of the active market player are also no more than three.¹⁸ It may imply that collective SMP concern is at least more acute in a market where there are no more than three market players. Nevertheless, it is also observed that a lot of NRAs undertake collective SMP assessment in markets where there are more than three market players, though they do not find collective SMP in the end.¹⁹ This observation makes market concentration less meaningful to collective SMP assessment.

The second problem is related to the evaluation of the Herfindahl-Hirschman Index (HHI)²⁰, which is a common method to assess the size of firms in relation to the industry and the amount of competition among them. Markets in which the HHI is between 1000 and 1800 points are usually considered to be moderately concentrated while those in which the HHI is in excess of 1800 are considered to be concentrated. However, this rule cannot be easily adapted to electronic communications markets, given the fact that the HHIs in all the notifications involving collective SMP analysis are much higher than 1800. Because of this practical difficulty the NRAs evaluate HHI without a consistent method. For example, in Czech Market 14, the HHI, around 2525, was nevertheless considered to indicate low market concentration. In addition, some NRAs rely on a comparison of the HHI in their own markets with the markets in other Member States. Nevertheless, the Commission considers 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.²¹ Consequently, same as the first factor, the analysis of the second factor does not result into legal certainty either.

Furthermore, the Commission suggests that other indicators, such as concentration ratio²², can provide additional relevant review of market concentration, in view of the

¹⁸ See, Case Ireland Market 15, Case Malta Market 15(1) and Case Spain Market 15.

¹⁹ See, *e.g.*, Case Czech Market 10 (ten undertakings), Case Slovenia Market 14 (six undertakings), Case Sweden Market 15 (five undertakings), Case Netherlands Market 15 (five undertakings), Case Latvia Market 14 (four undertakings), Case Italy Market 15 (four undertakings), Case Germany Market 15 (four undertakings), Case Greece Market 15 (four undertakings), and Case Austria Market 15 (five undertakings).

²⁰ The HHI is calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers. For example, for a market consisting of four firms with shares of thirty, thirty, twenty and twenty percent, the HHI is 2600 ($30^2 + 30^2 + 20^2 + 20^2 = 2600$).

²¹ See, Case UK Market 15.

²² The concentration ratio of an industry is used as an indicator of the relative size of firms in relation to the industry as a whole. This may also assist in determining the market form of the industry. For example, one commonly used concentration ratio is the four-firm concentration ratio, which consists of the market share, as a percentage, of the four largest firms in the industry. In general, the N-firm concentration ratio is the percentage of market output generated by the N largest firms in the industry.

practical difficulty related to the HHI.²³ Given the importance of concentration ratio highlighted by the Commission, the following paragraphs examine the concentration ratio in all the notifications related to collective SMP, with an aim to identify a possible minimum aggregate market shares of a collective SMP group. Since collective SMP analyses conducted by a majority of the NRAs only focus on the two largest undertakings on the markets, this article takes two-undertaking concentration ratio as its research method, the result of which is indicated in Figure 1.

Figure 1. Two-undertaking Concentration Ratio in the Commission decisions related to collective SMP

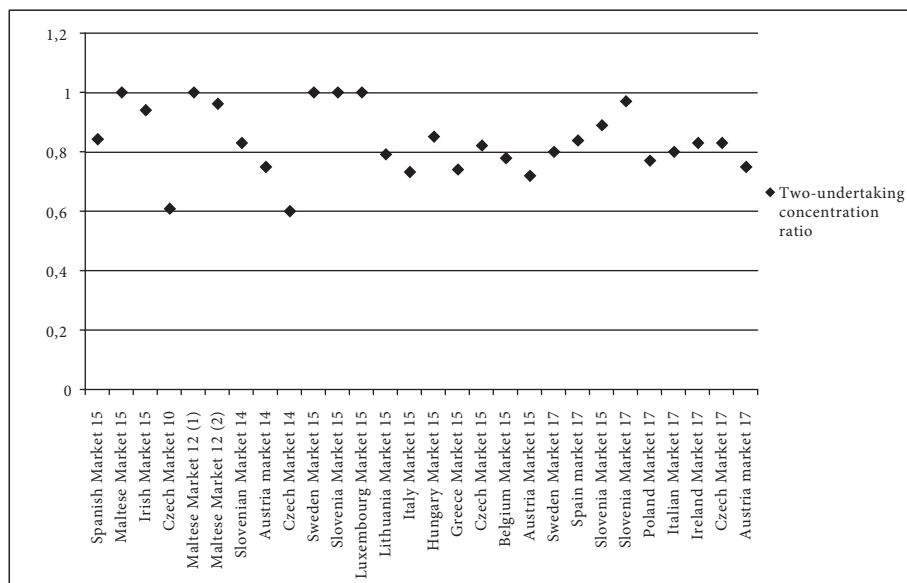


Figure 1 indicates that the two-undertaking concentration ratios are always more than 60%. In most cases these ratios are even no less than 75%. Moreover, in cases where the concentration ratios are less than 75%, a third largest undertaking with similar size can always be found. In the three notifications²⁴ where collective SMP is found by the NRAs and approved by the Commission, the two-undertaking concentration ratios are 84.1%²⁵, 94%²⁶ and 100%.²⁷ These figures may imply the threshold above which collective SMP concern is at least more acute.

²³ See, Case UK Market 15.

²⁴ Case Italy Market 18 does not disclose market shares information.

²⁵ See, Case Spain Market 15.

²⁶ See, Case Ireland Market 15.

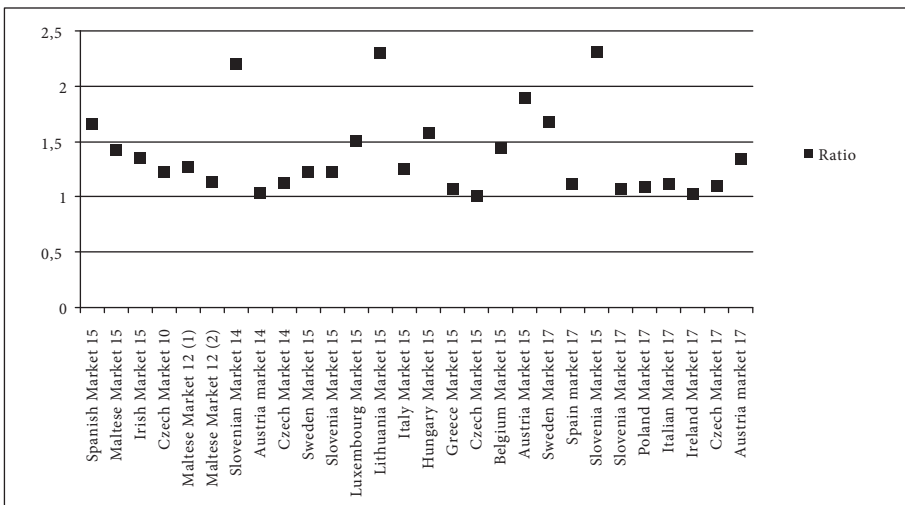
²⁷ See, Case Malta Market 15.

3.3.2. Asymmetric Market Shares

Similar market shares between undertakings are also crucial to collective SMP assessment because large imbalance of market shares between suppliers may make collective dominance less likely.²⁸ Nevertheless, similar as the criterion of market concentration, it is also lack of practical certainty to quantify similarity between undertakings and accordingly is not categorised as direct market characteristics.

Despite of the drawback, the subsequent paragraphs attempts to find a possible trend in appraising this criterion based on the Commission decisions. Since almost all Commission decisions concerning collective SMP involve two undertakings, this article only collects market shares of the first two largest undertakings, if available, in those decisions. The following research has three branches. At the first branch, it examines the ratio between the first and the second undertaking (the ratio = market share of the first undertaking / market share of the second undertaking); at the second branch it investigates the range of market shares of all the first largest undertakings; and the last branch concerns the range of market shares of all the second largest undertakings.

Figure 2. Ratio between the first two largest undertakings in the Commission decisions related to collective SMP



The result of the first branch is contained in Figure 2, which suggests two implications. First, the ratio between the first largest and the second largest undertaking usually falls into the range of {1, 2}, with three exceptions. Secondly, in 75% cases the first

²⁸ See, ERG working paper on SMP, pp 11, *supra* note 12.

largest undertakings are no more than 1.5 times bigger than that second one. These two numbers may show the trend of the NRAs' interpretation of similar market shares between members of a collective SMP.

With regard to the second branch, it is found that the first largest undertakings' market shares in all the Commission decisions are less than 60%. This finding on the one hand corresponds to a research related to single SMP assessment that an undertaking with a market share exceeding 60% can be assumed to have single SMP, save in exceptional cases (Hou, 2008); and on the other hand tally with the research of Davies, Olczak and Coles (2007) in the area of EC merger control, who tend to reach a conclusion that when the largest firm with more than 60% market share would be considered to have single dominance and only below 60% would generate concern on collective dominance.

Concerning the last branch, it is observed that all the second largest undertakings' market shares are above 24%. This figure accords with a report of the Competition Commission in the UK that "once an MNO (mobile network operators) has captured 20%-25% of the market volume, there are only very limited remaining economies of scale".²⁹ Although it is not clear whether the figure (20%-25%) in this report can also apply to other electronic communications markets, it is of no doubt that there must be a threshold in terms of market shares in every market above which the average cost of an undertaking increases when its output grows. If there is still scope of economies of scale, the newcomers may have incentives to increase their outputs in order to lower down their costs and consequently may have no incentive to establish collective SMP with the largest undertakings, in most case namely the incumbents that have already achieved economies of scale before the liberalisation. Only after achieving this threshold the newcomers may possibly consider tacit collusion with the undertakings enjoying economies of scale. Therefore, this 24% market share may imply the lowest market share above which the second largest undertakings achieve economies of scale.

3.3.3. *Mature Market and Lack of Technical Innovation, Mature Technology*

A market is mature when there is absence of significant growth, or lack of innovation. Collusion is easier to sustain in mature markets where innovation hardly emerges, compared with innovation-driven markets (Rey, 2004). The reason is three-fold. First, technological innovation comes along with product differentiation and the latter makes it more difficult to achieve at an agreement of a joint-profit maximising outcome. Second, once innovation is possible, monopolistic profits may increase the likelihood of entering of new competitors. Third, because of uncertainty over future

²⁹ See, Case Spain Market 15.

market conditions, competitors in innovative markets may wish to compete fiercely in order to have a strong starting position in the next market phase.³⁰

Electronic communications markets may seem innovation-driven at first sight. However, the commercialisation of innovation in this sector always incurs a great amount of up-front costs, not even to mention the time to develop a sufficient customer base. In particular, it is even more difficult to establish a network with national coverage in bigger Member States. Therefore, innovation cannot be immediately turned into market force in most cases.

Nevertheless, in small Member States a newcomer may easily establish its own network with a national coverage based on new technologies. Most importantly, this newcomer can act as a “maverick” player to challenge the undertakings with collective SMP. For example, in the wholesale market for broadband access in Malta there were only two fixed broadband operators before June 2007. At that time the Maltese NRA considered the two operators may establish a collective SMP, the decision of which was however subject to serious doubts by the Commission.³¹ Since June 2007 a new broadband operator has quickly established a wireless broadband network covering the whole territory of Malta. Although its market share is still small, it acquires the position to compete against the two incumbents. Therefore, in its renotification the Maltese NRA decides that there is no collective SMP mainly by the reason of the entry of this newcomer with its new wireless technology.³²

3.3.4. *Homogeneous Products*

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 that may increase the incentive and ability to collude. In differentiated product markets competition does not focus on price alone, but takes place along multiple dimensions, and agreements (tacit or otherwise) are more difficult to reach.³³ However, since electronic communications markets are not really innovation-driven, it is perceptible that “old” technologies are still dominating the markets and thus market players usually offer homogeneous products in electronic communications markets, which can be observed in almost all of the Commission decisions. This fact makes the appraisal of this criterion in practice also less meaningful to collective SMP assessment. Moreover, the criterion of homogeneous product should be better examined in conjunction with innovation because the more innovation, the less homogeneous products.

³⁰ See, ERG working paper on SMP, pp 11, *supra* note 12.

³¹ See, Case Malta Market 12(1).

³² See, Case Malta Market 12(2).

³³ See, ERG working paper on SMP, pp 11, *supra* note 12.

3.3.5. *Various Kinds of Informal or Other Links Between the Undertakings Concerned*

Evidence of structural links between undertakings, such as shareholding, personal links, production arrangements, marketing arrangements and joint ventures, can facilitate tacit collusion through these frequent interactions. Firms could not tacitly collude if they cannot anticipate interacting again in the future. Similar, collusion is unlikely when firms interact only infrequently, since the short-term gains from undercutting a collusive price can then be “punished” only in a far future. Instead, collusion is conversely easier when firms interact more frequently, since they can then react more quickly to deviation and retaliation can thus come sooner (Rey, 2004).

However, as a matter of fact there are considerable links between the electronic communications undertakings in the form of, *e.g.* agreements of access, interconnection and infrastructure sharing, or through “millions of customer and a number of ‘churning’ customers on the demand side every month”.³⁴ This common feature of electronic communications cannot contribute to collective SMP assessment. On the other hand, as indicated by the Commission, the mere fact that two or more undertakings are linked by an agreement, a decision of associations of undertakings or a concerted practice within the meaning of Article 81(1) of the EC Treaty does not, of itself, constitute a necessary basis to establish collective SMP.³⁵ In practice no Commission decisions draw conclusions of existence or absence of collective SMP based on various kinds of informal or other links between the undertakings concerned either.

Consequently, various kinds of informal or other links between undertakings concerned may have a collaborating value on collective SMP assessment, but cannot alone prove existence of collective SMP.

3.4. TWO AMBIGUOUS MARKET CHARACTERISTICS

Stagnant or moderate growth on the demand side and low elasticity of demand are listed in Framework Directive as criteria for collective SMP assessment. However, the value of these two criteria is ambiguous because of the different opinions on evaluation from the European Regulators Group (ERG).

3.4.1. *Stagnant or Moderate Growth on the Demand Side*

A stagnant or moderate growth on the demand side is considered as a factor conducive to tacit collusion within the Framework Directive. However, the ERG holds exactly to

³⁴ See, Case Ireland Market 15.

³⁵ See, SMP Guideline, para 93, *supra* note 5.

the opposite that “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.”³⁶ The ERG’s opinion is supported by Rey (2004), who argues 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.”

Contradictory Commission decisions to support both of the abovementioned two opinions are also observed. For example, one of reasons for the Irish NRA to conclude the existence of collective SMP on the market for mobile access and call origination is that the demand on that market is steadily increasing.³⁷ By contrast, the Hungarian NRA finds that the market players on the market for mobile access and call origination do not collectively hold a dominant position because of the increasing market demand.³⁸

3.4.2. *Low Elasticity of Demand*

The Framework Directive provides that low elasticity of demand can contribute to tacit collusion. However, the ERG considers that demand elasticity is an ambivalent criterion in the context of collective SMP assessment because both a high and a low elasticity of demand can enforce collusion.³⁹ Moreover, Rey (2004), who agrees with the ERG, argues that “[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.” Despite this discrepancy, there are still a number of Commission decisions in which low elasticity of demand is considered as one of factors to support the existence of collective SMP.⁴⁰

³⁶ See, ERG working paper on SMP, pp 10, *supra* note 12.

³⁷ See, Case Ireland Market 15.

³⁸ See, Case Hungary Market 15.

³⁹ See, ERG working paper on SMP, pp 10, *supra* note 12.

⁴⁰ See, Case Malta Market 15, Case Italy Market 18/2003, Case Malta Market 12(1), Case Slovenia Market 17, and Case Finland Market 17.

4. INCENTIVES TO COORDINATE

4.1. INTRODUCTION

Since tacit collusion is not necessarily formed in a market with oligopolistic features, the Commission requires the NRAs, after finding the abovementioned criteria are met in a market, to continue to examine “whether, in particular, the market operators have a strong incentive to converge to a coordinated market outcome”.⁴¹ In order to test this incentive, the NRAs normally first select a hypothetical common policy (also called focal point), sometimes two, and then investigate whether the hypothetical policy is sustainable in view of market transparency. The types of coordinated behaviours vary in different markets. Nevertheless, taking into consideration the bottlenecks of electronic communications regulation, common policies normally occur in two forms: access-oriented coordination and price-oriented coordination. Subsequently, the assessment of two forms in the Commission decisions will be reported.

It should be noted that the analysis of incentives to coordinate is significant to collective SMP assessment. In all the electronic communications markets listed in the Commission Recommendation on relevant markets⁴² the criteria related to the first factor can in general be fulfilled. However, there were so far only six national measures (four approved and two withdrawn) with the findings of collective SMP. The second factor serves as the real threshold for collective SMP assessment, which will be more elaborated in the following.

4.2. ACCESS-ORIENTED COORDINATION

As a matter of fact, collective SMP is only investigated and found in wholesale electronic communications markets. As far as wholesale markets are concerned, it is important to notice the significance of wholesale markets to retail operators to the extent to which “pure” retail operators without their own infrastructures depend on wholesale inputs to make their business. Wholesale operators under certain circumstances may coordinate their behaviours by not granting their wholesale output to third parties with an aim to maintain monopolistic profits at retail level. Denying

⁴¹ See, SMP Guideline, para 99, *supra* note 5.

⁴² See, the first version of Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common Regulatory Framework for electronic communication networks and services, 2003/311/EC, 8.5.2003, O.J. L 114/45; and the second version of Commission Recommendation 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.

access thus turns into a convenient focal point for wholesale operators to coordinate their behaviours. As a focal point access-oriented coordination is easy to be monitored since a deviation necessarily means a coming up of a new service provider or an increased output on the related retail market. All the four notifications that find collective SMP and are approved by the Commission set it as the focal point.⁴³

Subsequently, the NRAs examine whether this hypothetical common policy can be sustainable. The Commission decisions related to collective SMP indicate that the examination of the sustainability has two steps. At the first step, the NRAs should check whether there is so called pent-up demand on the market; if the answer is affirmative, then at the second step they investigate whether there are monopolistic profits at the related retail markets.

4.2.1. *Pent-up Demand*

Pent-up demand refers to suppressed demand for wholesale access of retail operators. Once undertakings implement access-oriented coordination, there must be certain denied demand for access and therefore pent-up on the relevant market. Pent-up demand is frequently used by the NRAs as a tool to detect the sustainability of access-oriented coordination, especially in the analysis of markets for mobile access and call origination. There are 19 Commission decisions regarding this market and involving the analysis of collective SMP, in which 3 Commission decisions establish the existence of SMP while the other 15 not. It is noteworthy that in all those 3 decisions there are pent-up demands while in all the other 15 but one⁴⁴ the NRAs find no evidence of pent-up demand. The value of pent-up demand regarding collective SMP assessment is in particular witnessed within the Commission decision concerning the market for mobile access and call origination in Belgium where the conclusion of the absence of collective SMP is entirely based on no evidence of pent-up demand.

With regard to the evidence of pent-up demand, the Commission requires the NRAs to take into account the past behaviours of the undertakings concerned, in particular that “where there is no demand for access, there cannot be any collective denial of access”.⁴⁵ In practice, a lot of NRAs rely on actual complaints of denial of access. No complaints of denial of access can indicate lack of demand of access.⁴⁶ Moreover, where there is voluntary grant of access, there are also no coordinated

⁴³ See, Case Spain Market 15, Case Malta Market 15, Case Ireland Market 15, and Case Italy Market 18.

⁴⁴ Within Case Netherlands Market 15, the Dutch NRA did not take pent-up demand into consideration.

⁴⁵ See, Case Slovenia Market 15(2).

⁴⁶ See, Case Slovakia Market 15, Case Luxembourg Market 15, Case Italy Market 15, Case Hungary Market 15, Case Germany Market 15, Case Greece Market 15, and Case Czech Market 15.

behaviours.⁴⁷ Nevertheless, a complaint alone cannot be evidence of collectively denial of access, as explained by the German NRA that “denial of access only has to be examined if no offer at all exists on the market”.⁴⁸

4.2.2. Retail Monopolistic Profits

In order to render credible the finding of tacit collusion at the wholesale level, the NRAs should demonstrate that the level of rents at the retail level is high enough to provide incentives to collectively refuse access of third-party operators. If at the retail level there are no monopolistic rents, the incentives of wholesale operators to collectively deny access cannot be substantiated.⁴⁹

The commonly used method to identify whether there is sufficiently high rent at the retail level is to compare the retail prices or profits with other Member States, or the EU average.⁵⁰ In all the Commission decisions related to collective SMP there are only two⁵¹ that are withdrawn by the NRAs because of the Commission’s serious doubts. In both decisions the Commission questions that the level of retail prices are “particularly”⁵² or “excessively”⁵³ high than the EU average.

If there are no monopolistic rents on retail markets, the conclusion on incentives to coordinate cannot be warranted, despite of the existence of coincidentally paralleled behaviours. Regarding the market for mobile access and call origination in Slovenia, the Slovenian NRA draws a conclusion of the existence of incentives to coordinate based on paralleled denial of access of third parties by the two largest undertakings. However, the Commission raises serious doubts on this conclusion because the Slovenian NRA does not demonstrate the two largest undertakings can “generate a level of profits above the competitive level for a certain period of time or at least allow the prospect of a sustainably high level of profits over a certain period of time”.⁵⁴ Lack of monopolistic profits, paralleled access refusal may be caused by individual incentives, rather than a common policy.

⁴⁷ See, Case Austria Market 15, Case Belgium Market 15, Case Denmark Market 15, Case Latvia Market 15, Case Lithuania Market 15, Case Polish Market 15, Case Sweden Market 15, and Case UK Market 15.

⁴⁸ See, Case Germany Market 15.

⁴⁹ See, Case Spain Market 15.

⁵⁰ The EU average on every electronic communications market can be found in the Commission’s annual *Progress Report on the Single European Electronic Communications Market*, available at: http://ec.europa.eu/information_society/policy/ecomm/library/communications_reports/index_en.htm.

⁵¹ See, Case Malta Market 12(2) and Case Slovenian Market 15(2).

⁵² See, Case Malta Market 12(2).

⁵³ See, Case Slovenia Market 15(2).

⁵⁴ *Ibid.*

4.3. PRICE-ORIENTED COORDINATION

In the wholesale markets where access is not the main regulatory bottleneck, prices, given its nature, may serve as an alternative focal point. When examining price-oriented coordination, the NRAs always set their emphasis on market transparency, in other words whether the markets in question is transparent enough for undertakings concerned to monitor other's pricing behaviours.

There are several principles concerning the assessment of market transparency. First, market players are not assumed to grasp others' pricing behaviours in an unstable market. In particular, an unstable price, *i.e.* a steadily decreasing prices⁵⁵ or a fluctuating price⁵⁶, is considered to make it difficult to monitor the other undertakings' behaviours. Second, the prices of other members should be accessible via public channels, *e.g.* published price⁵⁷ or sometimes information disclosed in the negotiation with customers.⁵⁸ Nevertheless, individual debates are not considered as publicly assessable.⁵⁹ Third, even when undertakings provide homogeneous products or services, different tariff packages may make the market less transparent. For example, the Irish NRA acknowledges that the apparent complexity of these tariffs can work against the establishment of a consensus position even on a market where all the operators offer broadly the same portfolio services in their retail clusters.⁶⁰

4.4. THE GREENFIELD APPROACH: A CASE STUDY

The abovementioned analyses of incentives to coordination are all based on a backward-looking method. In particular, all those NRAs evaluate the incentives based on the market players' past behaviours. Then a question can be raised whether and how the NRAs can analyse the incentives to coordinate based on a forward-looking analysis, or in other words, how the NRAs deal with a market which is currently competitive under regulation and nevertheless may lead to tacit collusion after regulation is rolled back. This method is called the Greenfield approach,⁶¹ concerning which the Commission first decision concerning the market for wholesale broadband access in Malta⁶² may shed some light.

⁵⁵ See, Case Czech Market 15 and Case Denmark market 15.

⁵⁶ See, Case UK Market 15.

⁵⁷ See, *e.g.* Case Ireland Market 15.

⁵⁸ See, *e.g.* Case Slovenia Market 15(2).

⁵⁹ See, *e.g.* Case Sweden Market 17.

⁶⁰ See, Case Ireland Market 15.

⁶¹ More details about the Greenfield approach can be found in Case DE/2005/0144: Call termination on individual public telephone networks provided at a fixed location, Brussels, 17.05.2005.

⁶² See, Case Malta Market 12(1).

In this case, there are two undertakings, Maltacom and Melita Cable, active on the wholesale market for broadband access in Malta. This market is considered by the Maltese NRA as a mature market with high entry barriers, similar cost structures between the two wholesale operators, high concentration, similar market shares between the two wholesale operators and homogeneous products, all of which make this market in general fulfilling the requirements of the first factor, *i.e.* oligopolistic market structure.

As far as the second factor, namely incentive to coordinate, is concerned, the Maltese NRA observes first that Maltacom is subject to access obligation and therefore opens its network to third parties that jointly have 30% market share in the retail broadband market, and secondly that Melita Cable that is not regulated continuously denies third-party access. The Maltese NRA is concerned that without the current access regulation Maltacom would have a strong incentive to discontinue its wholesale offer and establish a collective SMP with Melita Cable, and therefore it designates the two undertakings as holding collective SMP. Nevertheless, the Commission raises serious doubt on this conclusion because “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 the retail customers. These customers may switch to cable or emerging platforms, such as BWA.”⁶³ The Commission’s serious doubt makes the Maltese NRA to finally withdraw its draft measure.

Implications of this case are three folded. First, as already mentioned earlier, individual denial of access alone cannot be evidence of incentives of tacit collusion. In this case, denial of access by Melita Cable alone cannot be evidence of collective SMP between Melita Cable and Maltacom. Second, incentives of denial of access should be strong enough for undertakings concerned to discontinue the existing offers or not to initiate such offers if there are at present no such offers. In the present case, the Commission implies that discontinuing wholesale access to third parties would make Maltacom losing its clients on the wholesale market. Furthermore, the market shares of these clients are so considerable (up to 30%) that there is no guarantee that Maltacom would immediately acquire the customers of its clients. Instead, Maltacom must be confronted with competition from Melita Cable after the withdrawal of wholesale access, which in turn decreases the likelihood of tacit collusion between the two undertakings. Third, as already indicated previously, tacit collusion of not granting access to third parties must be based on monopolistic profits at the retail level. The Commission is not convinced that Maltacom and Melita Cable are maintaining an excessively high profit at the retail market. All these hinder Maltacom’s incentive from withdrawing its wholesale offers, as well as coordinating with Melita Cable.

⁶³ *Ibid.*

5. ABILITIES TO RETALIATE

The incentives to coordinate would be frustrated if there are no adequate deterrents to ensure that there is a long term interest not to depart from the common policy. Each member of a collective SMP must be aware that highly competitive action on its part to increase its market share would invoke identical action by the others, so that it would derive no benefit from its initiative.⁶⁴ Therefore, in order to prove the existence of a collective SMP, the NRAs should establish that an effective retaliation mechanism exists so that it is not worth the while of any member to depart from the common course of conduct to the detriment of the other members.⁶⁵ The following paragraphs report the evaluation of such retaliation mechanism in the Commission decisions.

5.1. ACCESS-ORIENTED RETALIATION

As regards the retaliation mechanism concerning granting access to third parties, the Commission provides guidance in some of its decisions. According to the Commission, the evaluation should be focused on an issue whether it is easier for the retaliating undertakings to immediately conclude an access contract with third parties after detecting a deviation. Emphasis of this analysis should be placed on the first-mover advantage of the deviating undertaking.⁶⁶ In practice, there are two options of retaliation for the retaliating undertakings: (i) to attract the third parties hosted by the deviating undertakings to their networks; or (ii) to host other third parties on their networks.⁶⁷

With regard to the first option, two factors are particularly relevant: (i) whether the agreement between deviating undertakings and their contracted parties contains exclusive clauses and (ii) whether transaction costs (including costs of negotiation with the non-deviating undertakings) might deter the third parties from switching the hosting deviating undertakings.

Regarding the second option, it is important to focus on the time-consuming process of the negotiation of an access agreement. If the negotiation is excessively time consuming and the first mover advantage of the deviating undertaking is strong, the effectiveness of a retaliation mechanism is questionable.

⁶⁴ See, Case T-342/99 *Airtours* [2002] ECR II-2585, para 62.

⁶⁵ *Ibid*, para 195.

⁶⁶ See, Case Spain Market 15.

⁶⁷ See, Case Malta Market 15.

5.2. PRICE-ORIENTED RETALIATION

As an alternative, other undertakings can retaliate based on prices. Price retaliation usually takes place at the retail level. Therefore, attention should be paid to the possibility of a price war by non-deviating undertakings at the retail market. The relevant criterion is the scope for price competition. An effective retaliation mechanism depends on the competition environment at the retail level. If the customers are locked by their current operators, or if switching costs are relatively high, the scope for price competition at the retail level is limited. Under this situation an initiation of a price war at the retail level is not considered effective to deter a deviation.⁶⁸ Furthermore, the scope for price competition can also be limited by market maturity. The Commission does not believe that a mature market can give incentives to deviate from the common policy by raising a price war because the possible result would be that market share would remain the same, albeit at lower prices.⁶⁹

6. ABILITIES TO RESIST MARKET CONSTRAINTS

The analysis of the previous three factors ensures that the undertakings concerned can establish a tight collective entity. In order to form a collective SMP, this collective entity should be able to act appreciably independent of their competitors, customers and ultimately consumers. Therefore, the last factor to assess collective SMP concerns a question whether the power of consumers and competitors are sufficient enough to constrain this collective entity. The relevant criteria are countervailing buying power and potential competition.

With regard to countervailing buying power, if buyers are powerful, undertakings with SMP may find it difficult to impose high prices and consequently the profitability of collusion is reduced.⁷⁰ However, customers' market power depends on the alternative choices on the market. In particular, as far as wholesale markets are concerned, the alternative choices refer to alternative infrastructures available on the relevant market. The problem is that all the undertakings with comparable infrastructures with the incumbents are also selected as suspects of collective SMP, which in practice makes no alternatives for customers. Consequently, customers normally do not enjoy countervailing buying power.

Concerning potential competition, undertakings with excess capacity have an incentive to deviate from tacit collusion by using their excess capacity to produce at a lower price and in so doing make more profit overall (Rey, 2004). Potential competition may be imposed by two groups of undertakings in the context of collective SMP

⁶⁸ See, Case Spain market 15.

⁶⁹ See, Case Malta Market 15.

⁷⁰ See, ERG working paper on SMP, pp 5, *supra* note 12.

assessment. Regarding the first group, potential competition is exerted by newcomers that has established a network comparable with the existing undertakings and nevertheless has not yet acquired sufficient customer base.⁷¹ These newcomers are determined to expand their business and accordingly will not coordinate their behaviours with the existing undertakings. For example, in the Commission second decision concerning the market for wholesale broadband access in Malta, the recent presence of a third infrastructure operator finally clears the Maltese NRA's concern of collective SMP established by the two existing infrastructure operators. The second group refers to undertakings that can easily switch to merchant sales.⁷² Although these undertakings currently do not offer or only offer a small portion of their outputs to third parties and therefore are only fringe competitors on the merchant market, they are confronted without difficulty to increase their sales to third parties. They can immediately disintegrate tacit collusion, if they detect a super-competitive profit maintained by undertakings with collective SMP. These two types of undertakings can act as "maverick" and impose competition pressure onto larger undertakings. Collective SMP thus cannot be sustainable with the existence of excess capacity.

7. CONCLUSIONS

Immediately after the coming into effect of the 2003 Regulatory Framework, Ryan (2005) was concerned that the introduction of collective dominance into electronic communications regulation would lead to increasing number of collective SMP cases because electronic communications markets in general present market features that are conducive to tacit collusion. However, the reality goes almost opposite to his concern. Until March 2009, there are only 41 Commission decisions concerning collective SMP, of which only six are positive (four approved and two withdrawn).

Based on the previous analysis, the Commission is observed to take a prudent view on collective SMP assessment. This prudence can be, in particular, observed in the two withdrawn decisions concerning the market for wholesale broadband access in Malta⁷³ and the market for mobile access and call origination in Slovenia⁷⁴, where the Commission raises serious doubts on the two NRAs' draft measures. In both cases, the Commission's serious doubts are related to the analysis of incentive to coordinate and the approach taken by the Commission renders difficulties to conclude collective SMP.

⁷¹ See, Case Malta Market 15(2).

⁷² Merchant sales are used as antonymous to captive sales. An undertaking at a wholesale market can sell their output to third parties and can also "sell" them to their own retail arms. The former are called merchant sales and the latter captive sales.

⁷³ See, Case Malta Market 12(1).

⁷⁴ See, Case Slovenia Market 15(2).

This prudential approach can be justified by one of the objectives set out in Article 8 of the Framework Directive, *i.e.* encouraging efficient investment in infrastructure. Given that collective-SMP-based regulation can include more than one undertaking into regulation, collective SMP is more intrusive than single SMP. On the other hand, it should be noted that more competition can be found in markets generating collective SMP concerns than markets which are dominated by only one undertaking. Apparently there must be at least one alternative operator that has a comparable market share and a comparable network with that of the incumbent in the markets in order to trigger collective SMP concern. If a conclusion of collective SMP can be easily drawn, alternative operators would lose their incentives to invest or acquire more market shares because by doing so they may induce regulation based on collective SMP. This prudent approach can give a signal to alternative operators not to be afraid of growing bigger.

Moreover, this prudential approach can also be observed in the fact that no collective SMP has been found in retail markets. It is compatible to the underlying principle of the Regulatory Framework, *i.e.* deregulation. Even if there is collective SMP in retail markets, the NRAs can always leverage wholesale regulatory remedies to break up collective SMP in retail markets. Therefore, it is not necessary to impose regulation based on collective SMP at the retail level.

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ANNEX: A FULL LIST OF COMMISSION DECISIONS RELATED TO COLLECTIVE SMP UP TO MARCH 2009

Abbreviation	Dates	Subject matters	Collective SMP or not
UK Market 15	29.08.2003	Case UK/2003/0001: Mobile access and call origination	No
Austria Market 15	25.06.2004	Case AT/2004/0063: access and call origination on public mobile telephone networks	No
Hungary Market 15	01.10.2004	Case HU/2004/0096: Market for access and call origination on public mobile telephone networks	No
Ireland Market 15	20.01.2005	Case IE/2004/0121: Access and call origination on public mobile telephone networks	Yes
Sweden Market 15	15.07.2005	Case SE/2005/0203: Access and call origination on public mobile telephone networks	No
Netherlands Market 15	13.10.2005	Case NL/2005/0242: Wholesale access and call origination on public mobile telephone networks	No
Denmark Market 15	21.10.2005	Case DK/2005/0243: Wholesale access and call origination on public mobile telephone networks	No
Italy Market 15	09.11.2005	Case IT/2005/0259: Access and call origination on public mobile telephone networks	No
Finland Market 17	16.12.2005	Case FI/2005/0304: the wholesale national market for international roaming on public mobile networks	No
Austria Market 12	22.12.2005	Case AT/2005/0312: Wholesale broadband access	No
Spain Market 15	30.01.2006	ES/2005/0330: access and call origination on public mobile telephone networks	Yes
Slovenia Market 14	21.04.2006	Case SI/2006/0362: Wholesale trunk segments of leased lines	No
Luxembourg Market 15	03.05.2006	Case LU/2006/0369: Mobile access and call origination on public mobile telephone networks	No
Italy Market 17	07.06.2006	Case IT/2006/0393: wholesale national market for international roaming on public mobile networks	No

Abbreviation	Dates	Subject matters	Collective SMP or not
Czech Market 15	23.06.2006	Case CZ/2006/0405: Access and call origination on public mobile telephone networks	No
Italy Market 18	27.07.2006	Case IT/2006/0424: broadcasting transmission services, to deliver content to end users	Yes
Denmark Market 17	28.07.2006	Case DK/2006/0419: The wholesale national market for international roaming on public mobile networks	No
Lithuania Market 15(1)	28.07.2006	Case LT/2006/0406: Access and call origination on public mobile telephone networks	No
Slovenia Market 17	07.08.2006	Case SI/2006/0434: The wholesale national market for international roaming on public mobile networks	No
Czech Market 10	10.08.2006	Case CZ/2006/0448: Transit services in the fixed public telephone network	No
Czech Market 17	10.08.2006	Case CZ/2006/0452: Wholesale national market for international roaming on public mobile networks	No
Malta Market 15	10.08.2006	Case MT/2006/0443: Access and call origination on public mobile telephone networks	Yes
Slovakia Market 15	10.08.2006	Case SK/2006/0442: Access and call origination on public mobile telephone networks	No
Czech Market 14	11.08.2006	Case CZ/2006/0451: Wholesale trunk segments of leased lines	No
Spain Market 17	24.08.2006	Case ES/2006/0460: wholesale national market for international roaming on public mobile networks	No
Austria Market 14	25.08.2006	Case AT/2006/0467: Wholesale trunk segments of leased lines	No
Austria Market 17	25.08.2006	Case AT/2006/0466: The wholesale national market for international roaming on public mobile networks	No
Ireland Market 17	08.09.2006	Case IE/2006/0477: Wholesale national market for international roaming on public mobile networks	No
Greece Market 15	29.09.2006	Case EL/2006/0492: Access and call origination on public mobile telephone networks	No

Abbreviation	Dates	Subject matters	Collective SMP or not
Sweden Market 17	03.10.2006	Case SE/2006/0496: The wholesale national market for international roaming on public mobile networks	No
Poland Market 17	10.11.2006	Case PL/2006/0517: The wholesale national market for international roaming on public mobile networks	No
Latvia Market 15	15.12.2006	Case LV/2006/0545: Mobile access and call origination on public mobile telephone networks	No
Greece Market 17	24.01.2007	Case EL/2006/0558: wholesale national market for international roaming on public mobile networks	No
Malta Market 12(1)	29.01.2007	Case MT/2007/0563: Wholesale broadband access	Yes (withdrawn)
Belgium Market 15	23/04/2007	Case BE/2007/0610: Mobile access and call origination on public mobile telephone networks	No
Germany Market 15	21/05/2007	Case DE/2007/0627: Market for access and call origination on public mobile telephone networks	No
Estonia Market 17	30.05.2007	Case EE/2007/0629: Wholesale national market for international roaming on public mobile networks	No
Estonia Market 10	24.08.2007	Case EE/2007/0670: Transit services in the fixed public telephone network	No
Poland Market 15	26.03.2008	Case PL/2008/0756: Wholesale mobile access and call origination	No
Malta Market 12(2)	07.11.2008	Case MT/2008/0803: Wholesale broadband access	No
Slovenia Market 15(2)	13.11.2008	Case SI/2008/0806: wholesale access and call origination on public mobile telephone networks	Yes (withdrawn)