Body of European Regulators
for Electronic Communications

BEREC

BoR (15)74

Draft

BEREC Report on
Oligopoly analysis and regulation

June 2015

Contents

1 Executive summary and main findings 5

2 Contents of the report 7

3 Context and objectives of the report 8

4 Oligopoly theory 11

4.1 Economic background 11

4.1.1 Distinction and characteristics of oligopolistic markets 11

4.1.2 Models of oligopolistic competition 12

4.2 Oligopolies and potential competition concerns 14

4.2.1 Non-collusive outcome 14

4.2.2 Collusive outcome - tacit collusion 17

4.3 Summary 18

5 Relevant precedents on oligopoly analysis and regulation 18

5.1 The competition law concept of dominance 19

5.2 The legal framework for market dominance 19

5.2.1 Legal background of the concept of SMP 19

5.2.2 Criteria to assess joint dominance 20

5.2.3 Joint dominance in the context of Article 102 of the TFEU and the decisions by EU Courts 21

5.2.4 Joint dominance and non-coordinated effects in the context of the Merger Regulation 24

5.3 National cases and EC letters 26

5.3.1 Overview of the relevant cases 27

5.3.2 General presentation of the relevant cases 28

5.4 Lessons learned 32

6 Issues arising in assessing joint dominance 34

6.1 Suggested framework for assessing joint dominance 34

6.1.1 Reaching terms of coordination 35

6.1.2 Monitor deviations 39

6.1.3 Effective deterrent mechanism 40

6.1.4 Insufficient reactions from outsiders 43

6.2 Standard of proof 44

6.2.1 Standard of proof for joint dominance 45

6.2.2 Types of evidence used 46

Draft

6.3 Conclusion 48
7 Tight oligopolies 48
7.1 Tight oligopolies in contrast to collusive oligopolies 48
7.1.1 Criteria for assessing tight oligopolies 49
7.1.2 Competition constraints in tight oligopolies 52
7.2 Tight oligopolies and the current regulatory framework 53
7.3. Tight oligopolies and adjacent fields of competition law 54
7.4. Conclusion 56
8 Remedies in the context of oligopolies 56
9 Recommendations to amend the regulatory framework 59
9.1 Regulatory treatment of joint dominance 59
9.2 Regulatory treatment of tight oligopolies 61
10 References 62
11 Annex A: Detailed presentation of the relevant joint dominance cases analysed by NRAs 65
11.1 The market for access and call origination on public mobile telephone networks 65
11.1.1 COMREG's case – IE/2004/0121 65
11.1.2 ARCEP's case – FR/2005/0179 67
11.1.3 CNMC's case – ES/2005/0330 69
11.1.4 MCA's case – MT/2006/0443 71
11.1.5 AKOS' case – SI/2008/0806 73
11.2 The market for broadcasting transmission services 75
11.2.1 OFCOM's case – UK/2004/0111 76
11.2.2 AGCOM's case – IT/2006/0424 77
11.3 The market for wholesale broadband access 79
11.3.1 MCA's case – MT/2007/0563 80
12 Annex B: Joint Dominance Cases in the context of non-telecommunication markets 83
12.1 Introduction 83
12.2 ABF/GBI Merger case (COMP/M.4980) 84
12.2.1 Overview 84
12.2.2 Market Characteristics 84
12.2.3 Theory of harm 85
12.3 Anglo American PLC and Lafarge S.A. 87
12.3.1 Overview 87

Draft

12.3.2 Market characteristics 87
12.3.3 Theory of harm 87
12.4 Aggregates, cement and ready-mix concrete market investigation 88
12.4.1 Overview 88
12.4.2 Market characteristics 89
12.4.3 Theory of harm 90
12.5 COMP/M.7009 and COMP/ M.7054 – HOLCIM / CEMEX WEST and CEMEX / HOLCIM ASSETS 90
12.5.1 Overview 90
12.5.2 Market Characteristics 91
12.5.3 Theory of harm 91
12.6 COMP/M.3333 of Sony/ BMG 92
12.6.1 Overview 92
12.6.2 Market Characteristics 92
12.6.3 Theory of harm 93

Draft

1 Executive summary and main findings

This BEREC report aims to provide initial assistance to NRAs about the analysis and regulation of oligopoly markets and review the different outcomes for oligopoly market settings, as well as to assess whether there is any need to evolve the regulatory framework to address potential competition problems that could arise. The document can be considered as a starting point to structure BEREC discussion on the future regulatory treatment of oligopolies in the context of *ex ante* regulation.

The European electronic communications sector has seen the emergence of oligopolistic markets defined by a limited number of operators. Fixed markets are evolving from a single SMP position to oligopoly market structures, driven by the deployment of NGA networks and technological convergence; mergers and acquisitions are reducing the number of undertakings and there is an increased move to supplying bundled services so just a limited number of operators own both fixed and mobile network infrastructures.

BEREC acknowledges that oligopolistic market structures may also arise in a natural way in the context of electronic communications markets: high fixed and sunk costs for deploying access infrastructure, economies of scale and scarcity of resources (as is the case for spectrum) may limit the number of players.

BEREC also considers that not all oligopolies raise competition issues and therefore oligopolies are not necessarily always problematic. Oligopolistic market settings are only of concern when they contribute to a non-competitive market outcome, resulting in significant consumer harm/welfare loss, thus requiring regulatory action to address evident or potential market failures.

Indeed, according to economic theory, oligopolistic outcomes can range from competitive, effective oligopolistic competition in which no super-normal profit is made, to non- or sub-competitive market outcomes. These outcomes may be the result of tacitly colluding oligopolies (joint dominance) or of tight oligopolies where coordination does not occur but the market structure is not conducive to effective competition.

To remedy potential competition issues, the current regulatory framework provides NRAs in general terms with a tool box to assess and regulate non-competitive markets. While the regulatory framework applies the concept of joint dominance, which covers tacit collusion in line with competition law, *ex ante* regulation however does not explicitly address tight oligopolies. In order to trigger *ex ante* intervention, NRAs must first prove dominance (joint or otherwise) before imposing remedies on undertakings.

A small number of cases of joint dominance have been brought over the past decade by NRAs to the Commission and many of them were overturned or withdrawn. This may reflect that it is hard to demonstrate joint dominance and that more guidance may be needed for NRAs on how to assess non-competitive outcomes in the case of oligopolistic markets and how to intervene with *ex ante* regulation.

This report shows, based on past cases, that a finding of joint SMP must be based on convincing evidence. In this line, the report also elaborates on the criteria that NRAs could use to demonstrate joint dominance, in particular on the basis of the Airtours' case, which is considered to be the key reference for NRAs when assessing joint dominance. Based on existing cases (both from NRAs' notifications and *ex post* competition law), BEREC provides further assistance for NRAs on the application of each criterion. In particular, the report

Draft

highlights that terms of coordination are more likely to be reached where a focal point can be identified, firm structures and cost structures are symmetric, market shares and demand are stable, capacity constraints do not exist and long term financial incentives to collude exist. Monitoring deviations is facilitated by transparency in the market, simple homogenous products with stable demand and formal or informal links between firms. Tacit collusion also requires effective deterrent mechanisms. Retaliation is easier where firms are symmetric, where there is a financial implication to deviation and firms value long term profits over short term profits and where firms are better able to target the customers of the deviating firm. In order to sustain collusion the risk of disruption from firms outside the collusive setting must be low. This is more likely when barriers to entry are high, customers do not have buyer power and there are no active fringe competitors able to disrupt the collusion.

The report also addresses what the appropriate standard of proof should be in terms of *ex ante* intervention in a case of tacit collusion and considers the types of evidence to be used and a hypothetical versus factual analysis, highlighting the greater reliance on the former in *ex ante* cases for regulation.

Regarding tight oligopolies, the current regulatory framework does not explicitly address market failure of this kind. It is worth noting that the test applied in merger assessment was modified in 2004 in order to take into account any significant impediment of effective competition (SIEC) likely to result from the concentration. This change – from a dominance test towards a less restrictive SIEC test - implied that single and joint dominance (the latter being based on an analysis of tacit collusion or coordinated effects) were no longer the only form of competitive harm to be identified in the context of an EC merger review. BEREC considers that this is a relevant precedent to be taken into account when reviewing the framework, while acknowledging that a direct transposition of the test applied to the market review process may not be straightforward, as the context in merger cases is different.

Remedies to be imposed in oligopolistic markets are also a relevant issue to be analysed. BEREC is of the view that any regulatory obligation must be imposed by following an assessment on a case-by-case basis and according to the proportionality principle, i.e. NRAs should impose only necessary and the least burdensome remedies on operators in markets raising competition concerns. Further work will be needed in the context of each market for guidance on the application of remedies in oligopolistic settings. But this report identifies some issues to be considered: (i) while SMP guidelines intend to apply remedies to all undertakings having SMP, in the case of joint dominance, NRAs need guidance as how to implement remedies in particular with regard to whether regulatory obligations must be similar, and (ii) how to remedy tight oligopolies, given that current guidelines do not appear to deal with such a setting. However, other additional means may be suitable to remedy sub-competitive oligopolies in addition to imposing regulatory obligations on non SMP operators.

BEREC's views on the evolution of the regulatory framework are to be established in a specific workstream where a comprehensive analysis on the needs to revise the regulatory framework will take place. This report can be considered as one of the inputs feeding this discussion and does not pre-empt the recommendations to be produced by BEREC.

The main conclusions and findings of this report are focused on recommendation for the review of the regulatory framework regarding the regulatory treatment of oligopolies, namely: (i) to update Annex II of the Framework Directive to structure the criteria to be used to assess joint dominance around the criteria used in the Airtours case, (ii) to develop in more detail the criteria to be used when assessing joint SMP following the guidance provided in chapter 6 of

Draft

this document (depending on the final level of detail of the SMP guidelines, preparing a BEREC Common Position could also be considered) and (iii) to take into consideration the case for potential *ex ante* intervention in relation to tight oligopolies. However, in the case of tight oligopolies, more work will be needed to set the detailed criteria to be used for supporting the case for intervention and the type of intervention that should be considered.

2 Contents of the report

To deal with those objectives, the report is structured as follows:

Chapter 3 presents the motivation and the main objectives of the report.

Chapter 4 presents the key issues to take into consideration regarding the economic theory related to oligopolistic competition. Different models of oligopolistic competition ranging from effective oligopolistic competition to tacit collusion, as well as tight oligopolistic competition with limited competition are presented and analysed.

Chapter 5 sets out relevant precedents on the analysis and regulation of oligopolies that may be useful in the context of electronic communications services. The regulatory framework, based on competition law, is presented, as well as the relevant key competition cases of collective dominance to be taken into consideration by NRAs when assessing collective dominance and the evolution of the existing regulatory tools. The relevant regulatory framework applied by Competition Authorities to assess mergers and acquisitions is also presented. Finally, this chapter analyses relevant precedents from the decisions adopted by NRAs on joint SMP, together with the European Commission's opinion/comments and feedback given to NRAs.

Chapter 6 is focused on the set of criteria to be used to assess joint SMP under the existing regulatory framework which largely equates joint SMP with tacit collusion, providing relevant assistance to NRAs on the practical application of joint SMP.

Chapter 7 identifies potential competition problems that might appear in tight oligopolies that are currently not addressed in the existing regulatory framework and that, in the opinion of BEREC, should be taken into consideration when reviewing the framework. This chapter also provides information about the criteria to identify tight oligopolies with sub-competitive outcomes.

A general discussion on the selection of remedies in the context of oligopolistic situations is addressed in Chapter 8, identifying relevant issues to be taken into account.

Chapter 9 presents BEREC recommendations to evolve the regulatory tools to be used by NRAs to address potential competition problems in oligopolistic situations.

Finally, chapter 10 includes relevant bibliographic references in the context of oligopoly analysis and regulation, and annexes A and B include a detailed description of relevant joint dominance cases notified by NRAs and other cases outside of telecoms market reviews where concerns over tacit coordination have been upheld or closely scrutinized.

Draft

3 Context and objectives of the report

This BEREC report aims to provide initial assistance to NRAs about the analysis and regulation of oligopoly[1] markets and review the different outcomes for oligopoly market settings in order to assess whether there is any need to evolve the regulatory framework to address potential competition problems that could arise. The document can be considered as a starting point to structure BEREC discussion on the future regulatory treatment of oligopolies in the context of *ex ante* regulation.

The European electronic communications industry has undergone a significant transformation over the last few years, largely attributable to advances in technology - such as the deployment of fibre networks, technological improvement and increased deployment of cable networks, the launch of the LTE standard and network convergence - in combination with new market entries and players climbing up the so-called ladder of investment. This evolution of the European telecommunications market is also conditioned by a trend towards consolidation of the industry via mergers and acquisitions.

An important consideration in this respect is the increased occurrence of oligopolistic market structures, with a number of European electronic communications markets characterised by oligopolistic structures where a small number of operators compete with each other. This raises issues as to the level of competition in oligopolistic electronic communications markets as well as the question of the necessity and effectiveness of *ex ante* regulatory intervention in addressing any potential anticompetitive behaviour in such oligopolistic markets.

Several major considerations are particularly relevant in order to understand such new characteristics of the telecommunications sector and the rise of oligopolies in electronic communications markets.

First, there is an increasing technological convergence based on the Internet Protocol (IP) adoption in fixed and mobile high speed bandwidth infrastructure, leading to a more integrated offer of services (voice, data and content) provided over just one fixed or one mobile network, or a combination of these two types of platforms. In particular, the traditional copper, cable and new fibre networks are capable of providing television services in addition to fixed telephony and broadband services. As a consequence of this convergence over the use of IP, bundling and double and triple play offers including telephony, broadband access and television are becoming mainstream. The commercial strategy of adding mobile services (both voice and data) to bundles that an increasing number of operators is adopting is further reinforcing this trend.

Indeed several European countries are experiencing an increase in take-up of bundled offers, typically integrating fixed and mobile services as well as TV services. A limited number of traditional voice operators are now able to offer television and internet services to their end users, whereas traditional television operators are now able to offer internet and voice services to their end users. This increase in platform competition has resulted in a convergence of market shares between the services. Operators that were traditionally strong on voice are

[1] Solely for the purpose of clarification, it has to be stressed that while the term "oligopoly" as defined in this report only relates to a certain market structure without prejudging the competitive performance, the same term may under national circumstances, in a legal context, relate to the finding of joint dominance in an examined market. The latter meaning does not reflect the use of this the term in this report

losing market share on the voice market to cable and mobile operators. Operators that were traditionally strong on television are losing market share on the audiovisual market to the copper/fibre incumbent. Due to this convergence markets seem to be shifting away from single SMP. The question that NRAs will increasingly face under the current framework is whether this shift causes markets to become effectively competitive or whether this shift causes the introduction of (a risk of) joint SMP.

Secondly, there are bottleneck issues or scarcity of resources and economies of scale and scope which also limit the number of infrastructure-based competitors. Next Generation Access Networks (NGAs) are being deployed by a limited number of players (incumbents, cable operators and some regional or local initiatives) in specific geographical areas. In most of the scenarios the economies of NGA deployment do not allow for more than two or three operators rolling-out high-speed access networks at a national level on a profitable basis because of the high fixed and sunk costs and the uncertainty as to the expected level of demand for new NGA products. In this regard, cable operators have increased their footprint in some countries and take-up over time, as well as improved their technology to offer high speeds, reaching in certain cases market shares similar to those of traditional incumbent operators in specific geographical areas.

In the mobile sector, the role played in the past by new entrants increasing competition via significant price reductions or new billing models may not be as relevant anymore if entry in the mobile markets by deploying new networks becomes more unlikely.

The provision of electronic communication services may therefore be geared towards a scenario where historical fixed incumbents and some access-based alternative operators are deploying fibre-based NGA networks (either FTTH or FTTC) and cable operators upgrade their networks on the basis of the DOCSIS 3.X technology.

Thirdly, a number of European countries have witnessed increased consolidation in the electronic communications sector, with mergers and acquisitions gathering momentum. Some countries are experiencing a number of mergers and acquisitions in the mobile sector, resulting in a reduction of the number of mobile network operators. In the fixed sector, consolidation of cable operators has been taking place in several countries. In some instances, market players providing services in the mobile sector have merged with fixed operators. Traditional telecommunications operators are also acquiring companies owning premium content rights in order to act as an integrated operator offering bundles and convergent services based on their own infrastructure.

In sum, a number of electronic communications markets across Europe have undergone or are experiencing a process of consolidation through mergers and acquisitions and also as a result of high investment costs associated with the deployment of NGA networks and the roll-out of 4G networks, as well as economies of scale and scope.

Based on these market trends, and also taking into account the experience of the past, BEREC considers that the following markets may show an increased occurrence of oligopolistic markets structures[2]:

[2] There were also other two specific cases for market 18/2003 (wholesale broadcasting transmission), but the future evolution to oligopolistic markets applies mainly to the aforementioned markets.

Draft

- Wholesale local access provided at a fixed location and wholesale central access provided at a fixed location for mass-market products (markets 3a and 3b/2014). Existing trends are moving to a configuration of retail markets where two or three operators may control most of the market enjoying similar market shares in specific geographical areas. Each of them will own network infrastructure to provide wholesale services in markets 3a and 3b/2014. The traditional situation of single SMP position in these markets may evolve either to a competitive situation not needing any regulation, to a joint dominance situation, or to a tight oligopoly.

- Wholesale market of access and call origination on public mobile telephone networks (market 15/2003). In this case, these markets are witnessing a reduction in the number of MNOs, following a series of mergers and acquisitions, and may raise competition issues, particularly when it is deemed unlikely for new market entry to materialise[3].

BEREC considers that oligopolistic markets may operate in ways that tend towards effective competition and that, therefore, are not necessarily problematic. Indeed, oligopolistic markets are only of concern when they contribute to a sub or non-competitive market outcome, resulting in consumer harm/welfare loss, thus requiring regulatory action to address evident or potential market failures. Although the number of members of an oligopoly is a relevant issue to assess the potential for competition, the appraisal of oligopolistic markets is much more complex than just examining the number of members in an oligopoly

Any analysis of the need for regulatory intervention should take into account not only static efficiency (as short-term competition), but also dynamic efficiency, a term which encompasses the potential impact on incentives for investment and development of new products and services. When assessing the evolution of telecommunications markets, consideration of OTT (Over-The-Top) services provided by content and application providers (CAPs) may also be relevant. Although OTTs are unlikely to increase competition at the telecommunication access infrastructure level, CAPs might exert competitive pressure at the retail level for certain media and voice services.

This report seeks to provide a better understanding of implications of oligopolies on the application of the regulatory framework, acknowledging that the notion of collective or joint dominance under competition law captures the possibility of an oligopolistic market having multiple operators with SMP and that there is little precedent of findings for *ex ante* regulation of joint SMP market structures.

Hence, this report also seeks to address the questions in which way the current regulatory framework is effective with respect to the analysis and regulation of oligopolistic market settings, as well as to whether there is a need to change the framework to address any issue not already covered under the existing joint SMP concept.

On the one hand, regarding joint SMP, as stated in the BEREC opinion on the Commission's Recommendation on relevant product and service markets susceptible to *ex ante* regulation, the SMP Guidelines do not cover the most recent decisions on joint dominance that have been adopted by the courts. Court decisions provide relevant parameters for determining the

[3] See the OECD document "Wireless Market Structures and Network Sharing", (OECD Digital Economy Papers, No. 243, OECD Publishing, http://dx.doi.org/10.1787/5jxt46dzl9r2-en) for an empirical study on the impact of the number of operators and new entrants in competition and the level of prices in mobile markets.

creation or strengthening of a jointly dominant position in *ex post* and merger scenarios. Additionally, as described in the following chapters, joint dominance has proven to be complex and difficult to address from a regulatory point of view[4]. This report aims, among other issues, to provide BEREC input for the evolution of these SMP Guidelines.

On the other hand, the current framework does not explicitly address tight oligopolies where market structures not fitting to joint SMP (based on coordinated effects) lead to non-effective competition.

In conclusion, the objectives of this report are to:

- Review the analysis and regulation of oligopolies in order to provide NRAs with assistance in the assessment of collective dominance under the existing framework;
- Identify situations where existing regulatory tools need adjustment to address the competition problems that oligopolistic competition might give rise to.

4 Oligopoly theory

4.1 Economic background

This chapter gives a short overview on the economic theory of oligopolies and briefly explains the distinction between oligopolies and other market types with regard to market conduct and market outcome. It also describes which types of oligopoly may be of concern for competition and why this may be the case.

4.1.1 Distinction and characteristics of oligopolistic markets

According to economic theory, perfect competition with a large number of suppliers and consumers results in prices that are equal to marginal cost and in the efficient use of resources in terms of both productive and allocative efficiency.[5] In a static setting, this would maximise total welfare for society. In contrast, high entry barriers due to, for example, substantial economies of scale, high fixed or sunk costs, legal barriers, patents or exclusive resource ownership may result in a low number of firms on the market. Such markets with only a few suppliers of goods or services and many customers are referred to as oligopolistic markets.

In contrast to firms in perfectly competitive markets, firms in an oligopoly may influence price and quantity in the market due to the market power held as a result of the small number of firms in the market.[6] Still, when maximizing their profits, oligopolistic firms have to take into account their rivals' reactions. As they cannot act independently, firms must anticipate the

[4] The 2013 report on implementation of the regulatory framework for electronic communications (A7-0313/2013) produced by the Committee on Industry, Research and Energy of the European Parliament does also consider that action against possibly non-competitive behaviours are currently difficult to address.

[5] Productive efficiency means that goods are produced with the lowest possible input. Allocative efficiency means that those goods are distributed in the best way; i.e. all consumers that are willing to pay exactly or more than the costs of production are allocated a product and there is no deadweight loss.

[6] In perfectly competitive markets the firms take the market price as given, because they would lose their whole market share even if they slightly increased their prices above the market price.

likely response of any rival to any given change in their price or quantity setting decision. At the same time, they face uncertainty about how their rivals will actually react to their actions.

While prices under perfect competition equal marginal costs, in oligopolistic markets as well as in a monopoly, prices are typically above marginal costs,[7] foremost, because firms are able to exert a certain degree of market power. A price higher than marginal costs can still be efficient, for instance, if the price is equal to long-run average costs, because the undertaking would not be able to cover its fixed costs in the long term by charging marginal costs. This would result in "normal" profits in the short term.

Moreover, in oligopolistic markets, even a degree of market power that results in profits above such a normal level ("super-normal" profits) might result in a market outcome that is optimal from a welfare perspective. Allowing firms to exert some degree of market power or, more precisely, the expectation of future super-normal profits may increase dynamic efficiency by stimulating innovation and risky investments. These, in turn, might deliver benefits such as lower production costs or product innovation in the long-run that compensate for allocative inefficiencies (higher prices) in the short-run. By eliminating any prospect of super-normal profits, there could be a risk of limiting innovation and investment incentives.[8]

On the other hand, if firms with market power can sustain excessive prices and profits over a longer period, the benefits derived from innovation are likely to be outweighed by welfare losses due to the higher prices and, hence, increased allocative inefficiencies. Moreover, very little competition in a market can also lead to decreasing incentives to invest and productive inefficiencies (X-inefficiencies) may increase while the incentive to compete is reduced.

The concept of "effective competition", as we use it in this paper, describes a situation in which an optimal balance between dynamic and static efficiency is reached. Hence, effective competition might deliver prices above a statically efficient level in the short term (e.g. prices above long-run average costs), while in the long run, the negative effects resulting from these higher prices are offset by increased investment or innovation. Therefore, effective competition would lead to an outcome that can be (but is not necessarily) statically inefficient and is – by definition – dynamically efficient. In contrast to monopolies, oligopolies can deliver effective competition under certain circumstances (see section 4.2.1.1).

4.1.2 Models of oligopolistic competition

There are several economic concepts of how oligopolies can be analysed.

4.1.2.1 Uncoordinated behaviour

First, *Cournot (1838)* assumes in his theory that firms produce homogenous goods and set their output subject to profit maximisation, taking their rivals' outputs as given. The market outcome is a stable price-quantity equilibrium, where no firm has an incentive to change the level of output at the given output of its rivals. This setting results in prices set above marginal costs and thus firms gain super-normal profits.

[7] One exception would be a Bertrand oligopoly with homogenous goods (see description below). However, this can be regarded a very theoretical and unrealistic case in telecommunication markets where a variety of different products is offered and price and capacity are involved in decision taking.
[8] Motta, M. (2004). "Competition Policy – Theory and Practice", pp.57-58; 89.

Cournot's earliest critique was expressed by *Bertrand (1883),* who argued that firms compete on prices rather than quantities. The only stable price-quantity equilibrium in this case would be where prices equal marginal cost, because firms will – under the assumptions that they have the same constant marginal costs and produce homogenous goods – have an incentive to absorb the whole market demand by undercutting their rivals' prices as long as their profit is not negative.

In another model, *Tirole (1988)* proposes price competition with differentiated goods, which can be regarded as more realistic than the classic Bertrand model.[9] In this approach, the outcome is similar to the Cournot equilibrium with a price above marginal costs and declining equilibrium price when demand becomes more elastic. Sometimes, telecommunications markets are described as markets with price competition and differentiated goods (e.g. Laffont, Rey and Tirole, 1998).

To better understand the behavioural component of oligopoly theory, economists make use of game theory. Firms in an oligopoly can be considered as being in a game, where the participants compete for the best outcome (i.e. for profit). Both, Cournot competition as well as price competition with differentiated goods usually end up in a prisoners' dilemma if it is a one-shot or finite game. We consider a simplified example of this below. We assume a one-shot game with two participants (a duopoly) where the strategy is either to cooperate or to compete assuming the following payoff matrix. Note that the payoff for firm A is listed first, and the payoff for firm B is listed second: so if firm A cooperates and firm B chooses to compete, the payoff for firm A would be 1 and for firm B it would be 5.

		Firm B strategies	
		Cooperate	Compete
Firm A strategies	Cooperate	4,4	1,5
	Compete	5,1	2,2

Table 4-1: Pay-off matrix in a prisoner's dilemma

The equilibrium outcome of this game is for both firms to compete. If firm A cooperates but firm B competes instead, firm A's payoff will be the lowest of all four payoff possibilities. The same would be true for firm B if it chooses to cooperate, while firm A competes instead. In principle, both firms are uncertain about the strategy of the other. However, by model assumption the firms know that each firm tries to maximize its profit and, hence, the only viable strategy for each firm is to compete, given that they expect the other firm to behave rationally and do the same. In economic theory this is considered as the only stable equilibrium (Nash equilibrium), which basically says that firm A picks its strategy taking into account firm B's strategy (and vice versa) and both firms cannot increase their payoffs by changing their strategy.

4.1.2.2 Coordinated behaviour

A different outcome can result if the aforementioned game is being infinitely repeated. In a repeated game with an uncertain number of rounds, both firms could achieve a higher payoff

[9] See Tirole J (1988) The Theory of Industrial Organization, MIT Press.

Draft

if they choose to *cooperate* (Pareto equilibrium). This is likely to occur, because each round the game is played, both firms can learn about the behaviour of the other. Both firms can then come to the conclusion that they can receive a higher payoff, if they cooperate.[10] An essential feature is that both firms are patient and value future profits highly. Therefore, the outcome of the game (i.e. whether they cooperate or not) is dependent on the discount rate. In addition, the number of rounds is not known in advance, which leads both firms to the assumption that if past cooperation generated higher profits, future cooperation in the coming rounds will likely do so as well. As a consequence there is not much incentive for both firms to defect, as defecting would reduce their profits. Such a situation describes how and why firms might engage in a coordinated or collusive conduct in an oligopoly situation.

4.2 Oligopolies and potential competition concerns

Taking into account the theoretical background of the previous section, we will describe several outcomes of oligopolistic markets as listed in Table 4-2 in more detail and refer to potential competition concerns that might emerge.

Strategic interaction	Market outcome	Competition concerns
Market players do not collude; i.e. they act individually rational	❶ Effective oligopolistic competition (4.2.1.1)	No
	❷ Tight oligopoly - ineffective oligopolistic competition without tacit collusion (4.2.1.2)	Yes
Market players collude; i.e. they act jointly rational	❸ Ineffective oligopolistic competition due to tacit collusion/joint dominance (4.2.2)	Yes

Table 4-2: Overview of different outcomes of oligopolistic markets

Note that Table 4-2 is not exhaustive. In addition to the above, an oligopoly can also lead to a situation of single dominance if one undertaking has a large share of the market. Such cases are already covered by the current SMP regulation and are therefore not included here. Neither are cartels, which are also considered not to be within the scope of the present report. Unlike tacit collusion, cartels are based on explicit agreements. Cartels are prohibited pursuant to Article 101 EC Treaty and their proof does not depend on a dominant position of the undertakings, but on factual evidence on the explicit cooperation.

4.2.1 Non-collusive outcome

In this section, we assume that the firms do not collude neither tacitly nor explicitly, i.e. all firms are acting individually rational. In section 4.2.1.1, we describe how oligopolistic market structures may under certain conditions result in effective competition. Section 4.2.1.2 deals with oligopolistic markets that yield a sub-competitive market outcome even in the absence of tacit collusion.

[10] Such an outcome in an infinitely repeated version of the game is called the Folk Theorem.

4.2.1.1 Effective oligopolistic competition

Generally, a market with an oligopolistic structure does not necessarily point to regulatory intervention. Moreover, the *number* of players in the market alone does not provide sufficient evidence of whether a market is competitive or not. Instead, the dynamics of competition determine whether an oligopoly leads to an efficient market outcome; market dynamics are identified by a combination of several indicators, such as price, quality and product diversity.

Oligopolistic competition can be effective in the presence of several features of the market in question.

Firstly, as already discussed in section 4.1.1, non-collusive oligopolies can in principle deliver dynamic efficiency, particularly in industries where innovation and investment associated with substantial risks play a major role. As telecommunications firms face manifold risks, such as uncertain demand or exogenous technological developments, an oligopolistic structure might be well suited to lead to a dynamically efficient outcome.

Second, competitive pressure can limit the firms' abilities to raise prices above a competitive level. Competitive pressure can, for instance, arise from adjacent markets. If adjacent markets provide similar or matching products to the oligopoly, this may generate competitive pressure on the undertakings in the oligopoly, leading to a more efficient outcome. This is because the undertakings in the adjacent markets could theoretically supply the customers of the oligopoly with similar products that are, however, not sufficiently substitutable to be part of the same relevant market. Take as an example text messages via SMS and text messages using instant messaging services. Both services may serve a similar purpose, but given that instant messaging uses different technology, they may not belong to the same relevant market.

Another source for competitive pressure can be the threat of potential entrants that are attracted either by supernormal profits of the undertakings in the oligopoly or when the existing competitors are less efficient or not able to adapt to new technologies. While entry barriers tend to be very high in traditional telecommunications markets (e.g. due to sunk costs, network effects, etc.), entry of content and service providers is more likely in certain retail markets.

We can conclude that effective oligopolistic competition delivers an optimal outcome in terms of total welfare, at least in the long term. It can be observed when benefits from increased innovation and investment incentives outweigh higher prices, or actual or potential competition limits the oligopolist's power to raise prices above a competitive level.

4.2.1.2 Tight oligopoly - "ineffective" oligopolistic competition without tacit collusion

Certain oligopolistic market structures might cause sub-optimal market outcomes without any explicit collaboration or tacit collusion observed or assumed among the members of an oligopoly.

In such a setting the undertakings unilaterally adopt a behaviour which forms a self-sustaining reduction in competition and prevents the development of competitive outcomes. In contrast to tacit collusion, this market outcome does not require any form of stability mechanism such as penalties. The equilibrium is non-cooperative and stable, as it results from each undertaking's individual best reaction to its competitor's behaviour.

In contrast to an effectively competitive oligopoly, this leads to an inefficient market outcome, both from a static, as well as dynamic point of view. Ineffective oligopolistic competition in the

absence of tacit collusion may occur when the market presents one or more of the following characteristics: (1) market concentration is high[11], (2) high entry barriers and no significant new entrants, (3) no countervailing buyer power, (4) mature technologies, i.e. little incentive to innovate,[12] (5) capacity constraints; and on the demand side: (6) low price-elasticity and low cross-price elasticities due to e.g. switching costs and (7) low growth of demand/a mature market.[13]

Oligopolies with an inefficient market outcome, which is not triggered by any form of coordinated behaviour can therefore have several reasons. Ineffective oligopolistic competition could emerge in an oligopoly in which the undertakings face capacity constraints and where the market bears high entry barriers.

In the following, we provide an example to illustrate how an oligopoly may not lead to effective competition. Assume that the capacity constraints of the undertakings do not allow for any single firm to supply the whole market demand. Assume also that the undertakings cannot expand their capacity in the short term (e.g. in mobile markets this could be due to spectrum availability) and that the undertakings already produce to maximum capacity. In such a setting it might be rational for all undertakings to price their products above an efficient level and make supernormal profit as they do not have to fear a price war from each other because no one would profit from lowering one's price. Due to the capacity constraint and their inability to expand their capacity in the short term, neither of them would be able to increase their output to meet an increased demand. As a result, reducing prices to the competitive level is not profit-maximising. This example illustrates a situation where an inefficient market outcome in terms of prices does not result from coordinated conduct or tacit collusion, but simply because of technical constraints.

The outcome of ineffective oligopolistic competition does not only concern prices, but could also amount to a limited supply of services, reduced quality of service, a decrease in output or a negative impact on R&D activity. In general, it is not easy to determine if a market outcome is inefficient. The discussion on how to determine whether a market outcome can be considered efficient or not, is further discussed in Section 7.1.1.

We can conclude that under certain circumstances, oligopolies may deliver a market outcome that is neither statically nor dynamically efficient. Competitive intensity might be so low that prices are raised above a competitive level while, at the same time, firms in the market have no incentives to strengthen their market position by innovating or investing, because of the lack of competitive pressure. If such a situation is expected to persist, regulatory intervention might be necessary to avoid a significant reduction of total welfare and harm for the consumers.

[11] In merger cases, competition authorities often argue that a reduction of the number of firms in a market might increase the price to an inefficient level, when close substitutes cease to exist with the merged entity (unilateral effects). This discussion is related to ineffective oligopolistic competition, as the existence of unilateral effects in a merger case typically hints to the creation or strengthening of ineffective oligopolistic competition.

[12] For instance, if innovation was likely, new firms could enter the market more easily based on new technologies circumventing existing entry barriers.

[13] For instance, if growth was rapid, it would be easier for new firms to enter the market, because there are many potential new customers.

4.2.2 Collusive outcome - tacit collusion

Unlike cartels, tacit collusion is a behaviour that firms follow without explicit agreement to, i.e. firms settle for a certain strategy without explicit coordination to reach a higher joint profit. It occurs when firms implicitly arrive at uncompetitive market outcomes in markets where they might otherwise have competed (see section 4.1.2.2). Tacit collusion is typically equated with joint dominance, because the colluding firms act as if they were a single entity and as such could be described as having a jointly dominant position. Their joint strategies enable them to behave to a considerable extent independent of other market players such as consumers.

Tacit collusion occurs when, individually, the firms of the oligopoly arbitrate between short term profits and long terms profits given the threat of retaliation. Collusion is sustainable if firms put sufficient weight on future profits, i.e. the higher their discount factor, the more likely they are to collude.

Besides the discount factor, implementing and sustaining tacit collusion may be facilitated by any of the following market conditions:

- **very few firms** (to be able to coordinate on a collusive equilibrium and for detection and punishment of a deviation),
- **repeated interaction** (firms need to expect to stay in the market and interact repeatedly with each other in order for collusion to be sustainable),
- **barriers to entry/exit** (if entry is easy and/or small fringe firms can rapidly expand their output, collusion is not sustainable),
- **capacity to reach a mutually acceptable equilibrium** (firms need to be able to determine how they are going to collude tacitly (i.e. find a common policy or a focal point); this does not require any kind of agreement – a mutual understanding of what the collusive outcome should be is sufficient),
- **ease of detection of cheating** (as for each firm there is always a short term incentive to deviate from the collusive outcome, cheating needs to be detectable; the relevant market variables have to be observable or firms have to be able to deduce from their own sales and profits whether or not the other firms are cheating) and
- **enforceability of compliance** (in order to deter cheating and sustain the collusive outcome, firms must have the means and willingness to punish a deviation, for example by initiating a price war; the threat of punishment has to be credible for effective enforcement).[14]

The outcome of tacit collusion is reflected in a reduction in competition in the market and, hence, a reduction in welfare due to higher prices, inefficiently allocated market output and/or a reduction in the rate of innovation or level of quality.

Although collusion is often price based, it can focus on other variables depending on the type of the strategic variables over which firms compete. If firms compete on quantities, the collusive conduct would consist of reducing the levels of production below those that would constitute competitive levels. Similarly, capacity choice can be the strategic variable and thus could be colluded over. Higher capacity utilization or expanding capacity leads to greater

[14] Study on Assessment Criteria for Distinguishing between Competitive and Dominant Oligopolies in Merger Control- Final Report for the European Commission Enterprise Directorate General by Europe Economics, May 2001, page 26 - table 2. 1 “Necessary Criteria to Implement and Sustain a Tacit Collusion Mechanism”

supply which usually reflects in decreasing prices. If capacity is being fully utilised, a reduction in capacity will reduce supply and imply higher prices. Collusion then consists of building less capacity in order to raise the price. This type of collusion decreases investment in the industry and in doing so decreases welfare.

Collusion can also take more subtle forms. For example, firms can also collude on innovation, e.g. agreeing not to upgrade their services to use the latest available technology, or on quality, e.g. agreeing not to extend the coverage of their network. They may also tacitly co-ordinate to use complex pricing or not supply to price comparison websites, making it hard for consumers to compare offers.

4.3 Summary

This chapter provides a brief overview on the economic theory of oligopolies. The chapter further outlines three types of oligopoly markets which serve as a setting to analyse oligopolies. These three different oligopolies are further distinguished with regard to coordinated and un-coordinated behaviour of the members in the oligopoly.

An oligopoly can be considered effectively competitive if competitive pressure among the undertakings leads to an optimal market outcome in terms of overall social welfare in the long-run (i.e. dynamic efficiency). Such a market outcome does not give rise to any competition concerns.

Tight oligopolistic competition without tacit collusion depicts a market in which the undertakings act independently and do not coordinate their market conduct, but due to the market characteristics (e.g. technical constraints), the outcome is not effective competition. Such a market exhibits a sub-optimal market outcome and thus may raise competition concerns.

As opposed to the two aforementioned markets, the oligopoly with a collusive outcome results from a coordinated behaviour among the undertakings in that market. There are certain market characteristics, which make such an oligopoly prone to tacit collusion, such as repeated interaction among the firms, barriers to entry or anything that facilitates detecting cheating. Such an outcome also raises competition concerns.

5 Relevant precedents on oligopoly analysis and regulation

This section presents the experience of European NRAs with respect to their analyses of electronic communications markets, more specifically where these markets have been characterised by oligopolistic market settings and several undertakings holding an SMP position to the detriment of competition and consumers.

Experience shows that there has been only a handful of national cases appraising the notion of joint dominance in the context of an oligopolistic market setting. In fact, only eight such cases were notified by NRAs to the EU Commission in the period 2004–2012, and half of those notified cases did not finally entered into force. This seems to suggest that NRAs may face a high burden of the proof when seeking to address non-competitive outcomes in such instances. It further shows that, to a certain extent, the assessment of joint dominance in electronic communications markets remains largely unchartered territory for most NRAs, particularly where oligopolistic dynamics are being observed, even though it must be said that oligopolisation is not necessarily conducive to joint dominance.

Draft

This section looks into the regulatory framework for oligopoly analysis and regulation as well as the most relevant judgements of the General Court[15] and Court of Justice[16] with respect to the finding of joint dominance. These cases and judgements are taken into account by the EU Commission and NRAs when assessing joint dominance.

It is also relevant to underline here that under the European regulatory framework the assessment of SMP (and therefore the ability to impose regulation) is governed by the concept of joint dominance under European competition law. This stems from Article 102 of the Treaty on the Functioning of the European Union in relation to the assessment of dominance, as interpreted by the Court of Justice, the General Court and the European Commission.

5.1 The competition law concept of dominance

When NRAs carry out analyses of the relevant markets, they do so in order to determine whether one or more market players hold a position of significant market power (SMP) and whether regulatory intervention would be required in the relevant circumstances.

Under Article 14 (2) of the Framework Directive, SMP occurs where an operator, either individually or jointly with others, enjoys a position equivalent to dominance. Dominance is a concept under European competition law set out in Article 102 of the Treaty on the Functioning of the European Union and has been subject to extensive interpretation by the Court of Justice, the General Court and the European Commission, in addition to national competition authorities.

With respect to joint dominance, Article 14 requires NRAs to act in accordance with the Community law approach to dominance and to take utmost account of the Commission Guidelines on the market analysis and the assessment of significant market power (so called SMP Guidelines).

A brief background to the legal framework for the assessment of single and joint dominance is provided below.

5.2 The legal framework for market dominance

The underlying philosophy of the current regulatory framework is that NRAs draw upon competition law principles to implement specific *ex ante* measures on undertakings having SMP.

The framework establishes the parameters upon which NRAs define and assess electronic communications markets, with the aim of identifying market dominance on a forward-looking basis. In this context, NRAs are obliged to intervene *ex ante* in order to prevent the build-up of SMP in their own national markets such that competition is not distorted and can be sustained. This would in turn ensure that firms do not raise prices above the competitive level to the detriment of social welfare.

5.2.1 Legal background of the concept of SMP

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

[15] European Court of First Instance (CFI) at that moment.

[16] European Court of Justice (ECJ) previously the entry into force of the Treaty of Lisbon on 1 December 2009.

Draft

that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers."

This definition follows the European competition law concept of dominance set out by the Court of Justice in the United Brands case[17]. There, the Court of Justice states that dominance represents '*a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by giving it the power to behave to an appreciable extent independently of its competitors, its customers and ultimately its consumers*'.

5.2.2 Criteria to assess joint dominance

Article 14(2) of the Framework Directive provides guidance to NRAs on how to deal with one or more undertakings enjoying market power in a particular market. On a general level, NRAs must "*act in accordance with Community Law principles and take into the utmost account the [SMP* Guidelines*]*". It goes on to state that the criteria to be used in making such an assessment are set out in Annex II to the Directive.

It is also relevant to underline that the criteria mentioned in Annex II of the Framework Directive and in the SMP Guidelines and are only illustrative, considering that some may not be suitable to use in particular circumstances (given the diversity of the markets under consideration), which means that they can support assertions concerning the existence of joint dominance but they are not, in themselves, pre-requisites.

In this regard, Annex II of the Framework states that '*two or more undertakings can be found to be in a joint dominant position within the meaning of Article 14 if, even in the absence of structural or other links between them, they operate in a market which is characterized by a lack of effective competition and in which no single undertaking has significant market power*'.

Annex II of the Framework lists several criteria that NRAs are requested to consider and examine when making an assessment of a potential joint dominance position. These are the following:

- low elasticity of demand;
- similar market shares;
- high legal or economic barriers to entry;
- vertical integration with collective refusal to supply;
- lack of countervailing buyer power; and
- lack of potential competition.

A jointly dominant position should not be inferred from the fulfilment of a single criterion, but will more likely be found when several of the criteria highlighted above are met. It is also relevant to underline that the criteria highlighted above are neither exhaustive nor cumulative and that it will be necessary for NRAs to take into account the Commissions' practice and the European Courts' jurisprudence when building a case concerning the existence of joint dominance.

[17] CJEU, United Brands v Commission Case 27/76 [1978] ECR 207, judgment of 14 February 1978.

5.2.3 Joint dominance in the context of Article 102 of the TFEU and the decisions by EU Courts

As far as dominance/SMP is concerned, Article 102 of the TFEU and the Framework Directive provide NRAs with guidance to assess a dominant position, both when a firm is dominant in its own right and when two or more firms behave as if they were a single dominant firm.

In this context, BEREC considers that the SMP Guidelines serve as a key reference tool with which NRAs could analyse and support a finding of joint (or 'collective') dominance.

To this effect, the SMP guidelines stipulate a number of conditions/criteria that are required for the assessment of joint dominance. These conditions are in line with the principles laid down by a series of judicial interpretations on collective market power by the European Courts. In this regard, the following cases are particularly relevant:

- Gencor v. Commission[18];
- Compagnie Maritime Belge Transports and Others v. Commission[19];
- Airtours v. Commission[20]; and
- Impala v. Commission[21].

These four judgements have developed the concept of joint dominance under Article 102 Treaty on the Functioning of the European Union (and its predecessor Treaty Articles).

5.2.3.1 Gencor v. Commission

This case involved a merger between a South African company carrying on business in the mining and metals industries and Lonrho (a UK-based parent company of a diversified group with interests also in the mining and metal business). The European Commission prohibited the merger on the grounds that the merger would have resulted in the creation of a collective dominant position involving another major player on the market, Amplats (a subsidiary of Anglo-American South Limited).

The General Court's judgment on the Gencor case recognises the possibility that a merger could enhance/strengthen a position of joint dominance. It also elaborates on the significance of economic links and structural links in this context. In this regard, the CFI makes it clear that the notion of economic links should not be equated to the notion of structural links and argues that structural links are not required for the finding of joint dominance.

The Gencor judgement puts emphasis on three conditions for the presence of joint dominance to be ascertained, namely:

- the presence of several undertakings on the market behaving as a single entity;

[18] General Court, Gencor Limited v Commission, Case T-102/96 [1999], ECR II-753.
[19] CJEU, Compagnie Maritime Belge Transports and Others v. Commission, Case C-395/96 [2000], ECR I-1365 / General Court, Compagnie Maritime Belge Transports and Others v. Commission, Case T-276/04 [2008], ECR II-1277.
[20] General Court, Airtours v. Commission, Case T-342/99 [2002] ECR II-2585.
[21] General Court, Independent Music Publishers and Labels Association (Impala) v. Commission, Case T-464/04 [2006] ECR II-2289.

- a large market share (exceeding the 50% threshold) in the case of a dominant duopoly; and
- a market characterised by undertakings that have an ability to act irrespective of competitors, trading partners, and consumers.

Furthermore, the CFI specifies that joint dominance can also result from the relationship or interdependence existing between the parties involved in an oligopoly, within which several market characteristics may emerge in the form of product homogeneity, high market transparency, increasing homogeneity of suppliers, and anti-competitive parallel behaviour by the parties involved.

5.2.3.2 Compagnie Maritime Belge Transports v. Commission

The Compagnie Maritime Belge case involved a number of shipping companies (together accounting for a 90% market share) attending in a conference with the purpose of reaching an agreement to selectively cut shipping prices in order to eliminate competition from their rival Grimaldi and Cobelfret (not being a member of the shipping conference).

The CFI's ruling in this instance clarifies that a position of joint dominance corresponds to a scenario whereby firms form a collective entity in a way that is damaging vis-à-vis their competitors, customers and consumers.

The CFI reaffirms that the presence of economic / structural links is not an indispensable condition to establish a position of collective dominance, particularly when such links do not result in various market players being represented on the market as a single entity.

The CFI also considers that a finding of joint dominance '*may be based on other connecting factors and would depend on an economic assessment and, in particular, on an assessment of the structure of the market in question*' and that an economic assessment of the structure of the market may open up the possibility of analysing non-collusive but parallel behaviour in an oligopolistic market.

In this regard, the CFI takes into account the following conditions that may point to joint dominance:

- Undertakings behaving on the market as a single or collective entity with combined market shares exceeding the presumed dominance threshold; and
- Undertakings behaving as a single entity capable of acting in a coordinated manner without being undermined by competitors, trading partners, and consumers.

5.2.3.3 Airtours v. Commission

The Airtours' case involved the EU Commission blocking the merger of two UK companies, namely Airtours plc and First Choice Holidays plc, with business activities related to the provision of packaged holidaying, charter airline operations and travel agencies. The CFI judgment on the Airtours' case took a different stance and reversed the decision of the Commission.

In its ruling on this case, the CFI widens the dimension of collective dominance theory from a situation that involves the implicit collusion between a relatively small number of oligopolists to a situation where '*each member of the dominant oligopoly, as it becomes aware of common*

interests, consider[s] it possible, economically rational, and hence preferable, to adopt on a lasting basis a common policy on the market with the aim of selling at above competitive prices', even without these different members of the oligopoly necessarily entering into an official agreement with each other and without them implementing concerted practices (i.e. even without actively colluding).

To this effect, the CFI Airtours' judgment lays down a set of conditions for the finding of joint SMP and the possibility of tacit collusion in an oligopolistic market setting[22]. These conditions are highlighted below:

i. A high degree of market transparency, with members of the dominant oligopoly having '*the ability to know how the other members are behaving in order to monitor whether or not they are adopting the common policy*'.

   In this regard, the CFI argues that it is not enough for each member of the dominant oligopoly to be aware that interdependent market conduct is profitable for the parties involved, but that each member must also have a means of knowing whether the other operators are adopting the same strategy and whether they are maintaining it.

ii. 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*' for the members of the dominant oligopoly.

   In this context, the CFI judgment puts forward the view that the Commission must not necessarily prove that there is a specific retaliation mechanism, but that it must establish that deterrents exist, to ensure that there is a long-term incentive for each member of the dominant oligopoly not to depart from the common policy.

iii. Customers and competitors have no countervailing buyer power, in that their '*foreseeable reaction...would not jeopardise the results expected from the common policy*'.

Stable market shares are also deemed in the Airtours case as being a factor that contributes to a position of joint dominance.

5.2.3.4 Impala v. Commission

The Impala case involved a court action brought by an association of independent music production companies against the European Commission, given the latter's go ahead to the merger of Bertelsmann AG and Sony in the recorded music sector to form the new company Sony BMG.

The CFI's judgment annulled the Commission's decision on the basis that the relevant market exhibited a high level of transparency and a potential for retaliatory behaviour. Although these findings correspond to two important Airtours conditions when testing for collective dominance, the CFI calls for a less formal regime of implementation of the Airtours criteria for the substantiation of such a finding. In this regard, the CFI suggests that an assessment of collective dominance should be more sensitive to the overall economic mechanism of a

[22] In this sense, the CFI judgement on the Airtours case establishes that joint dominance effectively involves the risk of tacit co-ordination by the market players in an oligopolistic market setting.

hypothetical tacit coordination rather than just being focused on a mechanical assessment of the different criteria specified by the Airtours judgement.

Further to the above, the CFI states that '*close alignment of prices over a long period, especially if they are above competitive level, together with other factors typical of a collective dominant position, might, in the absence of an alternative reasonable explanation, suffice to demonstrate the existence of a collective dominant position*'.

5.2.4 Joint dominance and non-coordinated effects in the context of the Merger Regulation

Competitive concerns in relation to the creation or strengthening of oligopolistic market structures through mergers may take two main forms:

- They may pose a threat to competition as a result of the dilution or elimination of direct competitive constraints that merging parties previously exerted on each other in the relevant market(s). This would raise the risk of merging parties engaging in a strategy to increase prices and maximise profits, without the fear that rivals manage to pose a sufficient competitive constraint on their behaviour23. These uncompetitive market effects are typically referred to as the non-coordinated (or unilateral) effects of a merger.
- mergers may also threaten competition if the parties involved in the merger engage in tacit or explicit collusion, with the consequence that prices are raised. These uncompetitive market effects are referred to as the co-ordinated effects of a merger

Under the European Merger Regulation, unilateral and / or coordinated effects of a merger are assessed by reference to the extent to which the concentration may give rise to a '*Significant Impediment to Effective Competition*' (SIEC)[24]. More specifically, the Merger Regulation interprets the concept of SIEC "[…] *as extending, beyond the concept of dominance, only to the anti-competitive effects of a concentration resulting from the non-coordinated behaviour of undertakings which would not have a dominant position on the market concerned*".

Hence, the EU Commission's appraisal of the compatibility of a merger with the internal market and thus the threshold for prohibiting a merger would rest on the outcomes of a SIEC test.

This test ultimately considers several factors – qualitative and quantitative – in order to determine how a merger impacts on consumer welfare. It builds on a concept that goes beyond the strong reliance on structural parameters of a market, as it takes into account anti-competitive effects even when a dominant position in terms of high market shares cannot be identified. These factors are further highlighted below.

[23] Particularly, when – prior to the merger – the products of the merging firms are highly substitutable and the firms are therefore strong competitors, the result of the merger may be an incentive to raise prices or to lower the production. It can also lead to a secondary anti-competitive effect when the remaining competitors respond to the behaviour by also increasing prices. This market evolution does not relate to the creation of tacit collusion, but simply to a shift in the market outcome, each undertaking providing before and after the merger individual profit-maximising responses.

[24] A significant harm to effective competition may result when one or more firms are able "*to profitably increase prices, reduce output, choice or quality of goods and services, diminish innovation, or otherwise influence parameters of competition*".

5.2.4.1 Qualitative factors of the SIEC Test

The qualitative factors that are taken into account when appraising the potential anti-competitive effects of a merger on a particular market(s) are listed below.

i. Large market shares

The first indication that a merger is likely to have anti-competitive effects may be a large market share of the merging firms. The larger the market shares of these firms before the merger, the more likely it is that the merger leads to a significant increase in market power. A large increase of the sales base of the merging firms can build an incentive to increase prices in order to earn higher margins. Market shares are an important finding in the assessment of market power, although they only represent a starting point of the assessment.

ii. Close competitors

Additionally, anti-competitive effects created by a merger become more likely when the merging firms are close competitors. The higher the degree of substitutability between the products of the firms prone to merge, the more likely a significant price increase may occur after the merger has taken place. On the contrary, a significant impediment to effective competition (SIEC) is less likely, when the products of the merging firms and the products supplied by competitors are highly substitutable, because the existence of close substitutes exerts competitive pressure on the merging firms. The degree of substitutability can be evaluated by different methods, such as customer preference surveys, analysis of purchasing patterns, estimation of the cross-price elasticity of the products involved, or diversion ratios which measure the number of customers switching from one operator to another.

iii. Few alternative suppliers and substantial switching costs

Furthermore, the probability of anti-competitive effects rises when there are few alternative suppliers and customers face substantial switching costs. A consideration of past customer switching patterns and reactions to price changes might be helpful to evaluate the possibility of anti-competitive effects.

iv. Capacity constraints

As another factor, the Merger Guidelines state that the risk of significant anti-competitive effects rises when competitors are unlikely to increase supply, if the merging firm increases prices. In this case, the merged firms may have an incentive to raise prices by reducing the output, because the merger leads to a higher base of sales for the merged entity on which to enjoy higher margins. When the competitors have the capacity and incentives to expand their own output, it is unlikely that the competition is significantly impeded by the merger. On the contrary, capacity constraints and high costs for existing excess capacity reduce the possibility for competitors to increase the output. These capacity constraints are especially important when the products in the market are homogenous, but can also raise issues in case of differentiated products.

v. Ability of the merged entity to hinder competitors' expansion

The ability of the merged entity to hinder the expansion by competitors or to restrict the ability of rival firms to compete may also create a significant impediment to effective competition. The merged firm may, for instance, have such a degree of control or influence over the supply of inputs or distribution possibilities that expansion or entrance by new competitors may be too costly. This might also be the case when the merged firm has the control over patents or

Draft

other types of intellectual property, or when the interoperability between different infrastructures is an important factor in the market and the merged entity has the possibility to raise the costs or decrease the quality of service of its rivals. Finally, in making the assessment, the Commission is also requested to take into account the financial strength of the merged entity relative to its rivals.

vi. Elimination of an important competitive force

Finally, anti-competitive effects become more likely when the merger eliminates an important competitive force. In particular, this is relevant when firms exert more influence on competition than their market shares suggest, and their removal from the market by a merger may change the competitive dynamics in an anti-competitive way (for example, in the case of a maverick firm).

It is also important to note here that the factors listed above are non-exhaustive and that they do not need to be fulfilled cumulatively in order to determine that a merger would be detrimental to competition.

5.2.4.2 Quantitative factors of the SIEC Test

The SIEC test uses not only qualitative factors but also, where available and especially in complex merger cases, quantitative evidence. The tools used to measure the impact of the loss of competition, in particular with respect to the risk of price increases, include upward pricing pressure (UPP) analyses, indicative price rise (IPR) analyses, and merger simulation models based on calibrations or demand estimation. UPP and IPR analyses give an indication of the price developments after a merger in relation to the pre-merger situation, by evaluating the diversion of sales between the products of the merging firms. While the standard UPP/IPR analyses do not take into consideration the likely reactions of competitors to the merger, the more complex merger simulation takes into account the incentives of the merging firms to raise prices, as well as the reactions of the competitors to that price increase.

5.2.4.3 Conclusion

The introduction of the SIEC test in merger law was a consequence of identified gaps in dealing with merger cases in oligopolistic market structures, where the reliance on the concept of dominance did not seem to be sufficient to ensure effective competition. Consequently, the SIEC test accounts for non-coordinated effects in mergers that might in the end eliminate important competitive constraints from the relevant market(s).

This is of particular relevance in the case of a market characterized by a tight oligopoly, as defined in section 4.2.1.2. There is indeed a specific risk in a tight oligopolistic market that non-coordinated behaviour might lead to inefficient market outcomes, without the existence of significant market power.

5.3 National cases and EC letters

In this section BEREC presents the main conclusions reached by the National Regulatory Authorities in the context of their market review processes where joint dominance situations

Draft

have been identified, irrespective of whether the proposed measures were ultimately adopted or whether the measures were withdrawn in the process[25].

First, BEREC gives an overview of the relevant cases in which NRAs dealt with joint dominance in the context of *ex ante* regulation. Then, a summary of the relevant experience is presented, being classified according to the electronic communication markets where potential joint dominance situations have been identified by the NRAs (for detailed information concerning each case, please see Annex A[26]). Lastly, the main lessons learnt from the Commission's view are presented at the end of the section.

5.3.1 Overview of the relevant cases

The following table presents a summary of the market reviews which were conducted in the 2004 – 2012 period and in which a joint dominance analysis has been done.

Year	NRA	Country	Market	Number of players	Joint SMP	Final Solution
2004	COMREG	Ireland	15/2003	2	**identified**	***agreed by the Commission, overturned by national body***
2004	OFCOM	United Kingdom	18/2003	2	**identified**	***withdrawn***
2005	ARCEP	France	15/2003	3	**identified**	***withdrawn***
2006	CNMC	Spain	15/2003	3	**identified**	***adopted***
2006	MCA	Malta	15/2003	2	**identified**	***adopted***
2007	AGCOM	Italy	18/2003	2	**identified**	***adopted***
2007	MCA	Malta	5/2007	2	**identified**	***withdrawn***
2008	AKOS	Slovenia	15/2003	2	**identified**	***withdrawn***

Table 5-1: Cases of joint dominance identified in market reviews[27] (2004 – 2012)

Overall, there were seven NRAs who presented eight joint dominance cases to the European Commission, and most of the notifications where focused on the market for access and call origination on public mobile telephone networks[28]. Five NRAs[29] (COMREG, ARCEP, CNMC, MCA, AKOS) designated entities being jointly dominant in this market. Other markets where relevant competitive problems were identified by NRAs[30] are the market for broadcasting

[25] It is worth mentioning that, beside the cases to which BEREC makes reference in detail, there are a couple of NRAs who attempted to deal with joint dominance in other documents than market review notifications. ANACOM made a statement about its concerns of joint dominance in a document informing the public about the revision of market 15 of the 2003 Recommendation (2005), while ACM prepared an advice concerning a high risk of tacit collusion in the mobile market for the Ministry of Economic Affairs (2010).

[26] Annex A contains the following information for each of the analyzed cases: an overview of the market analyses conduct, a summary of the main arguments put forward by the NRAs, the main conclusions and the Commission's comments regarding the notifications.

[27] Reference is made solely to the cases of the member states of the European Union.

[28] Market 15/2003 EC Recommendation.

[29] See References.

[30] See References.

transmission services[31] (OFCOM, AGCOM) and the market for wholesale broadband access services[32] (MCA[33]).

5.3.2 General presentation of the relevant cases

In what follows BEREC provides a general presentation of the relevant issues faced by the NRAs when dealing with joint dominance in their market reviews, while, as previously mentioned, a detailed description of each case is to be found in the Annex A.

From a methodological/procedural standpoint, the NRAs, when approaching the issue of potential joint dominance, have typically used both the SMP guidelines and the jurisprudence of the European General Court and the Court of Justice of the European Union, as highlighted in the previous sections. However, the most relevant case which was broadly used by the NRAs was the Airtours case[34], but also Gencor and Compagnie Maritime Belge cases, as well as the Sony BMG case were referenced. The approach followed by the NRAs in their market reviews consisted of the assessment of the relevant market structural characteristics (based on, typically, market shares, and the degree of concentration), the potential existence of incentives to coordinate (based on, typically, the symmetry/lack of symmetry of the market players, the interplay between them and the growth potential in the market), the existence/lack of existence of the ability to coordinate (dependent on a simple and transparent focal point), the ability to detect deviations from the focal point (dependent, mainly, on the transparency in the market), the enforceability of compliance, respectively the actual/potential market constraints (as a result of the existence (or not) of entry barriers in the market, the existence (or not) of fringe competitors). Furthermore, in certain cases, behavioural elements (like the consistent aligning of prices by the allegedly dominant operators to be seen in price trends and absolute price levels, their stable high profitability) have been also considered.

5.3.2.1 The market for access and call origination on public mobile telephone networks

With respect to the market for access and call origination on public mobile telephone networks, it was considered as having a high potential of sustaining collusive outcomes by most of the NRAs notifying joint dominance due, mainly, to its structure. Indeed, in most of the cases, there were two main mobile network operators in the market, while, in other cases, three of them were present, the number seeming to provide an upper bound[35].

One of the first authorities to notify joint dominance on the previous market 15 was the Irish regulator[36]. ComReg identified the two main operators in the mobile market (Vodafone and O2) as being jointly dominant based on structural characteristics, as well as behavioural elements pointing to joint dominance. It is worth mentioning that, at the time of the market review, there were four mobile operators active in the Irish market, but the third one had a very

[31] Market 18/2003 EC Recommendation.
[32] Market 5/2007 EC Recommendation.
[33] See References.
[34] In the answer to the dedicated BEREC's questionnaire, the Airtours case has been explicitly mentioned by a number of five NRAs out of a total number of seven NRAs who identified joint dominance situations in their electronic communications markets, in the market analysis process.
[35] There were also other cases where the number of mobile operators present was higher, but the other operators, irrespective of whether they were MNOs or MVNOs, were insignificant in terms of market shares.
[36] IE/2004/0121.

low market share (6% in terms of subscribers, as of September 2004), while the fourth had just entered the market, in September 2003. The Commission accepted ComReg's notification, having drawn attention to the fact that ComReg's analysis was mainly focused on the retail level, while the conduct of the operators at the wholesale level could have been different, and that the potential constraints exercised by the third provider should have been analysed in more detail, at both retail and wholesale level. What is particularly interesting about this case is that, even though the Commission accepted the market review and the proposed regulatory remedies, ComReg's decision was overturned by the national Electronic Communications Appeal Panel in December 2005, with consent of all of the parties involved. Interestingly enough, ComReg's decision was appealed not only by the two operators deemed to be jointly dominant, but also by the third operator. The main arguments against the decision had to do with the fact that all the evidence provided by ComReg could have been the consequence of tacit collusion, but also of competition in the market, while the Irish regulator failed to prove unequivocally that the observed market outcome was the consequence of coordination between Vodafone and O2.

Another relevant case was the French one. In 2005, ARCEP identified three operators as being jointly dominant in the previous market 15[37]. ARCEP took account in its analysis of the same main factors as ComReg, but in the view of the European Commission, it failed to reach the required standard of proof, since the Commission envisaged the opening of a Phase II investigation and, consequently, the notification was withdrawn. Since not all the relevant information on the case is available, BEREC can only formulate a preliminary conclusion on the matter of this case, but it seems that the argumentation sustaining collusion among the three operators needed to be more robust than when collusion involved two operators (coordination with three players was more difficult to sustain than coordination with two players). Furthermore, it seems that in the view of the Commission, the French regulator failed to analyse all the possible scenarios, making the assessment incomplete[38].

The Spanish regulator, CMT at the time (now CNMC), identified three MNOs as being jointly dominant[39]. CNMC based its assessment on the market structure which was conducive to coordination due to the symmetry of the cost structures of the three MNOs, the ability to coordinate on the collective refusal to supply wholesale network access, the ability to detect deviations from the coordinated outcome, as well as the potential market constraints. With respect to the potential market constraints, it is worth mentioning that there was a fourth mobile operator that concluded a national roaming agreement with one of the established MNOs, but which was not active in the market at the time of the review. CNMC was sceptical about its impact on the market since it kept postponing the commercial launch of the services. The Spanish market review went through and the regulatory measures were adopted. However, it seems that CNMC raised the relevant points in sustaining its position, but completed the picture with the necessary evidence afterwards. Price trends, profitability measures, detailed description of retaliatory mechanisms, data on the level of wholesale demand were additional pieces of evidence which were crucial in the Commission's assessment.

In 2006, the Malta Communications Authority (MCA) notified its decision to designate the two established MNOs as being jointly dominant in the relevant market for wholesale mobile

[37] FR/2005/0179.
[38] A point sustained also by the French Competition Authority.
[39] ES/2005/0330.

access and call origination to the Commission[40]. After having taken utmost account of the Commission's comments, the notified market review was adopted. Significant attention was given in this case to the interplay between the retail and wholesale market conditions, especially with respect to the fact that MCA did not find joint dominance at retail level. Also, the Commission added a word of caution in relation to the close monitoring of the market entry of a third MNO, which at that time had already requested spectrum resources.

The Slovenian case was somewhat different than the aforementioned cases in that there were four established MNOs in the market at the time of the review and two reseller/service providers, while AKOS identified just two of the established MNOs as being jointly dominant[41]. However, the Commission considered that the Slovenian regulator did not substantiate its draft measure with sufficient evidence on the incentives of the operators to coordinate, the sustainability of the coordinated outcome and the presence of rents to be protected and wrote a serious doubts letter after which AKOS withdrew its notification. This case is particularly relevant for the present report since the Commission, in its serious doubts letter, states which were its unfulfilled expectations regarding the standard of proof. For example, in its comment, the Commission states clearly that it would have expected the analysis of the following elements: the existence of pent up demand, the role of fringe competitors, the credibility of the collective denial of wholesale access, should national roaming agreements be signed absent regulation, and the competitive conditions at retail level. Furthermore, there was, yet, another specificity of this case: one of the mobile operators which were proposed for joint dominance was previously identified (in 2005) as being individually dominant in the relevant market. Therefore, in the case of these operators, AKOS had to prove a shift from the individual dominant position held before to the collusive behaviour.

Based on the reviewed cases concerning the wholesale market for call origination and access to the public mobile telephone networks, BEREC considers that the analysis of the interdependencies between the retail and wholesale market for mobile voice services has been one of the important issues followed by the Commission in analysing the notified market reviews. This point of view is further strengthened by the fact that a frequent comment of the Commission was that a finding of joint dominance at the retail level is not necessarily required to find joint dominance at wholesale level.

5.3.2.2 The market for broadcasting transmission services

Another market which has been identified by two NRAs as a market where joint dominance was present was the market for the provision of broadcasting transmission services. In one of the cases, joint dominance was identified in the national market for terrestrial managed transmission services (analogue and/or digital), while, in the other case, joint dominance was identified in the market for the provision of analogue terrestrial television broadcasting services.

The first case concerning joint dominance in the market for the provision of broadcasting transmission services was brought forward in 2004 by Ofcom[42]. The NRA, after having conducted the substitution analysis, reached the conclusion that there were three relevant product markets, depending on the transmission networks: one for terrestrial, another for cable and the last one for satellite networks. Only the market for terrestrial transmission services

[40] MT/2006/0443.
[41] SI/2008/0806.
[42] UK/2004/0111.

Draft

was considered to be susceptible to *ex ante* regulation, and a joint dominant position held by two operators was identified in this market. Furthermore, in the same market review, Ofcom defined also a relevant market for access to masts and sites. This case is somewhat special in that Ofcom first presented the draft market review to the Commission and the Commission had issues with certain aspects concerning the analysis of the market for the provision of managed transmission services. As a consequence, when notified to the Commission, the British regulator dropped all aspects relating to the managed transmission services markets and notified solely the analysis of the market for access to masts and sites.

Even though in the Commission's response to the notification letter there is no mention about the aspects which were dropped from the review, there are some relevant issues emerging from Ofcom's first discussion with the Commission. In this respect, the European Commission was of the opinion that if someone were to look at the functioning of the managed transmission services market in practice, the finding of joint dominance was questionable on the grounds that there was not sufficient evidence that the two operators had, on the one hand, the possibility and, on the other, the incentives not to compete against each other. Also, it seemed that Ofcom failed to establish a transparent focal point on which operators to coordinate their behaviour, given that the contracts for managed transmission services were typically awarded through single round bidding procedures, the contractual terms not being transparent at all. Another point raised by the Commission was that, actually, the two entities deemed to be jointly dominant interacted infrequently, considering that the broadcasting contracts were awarded by bidding and the bidding procedures were organised with low frequencies. Moreover, since the timing of the biddings was, typically, known in advance, this fact raised serious credibility issues regarding the effectiveness of the retaliatory mechanisms.

The other relevant market review was notified in 2007 by the Italian regulator[43]. Three wholesale markets were found to be susceptible to *ex ante* regulation: the market for analogue terrestrial television broadcasting services, the market for digital terrestrial television broadcasting services and the market for terrestrial radio broadcasting services. Joint dominance was identified in the market for analogue terrestrial television broadcasting services.

The Commission generally agreed with the reasoning provided by the NRA, but asked for additional evidence concerning the potential demand for analogue television broadcasting transmission services, especially in the context of analogue switch-off, the access or ownership of facilities (masts, sites and antennas), an assessment of the level of rents and the development of prices in the market to be included in the final market review.

5.3.2.3 The market for wholesale broadband access

The last market which was mentioned by one NRA as featuring joint dominance is the market for wholesale broadband access. The MCA defined the relevant product market as the market for wholesale broadband access provided by all the platforms/technologies available at the time (which were predominantly cable and DSL), including self-supplied services and excluding simple resale products[44]. It identified two operators (the cable operator and the DSL operator) as holding joint dominance in the market for wholesale broadband access.

[43] IT/2006/0424.
[44] MT/2007/0563.

The MCA sought to prove its finding of joint dominance by investigating the characteristics of the market that made it conducive to tacit coordination, the sustainability of tacit coordination and potential market constraints on tacit coordination. Nevertheless, the Commission opened a Phase II investigation on the market pursuant to Article 7(4) of the Framework Directive, as it disagreed with the inclusion of wholesale broadband access provided over cable networks in the definition of the relevant product market. A BEREC expert review team was eventually set up to assess the case. In its conclusions, the expert review team argued that the MCA should provide more information and explanation on some of the issues mentioned in its analysis. Nevertheless, it expressed reservations on the fact that the Commission seemed to place a higher burden of proof on the case presented by the MCA than that in the Spanish case for access and call origination on public mobile telephone networks (ES/2005/0330). The group also recommended the publication of guidelines in order to contribute to more legal and regulatory certainty with respect to the proof required in relation to a finding of joint dominance.

5.4 Lessons learned

As shown, the past decade has only seen a small number of instances where NRAs sought to address a situation of joint dominance due to an oligopolistic market structure and, even in a smaller number of instances (only three cases[45]), the measures went through and were adopted.

Experiences of NRAs in regulating operators being jointly dominant show that joint dominance has been fairly difficult to prove due to the extensive evidence typically required for the adoption of the market reviews. Both the competitive situations on the wholesale and corresponding retail market needed to be assessed, while the monitoring and retaliatory mechanisms have been considered very important arguments to support a positive joint dominance finding.

Closely connected with the aforementioned point, the retaliatory mechanisms in the two markets worked together and the Commission took particular interest in the descriptive evidence of these connections. For example, in the case of the market for wholesale access and call origination on public mobile telephone networks, the logical arguments concerning the fact that if a deviating MNO grants access to its network, retaliation would occur by other MNO(s) also granting access or that if a MNO lowers its prices, a price war could be started, were not enough. Evidence of the NRAs' thorough assessment was required. However, sometimes, the NRAs were faced with difficulties in providing the required empirical evidence regarding these mechanisms at work and had to withdraw the notification. Therefore, as previous experience has shown, even if coordinated effects were observable in the markets, in certain instances definite empirical evidence could not be provided, while solid arguments for supporting joint dominance could be made, the main issue being related to the depth of the analysis and the convincing evidence/argumentation.

Also, meeting the required standard of proof was dependent on the different electronic communications markets analysed, together with the identified focal points. As an example, market transparency was fairly easier to argue in favour in the market for access and call origination on mobile networks than in the market for wholesale broadband access or broadcasting transmission services, since granting of access would be noticeable much easier in the first case.

[45] As shown in table 5-1.

Draft

Another point worth mentioning is that, in cases where the focal point of collusion was denial of access to wholesale networks, there was particular interest expressed in the case of pent up demand. In this respect, the Commission asked, whenever it was possible and relevant, for concrete evidence concerning the particular circumstances in the cases where there were attempts to negotiate access agreements and they failed. Furthermore, given the importance of the presence of potential access seekers for the competitive assessment, it seems that the Commission considered, to a certain extent, that the mere existence of access seekers having access granted implied the existence of potentially relevant competitive pressures. However, BEREC considers that this fact should not preclude NRAs from conducting a detailed analysis of other potential focal points concerning the terms for access.

Overall, most of the cases presented were about foreclosure, and it seems that joint dominance was slightly easier to prove when only two significant operators were in the market than when three were involved.

Indeed, summarizing the issues raised by the Commission in all the study cases, they all come down to the issue of the completeness of the assessment. The Commission did not question the NRAs conclusions *per se*, but asked for additional evidence and argumentation for the statements made. Thus, to support a positive finding of joint dominance, NRAs need to prove the requisite legal standard established by the case law and conduct the analysis in line with the SMP guidelines, aiming to prove that the market is conducive to tacit coordination and that the coordinated behaviour is sustainable.

Furthermore, as already implied by the above, whenever possible, the NRAs should make a balanced assessment of the possibility that joint dominance exists at both the retail and wholesale level. However, NRAs should be cautious in inferring conclusions from the retail level to the wholesale level, without further assessment.

NRAs should also establish a clear and transparent focal point, on which coordination is to be sustained. Previous experiences have shown that in cases where NRAs failed to establish an explicit, clear and transparent focal point, the standard of proof was more difficult to be met or it was not met at all[46]. A focal point could be identified both at retail and wholesale level.

Finally, in meeting the standard of proof, NRAs should also give particular weight to the retaliatory mechanism and provide a detailed description of its functioning at both retail and wholesale level, should it be the case.

In the view of the period covered by the market reviews analysed in this chapter, BEREC considers the NRAs' prior experiences to be extremely informative, but stresses that most of the cases pertain to markets which are not present anymore in the 2014 EC Recommendation on relevant markets susceptible to *ex ante* regulation. Furthermore, in most of the EU member states these markets have been deregulated. However, should, in the view of the ongoing changes taking place in the electronic communications markets (consolidation processes, fixed-mobile convergence, bundling etc.), NRAs identify competition problems in national markets, they can impose the necessary obligations to remedy the identified failures[47].

[46] For example, in case UK/2004/0111.

[47] For example, BEREC could envisage future revisions of the market for wholesale access and call origination on public mobile telephone networks in situations in which the number of players is reduced due to mergers and acquisitions or when the evolution of the market shows specific competition problems.

6 Issues arising in assessing joint dominance

In this section we consider the issues arising for NRAs attempting to assess joint dominance.

The NRAs' case analysis shows that only ten cases of joint dominance have been brought to the Commission in the period 2004-2012. The small number of cases may on the one hand reflect the fact that joint dominance does not frequently occur. On the other hand, it may also reflect the fact that it does occur, but that the burden of proof is perceived as high or at least unclear and that it is dissuading NRAs from bringing cases.

The national cases' analysis also shows that among these cases, only four decisions were actually adopted. Four cases were withdrawn following discussions with, or comments from, the Commission; one was overturned by a national court and one was ultimately not notified due to changes in the market. This could suggest that NRAs are unclear as to how to prove joint dominance to the satisfaction of the Commission and/or the national courts (or perhaps that in some cases the issue of concern is a tight oligopoly rather than joint dominance). In discussion, many NRAs do suggest they would like more assistance in their approach to the assessment.

In this line, this chapter aims to provide suggestions as to how joint dominance can be assessed. In particular, it considers the SMP guidelines and links it to the economic reasoning which sits behind the Airtours' Criteria. It also draws on the cases considered in Annex A and B looking at which factors were particularly important to prove joint dominance (or co-ordinated effects in the case of mergers) and why certain cases failed. It then considers the evidence required to show that these criteria hold.

6.1 Suggested framework for assessing joint dominance

Indeed, in assessing joint dominance, most NRAs and competition authorities have applied the Airtours' criteria to establish joint dominance. The horizontal merger guidelines have considered those criteria as indicating that coordination is more likely if (i) there is a possibility of reaching terms of coordination, (ii) it is possible to monitor deviations, (iii) there is an effective deterrent mechanism in place and if (iv) there are insufficient reactions of outsiders. The SMP guidelines approach joint dominance issues in the same way.[48]

The Airtours' criteria are also well grounded in economics. Identification of a focal point would usually be the first step in reaching a common understanding. In order for the collusion on the focal point to be stable, monitoring adherence to the agreement should be easy and there should be a credible punishment mechanism in place if it is seen that firms are deviating. In addition, players should not be able to anticipate when their interaction ends[49] such that cooperating is the equilibrium strategy for both firms (see also chapter 4). Also, there should be no external factors that could jeopardize the stability of the agreement such as relevant players in the market that do not act in line with the common understanding, or the threat of entry.

Draft

[48] Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services, OJ 165/6 of 11 July 2002.

[49] Parties should either interact for an infinite number of rounds or there should be sufficient uncertainty so that parties cannot anticipate when their interaction will end.

Based on the above, BEREC considers that the Airtours' criteria seem to be the relevant framework for assessing the risk of tacit co-ordination. This is also recognised by the Commission. For example, in UK/2004/0111 Ofcom based its finding of joint dominance on isolated market characteristics, but the Commission found this questionable because the Airtours' criteria were not sufficiently proven.[50]

In order to prove joint dominance the Airtours' criteria have to be cumulatively fulfilled. This contrasts with the criteria in the SMP guidelines which suggests factors which facilitate joint dominance, but are not all required in order for joint dominance to be proven (a possible exception is barriers to entry, without which most attempts at collusion would not be possible). Indeed, one of the main messages of the Airtours' judgement is that what is required is a coherent explanation of how the coordination is maintained, and how any difficulties in sustaining that are overcome, rather than mechanically using a check list approach.

In the next subsections BEREC considers each of the Airtours' criteria, illustrating how the characteristics highlighted in the SMP guidelines may be relevant to them.

6.1.1 Reaching terms of coordination

Other things equal, the more stable the economic environment is in a certain market, the easier it is to reach a common understanding on the terms of coordination. Factors that contribute to the ability to reach terms of coordination in a market are: the presence of a clear focal point, symmetry between firms, the lack of destabilising developments and the degree to which firms focus on the short or long term. Assessing these factors can help to explain whether the parties involved have an incentive to tacitly co-ordinate (or not).

- *Existence of a clear focal point*

The existence of a clear focal point is one of the requirements to prove joint dominance. It must be relatively easy for firms to reach a common understanding on the focus of coordination, given that this common understanding must be achieved without explicit coordination. The focal point must therefore be relatively simple and easy to establish. Moreover, the focal point should reflect a parameter that is important in determining the competitive process. The importance of establishing a clear focal point is illustrated by the Commission's views in case UK/2004/0111.[51]

In the national cases considered in Annex A, denial of access was the most common focal point considered. For example in case IT/2006/0424 both RAI and RTI, instead of selling their spare capacity and the frequencies they did not use, chose to deny wholesale access. In case ES/2005/0330 and MT/2006/0443 the focal point was also denial of wholesale access to third parties.

Another common focal point is price. For example, in case IE/2004/0121 an identified focal point was steady prices (both absolute and trends). In MT/2006/0443 one of the identified focal points was not engaging in price competition. In the merger and market investigation case studies, one example (ABF/GBI) suggested co-ordination was on prices.

[50] Competition Policy Newsletter - Number 2 Summer 2005, "First collective dominance cases under the European consultation mechanism on electronic communications" , page 48

[51] Competition Policy Newsletter - Number 2 Summer 2005, "First collective dominance cases under the European consultation mechanism on electronic communications", page 48

Other focal points could also be quality, market shares and network investments (for example, quality of the RAN in mobile markets or on using old technologies such as copper rather than fibre in fixed markets). In the cement cases (discussed in Annex B, sections 11.3-11.5), the focal point identified was market shares.

- *Symmetry*

In order for parties to reach a common understanding without explicitly agreeing on a common conduct it is necessary that parties are sufficiently symmetric so that the possible asymmetries do not lead to different incentives of the parties involved. The more symmetric parties are, the easier it is to reach a common understanding.

Factors that contribute to the symmetry between parties are similar market shares, cost structures, capacity constraints, homogeneity of the products and vertical integration. These factors will be discussed in more detail below.

These elements of symmetry are only factors in establishing collusion, they do not have to be fulfilled cumulatively. What is key is to establish a coherent and evidenced theory about how terms of coordination are reached. For example, in the *aggregates, cement and ready-mix concrete* market investigation considered by the UK Competition Commission, the firms in the market were found to have asymmetries in shares of sales and capacity. Nonetheless, the Competition Commission did not believe this undermined the ability to coordinate. In particular, the Competition Commission concluded that since market shares were aligned with capacity for each of the three main players, the incentives to deviate were still aligned.

- *Market shares*

Market shares are a parameter in determining the market power of individual players that are active in a particular market. If the market power of individual players is sufficiently asymmetric, then it is unlikely that parties have similar incentives and hence it is unlikely that parties will achieve a common understanding easily.

This is illustrated in the case studies. For example in case IT/2006/0424 RTI and RAI had consistently held similar market shares in both upstream and downstream markets since 1990. The market shares can only be measured in the downstream markets and were: RAI 51.7% and RTI 44.9%. In case MT/2006/0443 both companies had more or less similar market shares as well: Vodafone and Go Mobile were 58.5% and 41.5% in terms of revenues, 51.5% and 48.5% in terms of subscribers and 55.1% and 44.9% in terms of minutes, respectively. Market shares had been and still were converging to a 50/50 division.

However, experience from national cases also shows that the Commission has upheld some cases where there are significant asymmetries in market shares. For example in case ES/2005/0330 the market shares were 52.3%, 31.8% and 15.9% and stable. In case IE/2004/0121 market shares are also significantly different: Vodafone and O2 together control 94% of the market, but Vodafone had 54% and O2 40%.

- *Cost structures*

The cost structure of a firm is usually an important determinant of a firm's competitive strategies. If cost structures are sufficiently different, it may drive differences in incentives that make it hard to agree on a focal point.

Draft

Fixed costs in telecommunications markets are in general extremely high, whereas variable costs tend to be fairly low.[52] Variable costs are especially important in determining prices. However, given that variable costs are often rather low in comparison to the total costs and the corresponding retail price of a certain product or service, in telecommunications markets it seems less likely that differences in variable costs lead to different incentives for the parties involved. For example, in case ES/2005/0330 it was noted that there was no significant difference in the cost structures, as all companies had very high sunk costs and relatively low variable costs. This also became apparent in cases IT/2006/0424, IE/2004/0121, MT/2006/0443, SI/2008/0806 and UK/2004/0111.

- *Vertical integration*

If one of the parties involved in the coordination is vertically integrated while the other party is not, this may lead to diverging incentives. It seems likely that a firm that is not vertically integrated has less control over its underlying costs and the availability of capacity than a firm that is vertically integrated. Also, a vertically integrated firm will eliminate double marginalisation whereas a vertically separated firm cannot normally do so. Hence, for collusion to be sustainable, it can be helpful that both parties operate at the same levels in the supply chain.

Vertical integration can also help in signalling the desired outcome. For example, in the UK *aggregates, cement and ready-mix concrete* market investigation, the Competition Commission suggested that vertical integration meant that there was potential signalling of the desired level of prices through members of the coordinating group accepting higher prices for cross-sales than might otherwise have been the case.

- *Capacity constraints*

Differences in the degree of capacity constraints are likely to result in dissimilar incentives. Firms with greater excess capacity may want to co-ordinate on a lower price or higher quantity than those with less excess capacity, as the marginal cost of further output is lower for them.

In fixed telecommunications markets capacity constraints are often absent. In mobile telecommunications markets, capacity constraints may be more likely to be present, for example because it can be hard to obtain more spectrum or more sites. Capacity may be more constrained if the network is shared. But, so long as these constraints are similar it may be that collusion can be sustained.

For example in case ES/2005/0330 the NRA found that none of the mobile providers had existing network capacity to provide sufficient coverage for a significantly larger part of the market. However, all of the providers where able to adjust their capacity easily. Meaning that there were effectively no capacity constraints present for all of the firms involved in the coordination.

- *Homogeneity of the products*

Products or services that are offered by the parties involved should be sufficiently homogeneous for a focal point to be reached. Very heterogeneous products can lead to a

[52] This applies regardless of the market or the networks involved. Even when comparing the perhaps most extreme case where one party has a copper network and the other party has a fibre network it still holds that both parties have high fixed costs and low variable costs. The incentives of parties whether or not to cooperate are not so much determined by their absolute cost levels but by their cost structure. As long as the relative costs levels of parties are similar they will have similar incentives.

divergence of incentives, which can make it difficult to reach an agreement, or to complexity which can make it difficult to find a clear focal point.

For example in case ES/2005/0330 it was noted that products from all firms were basically the same. All operators offer pre-paid and post-paid services. Also in case IT/2006/0424, IE/2004/0121, MT/2006/0443 and UK/2004/0111 the products offered by the firms involved are very similar. It is also notable that the merger and market investigations case studies provided in Annex B where collusive concerns were found deal with rather homogeneous products such as yeast and cement.

Nevertheless, products need not be exactly the same for collusion to be sustainable. For example, the fact that internet access is being supplied through a hybrid fibre coaxial network or a copper network does not necessarily mean that products are too heterogeneous for a focal point to be found, if the end product is very similar in consumers' eyes.

- *No destabilizing developments*

In stable markets, it is easier for firms to reach a common understanding of the focal point, as firms may find they are more easily able to predict the outcome of each other's strategies. Thus, for example, it is easier to reach a common understanding in markets where there is limited growth, established players with high barriers to entry and stable market shares, as well as limited innovation.

In general, in telecommunications markets, penetration rates tend to be relatively high. Due to high entry barriers, market conditions are also often relatively stable. In many of the cases, including for example ES/2005/0330, stability of market shares and players in the market is emphasized as an important point. Although technological development plays an important role in telecommunications markets, it does not automatically cause a destabilization of the common understanding. For example, in case IT/2006/0424 the transition from analogue to digital television was not seen as a destabilizing development. What is relevant for the assessment is whether these developments cause diverging incentives for the parties involved. If this is not the case, than it will probably not destabilize tacit collusion.

- *Short term vs long term approach*

In order to make a common understanding profitable for both firms, the long term gains should outweigh the short term opportunity costs from not deviating from the common understanding (see chapter 4). Thus for firms to reach an agreement, all firms should be sufficiently focused on the long term. Given the high (sunk) costs of deploying telecommunication networks, it seems very sensible that firms that are active in telecommunications markets value their long term profits higher than their short term profits, since they aim, among other things, to recover their investment. This could be especially important in the context of Next Generation Access networks.

This is apparent in some of the national cases. For example, in case ES/2005/0330 it was mentioned that although lowering prices in the short term could be lucrative, avoiding a price war (stable pricing) in the long term was the beneficial strategy. Therefore, because of the high costs involved in deploying telecommunications networks, it is not desirable to end up in an equilibrium with lower profits for all parties. This reasoning was also recognised in case IE/2004/0121.

- *Other considerations*

Draft

In case DK/2006/0419, the market analysis of international roaming, the Danish NRA NITA argued that coordinated behaviour on a national level is difficult to reconcile with a membership of a pan-European alliance[53]. The Spanish CMT made the same reasoning in ES/2006/0460, concluding against collective market power, and so did the Irish ComReg in case IE/2006/0477.

The Austrian RTR in its market analysis of international roaming registered as case AT/2006/0466, considered that in markets with high levels of demand fluctuations (as in Austria where most international roaming traffic occurs during only a few months of the year, the holiday season) collusive or concerted behaviour is unlikely to be sustainable[54].

6.1.2 Monitor deviations

Individual firms may have an incentive to maximise their profits by deviating from the focal point. For example, they may decrease their price below the coordinated price. They may also increase quality by innovating, attempting to win customers served by other players, or selling wholesale products to potential retail competitors which other firms are hoping to keep out of the market. If deviations are difficult to monitor, coordination will not be sustainable, as the risk of the other firm deviating from the coordinated outcome is too high.

A number of market characteristics may help monitoring. One key factor is market transparency, but other factors, such as links between firms, and lack of product complexity or heterogeneity and market stability may also help. Also, it is important that firms have similar possibilities in monitoring deviations (i.e. are symmetric).

- *Transparency*

The market should be sufficiently transparent such that monitoring deviations from the coordinated outcome is relatively easy.

Certain focal points lend themselves more easily to monitoring. For example, if the focal point of the coordinated outcome is the denial of wholesale access, firms involved in the coordination should be able to monitor whether wholesale access of third parties is indeed being denied.

Other focal points may be harder to assess. For example, if the focal point of the coordinated outcome is, for example, price, a market may be more transparent if the retail prices that end users pay are public. In telecommunication markets that are focused on mass market products, pricing information is usually transparent due to marketing in the media or price comparison tools made available to the end users. Associations of providers/carriers may also help increase transparency by publishing market information. Mainstream media, economic press or financial statements can also prove to be a channel to monitor deviations.

However, there are some markets where prices are less transparent. For example, in wholesale markets, and telecommunication markets that are focused on high quality (business) services, prices tend to be less transparent. In these markets firms typically make

[53] Case DK/2006/0419: The wholesale national market for international roaming on public mobile networks. Brussels, 28/07/2006, p. 4

[54] Case AT/2006/0466: The wholesale national market for international roaming on public mobile networks, Brussels, 25/08/2006, p. 3.

Draft

individual customized offers to end users. Yet, firms may acquire information about pricing of its rivals from its customers during the negotiations of conditions.

These considerations are reflected in the case studies. For example, in case ES/2005/0330 it was noted that consumer prices are transparent and can be observed. In case FI/2005/0304, FICORA rejected the assumption of joint dominance in the market for international roaming with the argument that discount agreements had made the market less transparent which would make it difficult to monitor rivals' behaviour and observe any deviation from the coordinated outcome[55]. The Slovenian APEK came to the same conclusion in its market analysis in case SI/2006/0434.

The lack of transparency was also an argument that drew the Irish ComReg to the conclusion that the market for international roaming was not characterized by collective dominance.

- *Complexity, stability and heterogeneity*

Monitoring can be harder in complex markets or markets with heterogeneous products. For example, where products are customised, it can be hard to know if a low price reflects a deviation from an agreement, or a lower quality product. Pricing schemes in voice markets can for example be quite complex due to the presence of a fixed fee for the connection, a per-minute fee for traffic and sometimes even a fee for originating the call. One can imagine that coordination on price with these pricing schemes is complex and hard to sustain.[56] In case IE/2004/0121 it was however noted that mobile operators can calculate the Minimum Monthly Bills of the other operators, making the complex pricing schemes of the various providers comparable.

- *Links between firms*

Formal or informal links between firms can also help monitoring. For example, in the UK *aggregates, cement and ready-mix concrete* market investigation, the Competition Authority found that the transparency in the market was increased by cross-sales of cement between competing suppliers. And in the *Sony BMG* merger investigation, the Commission identified that the considerable structural links among the firms in the form of compilation, licensing and distribution joint ventures and agreements was a factor of the market conducive to collective dominance.

6.1.3 Effective deterrent mechanism

In order for the coordinated outcome to be sustainable over time, the presence of a credible threat as a consequence of deviation is crucial. It is the threat of future retaliation that keeps coordination sustainable. Punishments often take the form of a change to competitive conditions, so a reduction in price or an increase in output, for a limited time or forever[57]. More severe punishments might involve going below the competitive price or output, i.e. engaging

[55] Case FI/2005/0304: the wholesale national market for international roaming on public mobile networks, Brussels 16/12/2005, p.4

[56] There is, however, an increasing trend towards flat and simpler tariff schemes for voice.

[57] One punishment mechanism referred to in game theory is the grim trigger strategy. That is an infinite repeated game in which the players start by cooperating and continue to do so as long as no one defects (i.e. satisfying the trigger condition). As soon as someone does, the other player will defect for the remainder of the game, i.e. indefinitely.

in a price war. Where collusion is on capacity or investment, the punishment may be to increase capacity or investment. If capacity decisions are irreversible, this may undermine the credibility of the threat of punishment (since retaliating by building more capacity cannot restore the collusive outcome, and is likely to make the punisher worse off).

The case studies show that granting access to third parties (ES/2005/0330, IE/2004/0121 and MT/2006/0443), starting a price war resulting in a lower equilibrium price (ES/2005/0330, IT/2006/0424, IE/2004/0121, UK/2004/0111 and MT/2006/0443), or changing the commercial strategy (ES/2005/0330) can be effective deterrent mechanisms.

- *Symmetry*

The effectiveness of the punishment depends on the symmetry between firms. The firms in question should be symmetric in their ability to deviate from the coordinated outcome and their ability to punish the other firm(s) in case of a deviation.

If production is limited by capacity constraints, this limits firms' ability to compete. In order for the coordination to work both parties must be able to credibly punish and defect from the common understanding. If one of the firms is limited by capacity constraints, it cannot credibly punish or defect from the common understanding, as it does not have the capacity to take over a sufficient share of its 'rivals' customers. More or less the same reasoning holds for vertical integration. If one of the firms is vertically integrated whereas the other firm is dependent on the wholesale inputs from the other firm collusion is not sustainable. The non-vertically integrated firm in this scenario will not be able to credibly defect or punish because it is dependent on the other firm for its success in doing so.

As an example, imagine a case where co-ordination takes the form of a stand-still in investment, but one firm is much further behind in investment than the other. In such a case the deterrent mechanism, i.e. increasing (even slightly) the level of network investment, is completely in the hands of the party with the more advanced infrastructure, This is because the investments necessary to catch up are higher and take a longer time to be effective than those for small updates. Hence, a deviation from a coordinated outcome (i.e. to not invest) is to start investment, and a punishment mechanism would be for the other party to significantly increase investments in response which is strongly dependant on the respective parties' war chests. Furthermore, each party has a clear incentive to continue to invest, and such investments are irreversible, implying that once investments are made, there is no return possible to the coordinated outcome. In other words, there is no apparent credible punishment mechanism in relation to coordination on network investments if the parties' infrastructure and financial structure are not symmetric enough.

As mentioned above, symmetry is not equivalent to having the same or comparable market shares. In case ES/2005/0330, CMT argued that the three main MNOs had similar cost structures (e.g. the distribution between fixed and variable costs) even though the market shares of two of them were significantly lower. Moreover, by referring to a report of the UK Competition Commission, CMT held the view that once an MNO had captured a market share of 20-25%, there were very little remaining economies of scale to be achieved.

Draft

In case IE/2044/0121, ComReg considered that there were high incentives for coordination driven by the symmetry present in the case of the two main operators and a lack of innovation by one network operator favouring the other operators.

- *Short term versus long term approach*

The lower the deviation profit is relative to the coordinating profit and the lower the profit is in the punishment phase, the more likely it is that the coordinated outcome will be sustained.[58] Thus, a deterrent mechanism is effective if there is a threat that the short term profit of defecting together with the long term profit of punishment is lower than the long term profit of coordinating (indefinitely). In order for this incentive constraint to hold, the discount factor should be large enough, i.e. firms should be sufficiently patient, meaning that they value future profits more than short term profits.

Another factor is the period between the detection of a deviation and the effective reaction of the other competitors. This was one of the counterarguments of the European Commission in case ES/2005/0330 against the conclusion that Telefónica, Vodafone and Amena could easily retaliate if one of them gave access to MVNOs by doing the same and hence eliminating the coordinating profits that they were all making. The Commission argued that signing contracts with MVNOs would require lengthy negotiations on price and commercial and technical terms of supply, so that retaliation would not be immediate allowing the "cheating" firm to benefit from a first mover advantage[59]. The Commission had the same reasoning in case MT/2006/0443, specifying that MVNO negotiations can take up to six months if no preparatory work has been done before[60].

- *Nature of the focal point*

Punishment is more effective if the other parties can target the customers of the defecting party. This is most likely if co-ordination takes the form of customer sharing, rather than co-ordination on capacity or innovation where reversion to competition may have effects on the whole market.

In the mobile market the focal point could be denying existing MNOs access at the wholesale level to, for example, MVNOs with the "logical" deterrent mechanism of the non-deviating MNOs offering wholesale access to MVNOs who will of course compete at the retail level with the MVNO using the deviating MNO's network.

In case IE/2004/0121, ComReg considered that the simple threat of reversion to normal competitive conduct, by either lowering prices or granting access, represented a serious disciplinary mechanism. ComReg identified a focal point with two dimensions, one being price (at the retail level) and the other being the denial of access to the network (at the wholesale level);

ARCEP (FR/2005/0179) observed the existence of a common interest in not providing wholesale access to the existing mobile networks. ARCEP further explained that there were incentives not to grant access, as, in the long run, the costs from losing market shares in the

[58] Motta (2004), Competition Policy theory and practice, p. 160.
[59] Case ES/2005/0330: Access and call origination on public mobile telephone networks in Spain, Brussels 30/01/2006, p9
[60] Case MT/2006/0443: Access and call origination on public mobile telephone networks in Malta, Brussels, 10/08/2006, p6,

retail market would outweigh the benefits of developing the wholesale markets. Therefore, the identified focal point was the denial of access to the network and the effective deterrent mechanism would be the provision of the defective MNO to provide wholesale access.

In the Spanish case (ES/2005/0330), CMT identified the denial of wholesale network access to third parties as the focal point and considered that the most credible retaliation would occur at wholesale level. If access was granted, the other established operators could adopt the same strategy of granting access and there would also be the possibility of a price war at the retail level. The Commission confirmed this deterrent mechanism at the retail level.

In MT/2006/0443, MCA identified the denial of wholesale network access to third parties as the focal point of coordination and that the opening of an MNO's network to other MVNO(s) was a sufficient deterrent mechanism.

Along the same line AKOS (SI/2008/0806) saw a clear retaliation possibility on the side of the non-deviating MNO, at wholesale and/or retail level with the focal point on the collective refusal to supply national roaming services.

On the other hand, within the broadband access markets, one focal point could be the denial of access to third parties by the network operators with the deterrent mechanism being the starting of a price war which generally implies a loss in retail market shares and corresponding revenues.

In case MT/2007/0563, MCA referred to the deterrent mechanism at the retail level (i.e. undercutting of retail broadband prices to regain market share from the deviating duopolist) but was missing a description of the retaliatory mechanism at wholesale level.

6.1.4 Insufficient reactions from outsiders

Finally, for the coordination to be sustainable, the reaction of outsiders should not be able to jeopardise the coordinated outcome, since this will affect the stability of coordination. Reactions of outsiders are typically limited if entry barriers are high and if there is no countervailing buyer power.

- *Barriers to Entry*

If entry barriers are low, it is more difficult to reach a coordinated outcome because new firms can enter the market easily, disrupting any attempt at coordination. The entering firm has two options, either it adopts the coordinated strategy or it competes. If the entrant chooses to adopt the coordinated strategy, the profit of cooperating for each of the firms becomes lower. Hence, the coordinated outcome becomes less sustainable (firms need to have a higher discount factor). If the entrant, on the other hand, chooses to compete, the colluding firms will lose market share to the entrant, reducing the profitability of collusion.

In telecommunication markets entry barriers tend to be high because of the large sunk costs of the network. In some markets there are also entry barriers due to the scarcity of spectrum. It is therefore less likely that any possible coordinated effects are prevented because of (the threat of) entry. National cases illustrate these high entry barriers. In cases ES/2005/0330, IT/2006/0424, IE/2004/0121, UK/2004/0111 and MT/2006/0443 it is noted that entry barriers are high due to the high sunk costs from setting up your own infrastructure.

- *Buyer power*

Draft

Another factor that can influence the sustainability of collusion is the existence of countervailing buyer power. If buyers have bargaining power, they can stimulate competition among the firms that are active in the market. A powerful buyer can threaten to switch its current orders to a competitor or a new entrant. Furthermore, powerful buyers can design tenders for their demand thereby lowering the risk of coordination.

It seems unlikely that consumers that purchase mass market products in telecommunications markets have bargaining power. Similarly, the alternative operators that need access to the incumbent's network in order to be able to be active at the retail market do not seem to have any bargaining power.

- *Role of potential competitors*

Collusive outcomes may exist in market structures involving fringe competition. However, the ability of the fringe competition to exert pressure on the potentially colluding competitors may weaken that collusion or prevent it all together. Any fringe competition present on the market has to be analysed and closely monitored.

As an example, in the two *Holcim/Cemex cement* cases considered by the EC which are described in Annex B, joint dominance concerns were considered carefully but ultimately dismissed because of the ability of fringe firms to destabilise collusion.

In the case MT/2012/1375, one of the arguments against the finding of joint dominance was the prospect that fibre-based infrastructure would be rolled out, which made it particularly unlikely that collusive behaviour – which could not be observed in the market as it was –would ever be sustainable[61].

Many stakeholders refer to OTT services as exercising potential indirect constraints on their electronic communications service provision. According to these stakeholders, OTT services can increasingly be considered complements or even substitutes to certain electronic communications services provided at the retail level.

Although BEREC recognizes that OTT services may exert a degree of competitive pressure on the retail level in some markets, in general BEREC finds it unlikely that at present the providers of these services are able to distort the coordinated outcome at the wholesale level. Given that these OTT service providers depend on the underlying infrastructure provided by telecoms operators, it is likely that their ability to destabilise any joint dominance is limited.

6.2 Standard of proof

In practice, it has been difficult for NRAs to demonstrate the existence of joint dominance (and therefore SMP) which would justify regulatory intervention. In this subsection we discuss the standard of proof for establishing joint dominance and consider the types of evidence that can be used in proving joint dominance.

In considering this issue, we distinguish between two situations – the first is where the market is currently regulated and the concern is that removing this regulation would lead to joint dominance. This could be the case, for example, in a market where an incumbent broadband provider has historically been regulated but which has now evolved such that there are two similarly sized players – e.g. the historical incumbent and a cable company. The second is

[61] Commission Decision concerning Case MT/2012/1375: Wholesale broadband access in Malta, Brussels 15/11/2012 - https://circabc.europa.eu/w/browse/8ba4c83f-02c6-4191-a118-acf0e64cd238

Draft

where the market is unregulated but concerns about joint dominance have arisen. This could be, for example, because of a change in structure in a market.

6.2.1 Standard of proof for joint dominance

According to the horizontal merger guidelines a merger can be blocked if it leads to a significant impediment of effective competition through the creation or the strengthening of a dominant position. The standard of proof that is applied in merger cases is basically the outcome that is most likely to occur. The Competition Authority must rely on evidence that is convincing, consistent and cogent such that the evidence has a reliable factual basis for its assessment of probability. In addition it is accepted that the more speculative the theory of harm is, the more plausible evidence is needed to prove this theory. E.g. in case one of the merging parties has a market share above 50% the standard of proof for SIEC is considered to be lower than in case the market share lies below 50%. This reasoning is also accepted in single SMP cases in *ex ante* regulation.

According to the Framework Directive NRAs have to determine whether operators have significant market power (SMP). In order to impose regulation NRAs have to prove that the outcome with (joint) SMP is the outcome that is most likely to occur in the absence of regulation. In order to prove SMP NRAs should rely on convincing, consistent and cogent evidence.

The standard of proof that NRAs have to meet is whether or not one or more undertakings have SMP. This standard of proof does in principle not differ between markets with existing (single SMP) regulation in place and markets without existing regulation. Is this equal standard of proof appropriate or is there a justification for applying a different standard of proof?

When a market is subject to regulation and single firm SMP can no longer be established, regulation on which other operators may have previously relied would need to be lifted. However, if the market has moved from single firm dominance to a more oligopolistic structure, competition concerns may remain. If the standard of proof for establishing joint dominance in such cases is high and cannot be met, the impact of the removal of regulation may be significant in respect of those downstream operators which no longer benefit from regulation. This contrasts with a position in which no regulation was previously imposed. In such situations, no reliance is placed on it by other downstream operators, and there may be a greater impact on the upstream firms which were not previously regulated. It could be argued that the standard of proof in the latter case may therefore be higher from the perspective of regulatory certainty.

However, BEREC does not consider it appropriate to distinguish between the standard of proof applicable in the case of lifting regulation and imposing regulation. It seems likely that in both cases the burden on NRAs to conduct a robust market analysis are the same. Whilst there may be differing impacts depending upon the starting point for that analysis, it is to be expected that NRAs should always seek to secure the best outcomes for citizens based upon a fully evidenced case justifying regulation.[62] For this reason, BEREC considers it to be likely that

[62] Indeed, recital 27 to the Framework Directive makes clear that "it is essential that *ex ante* regulatory obligations should only be imposed where there is not effective competition i.e. i.e. in markets where there are one or more undertakings with significant market power, and where national and Community competition law remedies are not sufficient to address the problem."

the standard of proof for NRAs is equal regardless of whether there has already been a regulatory intervention or not.

6.2.2 Types of evidence used

This section discusses the difference between the type of evidence that Competition Authorities can use in their merger analysis of joint dominance, and the type of evidence to be used NRAs in *ex ante* regulation. In addition the possible differences between the types of evidence that NRAs can use in a regulated versus an unregulated environment is discussed.

Hypothetical assessment

For fixed markets the starting point of an NRA will in most cases be the market situation in the presence of single SMP regulation. However, the assessment that NRAs need to undertake is a hypothetical one, namely whether there is (a risk of) joint dominance in the absence of (single SMP) regulation. This analysis seems similar to the analysis made by Competition Authorities in the case of a merger. The Competition Authority also assesses a hypothetical situation, namely whether there is a likelihood that the merger creates or enhances the possibility of coordinated effects.

The question is whether this has any implications for the standard of proof. As discussed above both Competition Authorities and NRAs have to proof that there are undertakings active in the market in a SMP position.[63] However, the evidence used to prove it may be different. In the case of existing regulation of a single dominant firm it is difficult, if not impossible, for regulators to depend on empirical evidence and factual data in order to prove joint dominance.

The difference between the assessment of a NRA in a regulated environment compared to the assessment of a Competition Authority or the assessment of a NRA in an unregulated environment is that the analysis done by the NRA in a regulated environment is greenfield: in the absence of regulation. In the situation where there has been regulation before there is no factual market data present of the (hypothetical) situation where regulation would have been absent. The analysis done by the Competition Authority or the NRA in an unregulated environment is slightly different because it compares the actual market situation pre-merger or pre-regulation with the potential market situation post-merger or post-regulation. So the assessment done by the Competition Authority in case of a merger or by the NRA in an unregulated environment is less hypothetical in nature than the assessment done by an NRA in a regulated environment.

Factual analysis

The analysis done by NRAs in an unregulated environment is more direct, as they are assessing the existing market situation, and therefore they can rely on factual data and empirical evidence for their assessment. For example, market outcomes may provide indirect evidence of joint dominance. For example, in case SI/2008/0806, the Commission explicitly stated that it expected APEK to analyse the following elements:

- *the existence of pent up demand, in the view of the fact that where there is no demand for access, there cannot be any collective denial of access;*

[63] In addition to (joint) dominance, Competition Authorities can impose remedies or block a merger if it leads to unilateral effects.

- *the role of fringe competitors, from the perspective that maverick operators which prove capable of breaking the collusive equilibrium put into question the collective dominance finding;*
- *in case national roaming agreements were already signed absent regulation, the collective denial of access had little credibility;*
- *given that collective dominance need not be established at retail level, competitive conditions at retail level will, nevertheless, inform the NRA about the state of competition at wholesale level.*

Competition Authorities and NRAs in an unregulated environment can also look at national price trends, especially, if there was a change in the market structure in the past (e.g. market entry, merger or market exit). Also, an international or inter-regional comparison of the price levels can help an NRA in drawing conclusions about competition. In this case, the national/regional specifics for each country have to be taken into account. Likewise, profit levels (in absolute terms or relative to other, similar markets) are a further indicator for the competitive conditions. Finally, pent up demand in wholesale markets can be used as another indicator. Additionally, and depending on the focal point identified, quality characteristics or lagged investments may also play a role. To deal with the fact that NRAs in a regulated environment cannot depend on actual market outcomes, they can make predictions on how the market may look in the absence of regulation, as is also done in case of single SMP.

Nevertheless, for Competition Authorities and NRAs in an unregulated environment it is still considered important to evaluate the Airtours' criteria, and to establish a focal point, monitoring and punishment mechanisms, and the absence of external destabilising forces. This is important because high prices and profits may be a sign of tight oligopoly and not joint dominance, and these two concerns may require a different regulatory treatment. It is also important as high prices and high profits may simply be the reward for innovation, and not evidence of a lack of effective competition. It is also worth noting that, in cases where there is no prevailing regulation, there may be additional direct evidence of the Airtours criteria. In particular, it may be possible to consider internal documents from firms, which provide evidence of a particular co-ordination mechanism, or perhaps even provide evidence against such a theory of harm.

Ireland (IE/2004/0121) used market outcomes in their analysis, namely price trends, absolute price levels, profitability and pent up wholesale demand. Similarly, Spain (ES/2005/0330) used pent up wholesale demand and levels of profitability as additional indicators. Likewise, in the UK investigation into *aggregates*, profitability analysis formed an important part of the investigation. However, in all cases, there was still some explanation of the mechanism for joint dominance, identifying the focal product, the monitoring and punishment mechanism, and considering the absence of destabilising external factors.

Based on the above we conclude that the type of proof that NRAs can use in a regulated environment differs slightly from the evidence that Competition Authorities or NRAs in an unregulated environment can use. Hence, it seems likely that not so much the standard of proof that is being applied is or should be different but that the type of proof may be different. In a regulated environment NRAs will have to rely more on expectations and economic reasoning than on actual facts. (as in merger control).

Draft

6.3 Conclusion

Telecoms Cases involving joint dominance are rare and of those few cases that have been carried out, even fewer have resulted in legal decisions being taken. One explanation for this is that there is not enough guidance or clarity regarding how to carry out a case of this kind.

Existing guidance on joint dominance from merger control and most national telecoms cases to date mostly rely on the criteria set out in the Airtours case. Also, from an economic theory perspective these criteria make sense. Hence, BEREC considers these criteria to be the right framework for assessing joint dominance cases.

In this section, we have examined each of these criteria and aligned them to the characteristics highlighted by the SMP guidelines. We have also illustrated some of these with relevant cases from the telecoms industry.

In particular, we highlighted that terms of coordination are more likely to be reached where a focal point can be identified, firm structures and cost structures are symmetric, market shares and demand are stable, capacity constraints do not exist and long term financial incentives exist to collude. We showed that monitoring deviations is facilitated by transparency in the market, simple homogenous products with stable demand and formal or informal links between firms.

Joint dominance also requires effective deterrent mechanisms. Retaliation is easier where firms are symmetric, where there is a financial implication of deviation and firms value long term profits over short term profits and where firms are better able to target the customers of the deviating firm.

In order to sustain collusion the risk of disruption from firms outside the collusive setting must be low. This is more likely when barriers to entry are high, customers do not have buyer power and there are no active fringe competitors able to disrupt the collusion.

Lastly, we considered what the appropriate standard of proof should be in terms of *ex ante* intervention in a case of joint dominance. One could argue that the standard of proof for joint dominance in markets with existing (single SMP) regulation in place should be lower when compared to markets with no regulation in place. However, given the possible impact the imposition of regulation may have BEREC does not find it appropriate to do so. According to BEREC the standard of proof between regulated and unregulated markets is equal, i.e. in both cases SMP has to be proven. We also considered the types of evidence used for proving joint SMP. We argued that in markets with existing regulation in place it is hard, if not impossible, for NRAs to use empirical evidence. On the other hand, in markets where there currently is no regulation in place NRAs can rely more on factual evidence because the analysis is less hypothetical in nature. Yet, also for markets without existing regulation in place NRAs still have to cumulatively fulfil the Airtours criteria.

7 Tight oligopolies

7.1 Tight oligopolies in contrast to collusive oligopolies

While the previous section focuses on forms of joint/collective dominance, which relies on collusion among the members of the oligopoly, this chapter will deal with oligopolistic market structures that cause non-effective market outcomes, without explicit collaboration or tacit collusion. In this report, this type of oligopoly is referred to as a “tight oligopoly”. As described

Draft

in more detail in Section 4.2.1.2, in such a market each firm finds it optimal to raise price, or lower quality, relative to the competitive level, taking the optimal decision of its competitors as given and sets its own quantity, price and/or capacity according to its individual profit maximisation.

Despite having important characteristics in common, concepts of non/sub-competitive oligopolies, first in the form of tacit collusion and second in the absence of tacit collusion (i.e. tight oligopolies[64]), basically differ in the way in which firms assess their competitor's conduct. In a tight oligopoly, the firms take their competitor's behaviour as given and not open to influences by the firm's own actions. By providing individual profit-maximising responses to market conditions without expecting to influence their competitors, firms do not effectively compete. In such a market situation market power does not result because of individual or joint dominance, but because firms may be able to raise their prices profitably above competitive levels. Thus, they form an equilibrium that – without requiring coordination mechanisms – is non-cooperative and stable. In contrast, in a market setting characterized by tacit collusion, firms make choices that would not be in their interest if they assume that the other firms were uninfluenced by their conduct.[65]

Although the foregoing stresses that an oligopolistic market configuration can – even without any occurrence of tacit collusion – lead to a non/sub-competitive market outcome, this does not mean that competition in an oligopoly is per se ineffective. Especially from a dynamic perspective, they often lead to an effective market outcome. But, as already mentioned in chapter 4.2.1.2, several factors might increase the probability that a non-collusive oligopoly is not conducive to effective competition.

This chapter includes an analysis of the structural factors that characterise a tight oligopoly. Additionally, the competitive effects a tight oligopoly might cause are considered. Moreover, the current regulatory framework will be recalled briefly focusing on its applicability in the context of tight oligopolies.

Finally, the chapter expands to adjacent fields of economic law, especially on general competition law and the encompassed merger law in order to provide some insights on how tight oligopolies are dealt with in comparable (although not necessarily the same) circumstances on a European level.

7.1.1 Criteria for assessing tight oligopolies

The occurrence of a tight oligopoly becomes more likely when the market is characterized by certain criteria.

---

[64] *Ivaldi et al*. call this oligopolistic market structure "individual rivalry"; see *Marc Ivaldi, Bruno Jullien, Patrick Rey, Paul Seabright, Jean Tirole*, IDEI, The Economics of Unilateral Effects, November 2003, Interim Report for DG Competition, European Commission, 3.

[65] *Marc Ivaldi, Bruno Jullien, Patrick Rey, Paul Seabright, Jean Tirole*, IDEI, The Economics of Unilateral Effects, November 2003, Interim Report for DG Competition, European Commission, p. 4-5: "For instance, under tacit collusion a firm can choose to set an output which, when added to the output produced by other firms, yields the monopoly output in the market as a whole. This could not be a short-term profit-maximising choice for all firms in the market if each were able to increase output without other firms' reacting, since in the absence of such reactions at least one firm and possibly all firms would find it profitable to deviate from the monopoly level. […] One way to see this is to note that each firm is a monopolist on its residual demand, which is the demand for its own products given the other firms' outputs or prices."

Draft

Draft

For example, a market situation where broadband products are offered on two different infrastructures, traditional copper and cable, might be susceptible to lead to a tight oligopoly. In this scenario the firms would not need to behave collusively to impede effective competition by refusing wholesale access to competitors. Instead, such behaviour could simply be a profit-maximising response to the market conditions, i.e. a rational answer to the given circumstances without expecting to influence the other firm. The operators simply have no incentive to offer wholesale access when they do not expect to gain a higher profit by allowing alternative operators the entrance to the market. Therefore this type of oligopolistic behaviour has to be differentiated from collusive behaviour, where the operators act with the intention of influencing the actions of their competitors.

In consequence, only two operators would offer broadband products on the retail level, which might increase the risk of welfare losses for the end consumer and hinder effective competition. The lack of competitive constraint could e.g. lead to an incentive for both firms to increase prices on the retail level.

This example of tight oligopoly might fail since basic characteristics of collusive behaviour are missing, and the NRA would not be allowed to intervene since no dominance is proven. Here are some criteria to provide guidance as how to identify oligopolistic markets leading to sub-competitive results in the absence of collective dominance:

- *High degree of market concentration*

A tight oligopoly usually involves a small number of firms. This might reflect a strong market position that makes it easier for the firms not to engage in effective competition and to raise the prices above the competitive level.[66] Again, it should be highlighted that the number of firms does not give a complete impression of the competition effects. Instead, these effects must always be assessed in the light of additional factors.

- *High entry barriers and no significant potential new entrants*

A tight oligopoly is typically characterised by high entry barriers and no significant potential new entrants; in this situation, the lack of new market entry may give the existing firms the possibility to raise prices.

- *High level of product differentiation*

Product differentiation also plays an important role in determining the market outcomes. The goods produced by different firms are – even when belonging to the same market – often not identical, but imperfect substitutes for each other. Although in some respects telecoms products might be fairly homogeneous compared to other retail goods, there are some ways in which they may be differentiated. For example, in a scenario of a bundled market consisting of at least two firms with own infrastructure (e.g. a cable provider and a classical fixed telecommunication provider), both firms might offer comparable broadband access products, but product differentiation can take place regarding the levels of service, or the type of bundles (for example, the firms might have different TV offerings) or the branding[67]. When there are many and/or close substitutes in a market, the prices will be closer to a competitive level for a given number of firms, because the consumers can easily substitute the products that have an increased price with the product of a competitor. In contrast, in a market with highly

[66] *OPTA*, Is two enough? Economic Policy Note, No. 6/2006, p. 10.
[67] *OPTA*, Is two enough? Economic Policy Note, No. 6/2006, p. 27.

differentiated products the firms can raise the prices closer to the monopoly level.[68] Therefore, tight oligopoly is more likely to occur where the level of product differentiation is higher. (this contrasts with tacit collusion which is more likely to hold when products are homogeneous).

- *Capacity constraints*

A tight oligopoly is often characterized by capacity constraints. As already explained in chapter 6.1.1 in terms of tacit collusion, capacity constraints limit firms in the competitive constraint they could potentially generate. In a tight oligopoly, where the firms make their capacity decisions unilaterally without taking into account their influence on competitors, a price increase of one firm might not be followed by an increase of the output of the competitors if they face capacity constraints. This effect is intensified when the products are highly differentiated and the customers are not able to easily substitute the products. However, in fixed telecommunication markets capacity constraints are unlikely to be present; they may be more likely in mobile telecommunication markets, e.g. in context of spectrum scarcity. Hence, for the arising of a tight oligopoly in telecommunication markets other factors than capacity constraints may be more relevant.

- *High switching costs, low growth of demand, low cross-price elasticity and no countervailing buyer power*

On the demand side, limited demand growth may enhance the market power exerted by the firms on the market. The incentive to hamper customer switching by differentiating products or creating significant switching costs is higher when the expectation of acquiring new customers is low. High switching costs and differentiated products may lead to low cross-price elasticities, because customers might not be able to easily switch to products of competitors as a reaction to a price increase. This implies that the competitive pressure exerted by the threat of switching customers is low. The lack of countervailing buyer power by a critical mass of buyers might also lead to lower competitive pressure.

Regarding the market outcome of a tight oligopoly, a typical indication for non-effective competition where regulation is not in place would be high prices, i.e. prices above the competitive level. Thereby, it should be recalled that prices in telecommunications markets should not only be set at an effective level in a short term, but also taking account of dynamic efficiency, in the long term. Telecommunication firms face substantial risks because of high investment costs which have to be covered on a long lasting basis. Therefore it is difficult to assess whether a specific price level reflects effective competition from a dynamic perspective, or whether it should be considered non-competitive from a short term perspective. A way to assess the price level might be the analysis of national price trends. It can also be useful to make an international or inter-regional comparison of the price levels. Additionally, the profit levels of the undertakings in an oligopoly can reflect the competitive conditions in the market, because a very high profit level might be an indicator of the lack of effective competition.[69] Other indicators for non-effective competition include poor innovation and low incentives for investment. In any case, the identification of competition problems cannot be made based on fixed criteria, but only case-by-case under consideration of the specific market situation.

[68] *Marc Ivaldi, Bruno Jullien, Patrick Rey, Paul Seabright, Jean Tirole*, IDEI, The Economics of Unilateral Effects, November 2003, Interim Report for DG Competition, European Commission, 11.

[69] *Marcel Canoy, Sander Onderstal*, Tight Oligopolies In Search of Proportionate Remedies, CPB Document, No. 29/2003, p. 15

As to the degree of frequency of tight oligopolies it is difficult to state concrete figures. Yet with regard to the aforementioned criteria, bearing in mind that most of them may indicate and facilitate both tacit collusion and tight oligopolies and considering the relatively low number of joint dominance cases (see chapter 5) in the past years, the presumption is that cases of tight oligopolies will not exceed (significantly) those number of cases brought forward by NRA's this far. That is to say, enabling NRAs to deal with tight oligopolies when regulatory intervention is needed should not likely increase *ex ante* regulation in terms of quantity of cases but should improve its quality.

BEREC well understands that any kind of regulatory action on tight oligopolies must be supported on an adequate standard of proof to be set in the regulatory framework. Therefore BEREC is by no means asking for a "regulatory joker" to be applied at NRAs' discretion. On the contrary, to avoid type I errors that unduly distort competition and the incentives for innovation and investment, the standard of proof must be based on the criteria as set out in the section 7.1.1 to determine that the market is non-effective competitive and thus *ex ante* remedies are required following the principles of adequateness and proportionality.

7.1.2 Competition constraints in tight oligopolies

In principle, tight oligopolies can effect competition in telecommunications markets in various ways.

For example, in an oligopolistic market where regulatory obligations are already imposed, the question of lifting the obligations arises when the criteria for single or joint dominance are no longer fulfilled, e.g. due to a change in the market structure.

However, lifting the regulatory obligations could result in a situation that can be described as a tight oligopoly, with few operators, although not in a jointly dominant position, yet still creating sub-competitive market outcomes[70]. In such a scenario, there would be the need to assess the effect of lifting the regulatory obligations on competition, which means that the analysis would have to be done from a forward-looking perspective through evaluating the likely market developments.

Another situation may exist in a market where at present no *ex ante* regulatory obligations are imposed. Concerning the basis for the determination of a tight oligopoly, that case differs from the first scenario described above. This assessment is essentially made with regard to the current market structure and an observable market outcome, less in a forward-looking perspective under consideration of the possible emergence of a tight oligopoly.

The scenarios presented above raise questions regarding the assessment and handling of tight oligopolies.

Firstly, it seems probable for a sub-competitive market outcome to be the result of an oligopolistic market structure in which no tacit or overt collusion is present. As such, consideration must be given as to how this sub-optimal market outcome can be addressed; i.e., whether regulatory intervention can lead to a better market outcome. Secondly, consideration must be given as to the specifics of the market development. Regulatory intervention could entail the continuation of regulation despite a recent removal of a

[70] OPTA describes the situation of a fixed broadband market where two operators offer bundled products through two existing infrastructures (traditional copper and cable), thereby creating unilateral effects; see *OPTA*, Is two enough? Economic Policy Note, No. 6/2006, p. 5 ff.

designation of SMP or the imposition of remedies in a market where no regulatory measures had been imposed recently.

7.2 Tight oligopolies and the current regulatory framework

Having outlined the market structures and possible outcomes tight oligopolies might lead to and having described the difficulties and uncertainties that go along with the identification and assessment of tight oligopolies, the question arises whether the current regulatory framework is suitable to address these issues and enable NRAs to accomplish their regulatory aims.

The current regulatory framework provides NRAs with a tool box to assess and regulate, where necessary, electronic communications markets at a national level. As such, in order for an NRA to conclude whether regulatory intervention is necessary, one has to recall the aims and means of sector-specific regulation.

Regulation does not simply take place because at a time a specific economic sector had been liberalised and privatised; liberalisation and privatisation do not lead to regulation per se. The European regulatory framework and especially the Framework Directive clearly outline and explain why the European Electronic Communication Sector had not been left untouched once privatised, but has continued to be subject to economic regulation. The Framework Directive, starting with Article 8 (1) is designed to ensure effective competition.

As proscribed in Article 8 (2-4) of the Framework Directive, NRA's are obliged to regulate markets where necessary with a view to the following regulatory goals:

- ensuring that users, including disabled users, derive maximum benefit in terms of choice, price, and quality; (Article 8 (2) lit. a),
- ensuring that there is no distortion or restriction of competition in the electronic communications sector; (Article 8 (2) lit. b) and
- encouraging efficient investment in infrastructure, and promoting innovation (Article 8 (2) lit.c).

By doing so, they shall promote the interests of the citizens of the European Union (Article 8 (4)).

When assessing relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation, the current framework refers to the principles of competition law in order to determine whether effective competition on a specific and relevant market actually exists or will, most probably, develop within a certain time frame.

Thus, according to Article 16 (4) of the Framework Directive, where a national regulatory authority determines that a relevant market is not effectively competitive, it shall identify undertakings with SMP on that market in accordance with Article 14 and the NRA shall impose on such undertakings appropriate specific regulatory obligations as referred to in paragraph 2 of Article 14 or maintain or amend such obligations where they already exist.

Furthermore, paragraph 2 of Article 16 states that NRAs shall determine on the basis of their market analysis (referred to in paragraph 1 of this Article) whether a relevant market is effectively competitive. Referring to the formula developed by the Court of Justice, Article 14 (2) defines an undertaking as having significant market power 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 power to behave to an appreciable extent independently of competitors, customers and ultimately consumers.

Consequently, it can be concluded that the framework defines a market as not effectively competitive if one or more undertakings, either individually or jointly, exert significant market power; i.e. the principle of dominance is the only applicable threshold to justify regulatory intervention. On the other hand, solely the finding of individual or joint dominance justifies the conclusion that a relevant market is not effectively competitive and thus has to be regulated.

Hence, NRAs may observe market failures or at least some form of ineffective competition on a relevant market while being aware that perfect competition is unlikely to be achievable. Yet, as long as they do not succeed in demonstrating (and proving) some form of significant market power, they are not empowered to implement the remedies laid down in the framework directive.

BEREC notes that tight oligopolies have not been addressed directly under the European framework for electronic communications. In light of that position, NRAs may find it difficult to ensure the development of effective and sustainable competition in the electronic communications sector in the presence of tight oligopolies. Changes in the market (converging market shares, mergers, consolidation, deployment of NGN and so on) may give rise to market structures that do not lead to effective competition and yet, given the current lack of precedent, it may be difficult to establish dominance (and thereby significant market power) which would justify regulatory intervention.

This economic evolution should not to be understood as a regulatory failure. On the contrary the goal of *ex ante* regulation is the evolution from markets experiencing significant market power by the incumbent to markets where the incumbent is no longer dominant. Along this market evolution, markets can exhibit joint dominance or tight oligopolies or simply competitive market success. As these markets evolve, tight oligopolies may increasingly occur in the future and NRAs should be given the regulatory tools to foster effective competition where necessary.

7.3. Tight oligopolies and adjacent fields of competition law

As set out above, the current regulatory framework does not provide NRAs with the necessary explicit powers to ensure the regulatory goals set up in the Framework Directive in the context of tight oligopolies. Therefore, the question arises whether there may be other means of tackling ineffective tight oligopolies, such as through *ex post* competition enforcement.

It can be argued that *ex ante* regulation is not suited to deal with tight oligopolies anyhow. Instead, such ineffective oligopolistic market structures and outcomes would be better dealt through general competition law.

However, to the extent that tight oligopolies are not addressed by the *ex ante* framework, they are also not explicitly addressed under the *ex post* framework. As set out above, the notion of significant market power is equivalent to the concept of dominance under general competition law. The situation illustrated above in an *ex ante* context therefore holds true for the *ex post* context of general competition law as well. Neither NRAs nor NCAs have an explicit basis on which to intervene in an existing ineffective tight oligopoly on the basis of European law as long as the principle of dominance (and its limitations) is the central threshold for defining (in)effective competition.

In addition, even if general competition law were more readily able to address tight oligopolies, timing may become crucial when observing the unfolding of tight oligopolies, since market

developments and a sub-competitive equilibrium being stablished may have led to a fait accompli by the time general competition law comes into play from an *ex post* perspective.

The European Commission's Green Paper regarding the review of the Merger Regulation for the first time opened the discussion on the role of the principle of dominance in the context of merger control in 2001. With the UK and Ireland adopting the so called SLC-Test (substantial lessening of competition) that had been used in the US the Commission entered the discussion whether or not this test should be included in European law. While the principle of dominance focuses rather on the assessment of market structures, the SLC-Test envisages modification of market processes and consumer welfare (effects based). Finally though, the Commission's proposal of a new merger regulation kept relying solely on the principle of dominance.[71]

Those favouring the adoption of the SLC-Test in European law had been arguing that the dominance-test leaves a gap of control in oligopolistic cases while the European Commission was convinced that the test is flexible enough to be used in any case. It was only until after the "Airtours"-case and the subsequent jurisprudence that the Commission acknowledged an oligopoly blind spot within the dominance-test and started addressing unilateral effects where dominance was not established in the context of mergers and acquisitions. They understood that especially mergers in oligopolistic market structures could have an impact on the effectiveness of competition that led to the conclusion that relying on the principle of dominance as single criterion may not be enough. When the new merger regulation was finally adopted in 2004, the so called SIEC-Test (Significant Impediment to Effective Competition) was included in the regulation. Thus, the SIEC-Test was initially introduced in order to close the gap in the system of prevention when only relying on the principle of dominance.

In overhauling the Merger Regulation and the European Union Guidelines on Mergers, European law gave for the first time a legal qualification to ineffective oligopolistic market structures. Although the creation or strengthening of a dominant position is a primary form of such competitive harm, the concept of significant impediment to effective competition should be interpreted "[…] *as extending, beyond the concept of dominance, only to the anti-competitive effects of a concentration resulting from the non-coordinated behaviour of undertakings which would not have a dominant position on the market concerned*". The SIEC-Test was created as a tool to prohibit mergers resulting in both, coordinated and unilateral effects, which refer to the ability of post-merger firms to raise prices, lower output and lessen efforts of innovation because of the removal of competitive constraints.

The parallelism of the problematic issue of gap cases in the current context is obvious: Just as the criterion of significant market power at some point was not adequate any longer to handle unilateral, i.e. uncoordinated effects in tight oligopolies concerning merger cases, the regulatory evolution of telecommunication markets may lead to in the presence of market structures and economic outcomes that are not explicitly covered by the concept of significant market power even though unfortunate results are to be expected.

As told previously, the above mentioned SIEC-Test (described in section 4) is an adequate starting point to define the test to be applied when identifying tight oligopolies in the context of *ex ante* regulation. However, this does not mean that a direct transposition of the SIEC-Test applied in mergers & acquisitions regulation must be done to the *ex ante* regulatory framework. Assessing existing market structures using a prospective view (as it is done in *ex ante* market

[71] OJ EU, L 20, p. 4 as of 28/01/2003.

Draft

analysis) and assessing the impact on competition of a proposed merger or acquisition are different tasks, and criteria and tools used in each of these contexts may differ. An in-depth analysis of these differences and adaptation of criteria and evidence to be used in the *ex ante* regulatory framework must be done.

7.4. Conclusion

BEREC observes changes in the European Electronic Communication Sector closely. With the deployment of NGN, converging market shares, mergers across Europe and the general market consolidation in the telecommunications sector, BEREC expects that increasingly oligopolistic structures might develop. While BEREC understands that oligopolistic structures may result in effective competition, it expresses its concern that there might be tight oligopolistic structures developing that cannot be addressed with current regulatory means nor by means of *ex post* competition law.

Difficulties and uncertainties remain in finding a solid benchmark when assessing the effectiveness of competition in tight oligopolies. Nevertheless, it remains doubtful whether a European regulatory framework that relies on the principle of dominance only will be effective in ensuring that the regulatory goals are met. BEREC cannot exclude the possibility that ineffective tight oligopolies or even tight duopolies might develop and that once markets have developed in a stable yet ineffective manner it would not be feasible any longer to foster effective competition by regulatory means. Preventing such a regulatory gap arising might be the key answer.

Therefore, BEREC has begun early to shed light on these developments and the possible problematic outcome they may entail. When looking at possible solutions, the evolution of European merger control seems to be an adequate starting point. Gap cases have led to a broader understanding of oligopolistic market structures, processes and effects and eventually to an adjustment of the merger control regime. As the problem setting is similar with ineffective tight oligopolies on the regulatory field, BEREC concludes that a review of the regulatory framework should address the aforementioned issues from a preventive point of view avoiding timely consumer harming market distortions.

Whether the solution lies in adopting and transferring and/or adapting at least part of the principles and preconditions of the SIEC-test to regulatory practice or whether new methods and instruments have to be designed remains open to discussion.

8 Remedies in the context of oligopolies

Imposing remedies in oligopolistic markets raises some issues such as which remedies should be adopted by NRAs and to which operator they should be applied, whether the actual framework is covering all competition issues in the case of sub-competitive oligopolies or whether the regulatory framework and/or the SMP guidelines[72] should be extended.

It is important to recall that in all cases of oligopolies, both collusive and tight, the assessment and any necessary regulation should apply **a case-by-case approach**. It makes sense to consider a set of parameters before deciding on the remedies, such as differences among

[72] 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)

technologies, the scope of the network i.e. whether it is a national or local infrastructure and the existing historical situations, for example whether some firms are already regulated. The burden to be imposed on each operator should also be considered, because it may be different and therefore could justify different approaches.

Furthermore, remedies should be imposed in accordance with the **proportionality principle**. According to EU law, proportionality means that the contemplated remedy is based on the problem identified, being justified by the objective to put an end to the identified problem, and that it does not go beyond what is necessary to achieve this objective.

In this respect, this chapter intends to set out hypothetical scenarios and then consider which remedy options might address specific competition problems.

In the current framework, when the existence of a non-competitive market outcome is established as a result of joint SMP, as well as of single SMP, NRAs are able to impose the appropriate *ex ante* remedies to solve competition problems. The set of remedies available to NRAs for *ex ante* regulation is listed in the regulatory framework:

Access Directive	Art. 9	Obligations for transparency in relation to interconnection and/or access
	Art. 10	Obligations of non-discrimination, in relation to interconnection and/or access
	Art. 11	Obligations for accounting separation in relation to specified activities related to interconnection and/or access
	Art. 12	Obligations to meet reasonable requests for access to, and use of, specific network elements and associated facilities
	Art. 13	Obligations relating to cost recovery and price controls, including obligations for cost orientation of prices and obligations concerning cost accounting systems, for the provision of specific types of interconnection and/or access
	Art. 13a	Obligation on vertically integrated undertakings to place activities related to the wholesale provision of relevant access products in an independently operating business entity *When obligations imposed under Articles 9 to 13 have failed to achieve effective competition*
Universal Service Directive	Art. 17	Obligations not to charge excessive prices (by retail price cap measures, control of individual tariffs, orient tariffs towards costs or prices on comparable markets), to inhibit market entry or to restrict competition by setting predatory prices, to show undue preference to specific end-users or unreasonably bundle services *Applied on undertakings identified as having significant market power on a given retail market*

When joint dominance is proven, the jointly dominant firms fall under the SMP-regulation, and NRAs must apply at least one of the remedies as explained above.

By contrast, when it comes to tight oligopolies, this market structure is not explicitly addressed in the framework and therefore it may not be possible to impose remedies in spite of sub-competitive outcomes. Additionally, there is no existing precedent, which could help NRAs to assess such a situation.

First, according to Article 16(4) of the framework Directive, NRAs "*must* […] *impose appropriate regulatory obligations on the undertakings concerned* [having SMP]". Therefore, the current framework intends to impose remedies on all operators designated as having joint dominance.

To identify the most appropriate remedies, NRAs should consider them in light of the specific competition problem identified. As such, in relation to tacit collusion, the focus is to address factors facilitating the collusion; for example, by disturbing the monitoring activities[73] of the undertakings, or addressing the focal point for the collusion, such as access denial.

The current framework does not explicitly state whether remedies imposed in the context of joint dominance must be similar for each joint-SMP operator. Imposing similar remedies on all joint-SMP operators must be feasible and appropriate. For example, imposing on all operators the exact same obligations relating to cost recovery and price control for the provision of specific types of interconnection or access may be inappropriate. For instance, a cost orientation remedy, if based on historical book costs, would imply having different tariffs for different operators. It may disincentivise investment because new operators with the incentive to develop their own infrastructures would present higher tariffs. In these situations, depending on the actual circumstances faced by NRAs, NRAs could define a reasonably efficient generic operator or other comparison tools to define a target of prices considered as compatible with competitive market functioning.

In some circumstances it may be appropriate to require several operators to meet reasonable requests for access or non-discrimination (the market functions when operators grant access to one another's network under the same conditions). Moreover, when access obligations are the most feasible and appropriate, NRAs may impose remedies at different points in the value chain for each operator subject to obligations.

Another possibility that NRAs may want to consider is that, with the aim of efficient regulation, applying differentiated remedies to operators with SMP could be appropriate. In such a case, it may make sense for the choice of the remedies to depend on the structure of the market. This could mean that one operator may be subject to stricter remedies. Furthermore, the burden to be imposed on each operator should also be considered, because it may be different and thus may justify different remedies.

Second, and as we have seen, the current regulatory framework intends to impose obligations on all undertakings with an SMP position. In tight oligopoly cases, where historically it has not been possible to define joint dominance, there are no obvious remedies applicable. Yet, there may be an adverse effect on competition without any coordinated effects, like, for example, in the case of unilateral effects. NRAs should have the opportunity to intervene in order to remedy these competition concerns.

Therefore, in case of tight oligopolies, it may be consistent with the regulatory goals set out in the provisions of Article 8 of the regulatory framework to impose remedies on all undertakings that may contribute to existing or potential sub-competitive outcomes[74] to "[ensure] *that there*

Draft

[73] For example, in the *aggregates* market investigation, discussed in Annex B section 11.4, to remedy concerns about tacit co-ordination, the Competition Authority required transparency measures to restrict publication of market data and prohibit the practice of issuing generic price announcement letters which signalled pricing intentions.
[74] Chapter 6 of the present report sets out criteria to assess tight oligopolies

is no distortion or restriction of competition in the electronic communications sector [and to encourage] *efficient investment in infrastructure*"[75].

Imposing the same obligations on all members of the tight oligopoly simply because they are part of a sub-competitive oligopoly therefore may be an option to consider. However, NRAs should carefully look at the market conditions, especially to distinguish among situations where operators can be deemed to be in equivalent circumstances or not. NRAs may consider, depending on the actual circumstances they face, to promote remedies which are less burdensome than in actual SMP situations. Moreover, lighter remedies may in certain situations be a possible means of encouraging alternative operators to enter the market.

Tackling entry barriers could be a starting point if high entry barriers lead to sub-competitive market outcomes in a tight oligopoly. One of the aims of regulating tight oligopolies should therefore be to ensure access for new entrants at the retail level based on wholesale level remedies. In this regard, NRAs may consider, for example, imposing an obligation to grant access at reasonable request at the wholesale level. Yet, other remedies may still be proportionate depending on the actual circumstances faced by the NRA.

Imposing light remedies on undertakings in a tight oligopoly, may be a good means to move a market characterized by a tight oligopoly towards effective competition.

9 Recommendations to amend the regulatory framework

At the same time that the report on oligopolies is being prepared, BEREC is in the process of carrying out a comprehensive analysis of all the areas of the framework requiring review. Among other topics, BEREC will address issues related to the scope of the framework, as well as the role of OTTs, joint dominance and the growing complexity of the link between retail and wholesale products (including bundles, some of which are also encompassing services which fall outside the definition of electronic communications services and the scope of universal service).

The recommendations included in this chapter are not intended to preclude conclusions of this comprehensive analysis in progress and should be considered as one of the inputs for the review of the regulatory framework regarding the regulatory treatment of oligopolies.

Taking into account issues raised in previous chapters, this initial input can be classified into two areas: regulatory treatment of joint dominance and regulatory treatment of tight oligopolies.

9.1 Regulatory treatment of joint dominance

BEREC considers that, given the current framework, the concept of joint dominance is still valid and relevant to address competition issues in oligopolies where coordinated effects are the main area of concern, and no significant changes need be made in the regulatory treatment of joint dominance. As it is defined now in the existing regulatory framework and the guidelines, joint SMP for telecommunications regulatory purposes is aligned with principles applied in *ex post* competition law, providing a solid and grounded base, as well as regulatory certainty for operators.

[75] Article 8(2) from the framework directive

Draft

Notwithstanding that, BEREC believes that several issues are worth considering when revising the existing regulatory framework. In the past, identification of joint dominance has been unusual and in the scope of very specific markets, but in a context of evolution from single SMP positions to oligopolistic market settings, it is likely that joint dominance concerns will become more likely to appear and it is advisable to clarify the regulatory tools to be applied, provide guidance to NRAs, assuring at the same time adequate regulatory certainty.

The criteria to be used by NRAs when assessing joint SMP are stated in Annex II of the Framework Directive. These refer to undertakings operating in a market which is characterised by a lack of effective competition and in which no single undertaking has significant market power, and which exhibits some uncompetitive market characteristics.[76]

BEREC considers that the information provided by presenting different competition cases in sections 3.1.2.1 and 3.1.3.3 should be consolidated and the list of characteristics included in paragraph 97 should be explained in more detail. This would help NRAs in the assessment of joint-SMP positions, as it is complex to go through different cases and get relevant conclusions on how to assess joint dominance.

In line with this, BEREC considers that the contents of chapter 6 of this document, which takes into account the analysis on joint SMP notified by NRAs under article 7 and the corresponding assessment carried out by the EC, are a good reference to develop section 3.1.2.2 of the existing guidelines in more detail. In this regard, BEREC is of the view that the SMP guidelines should be extended to explain in more detail how to assess each key factor to be taken into account when identifying oligopolistic market structures that may be conducive to coordinated effects.

In short, BEREC recommends focusing section 3.1.2 (*Collective Dominance*) of the SMP guidelines on more detailed guidance based on the structure of chapter 6 and use the specific cases in sections 3.1.2.1 (*The jurisprudence of the General Court/Court of Justice*) and 3.1.2.2 (*The Commission's decision-making practice and Annex II of the Framework Directive*) as a source for providing general guidance on the application of the relevant criteria.

Finally, there are some issues where more specific guidance would be needed, in order to ensure alignment with the approach set out in Chapter 6. These include:

- Detailed consideration of the possible differences in the burden of the proof set in the European regulation when the market to be analysed is subject or not to regulation at the moment of conducting the market analysis.

- In past notifications on joint dominance where the focal point was related to wholesale access, the EC has focused its assessment and comments on the existence of pure denial of access (typically, not providing wholesale access to MVNOs). BEREC considers that it should be made clear that even when wholesale access is provided to access seekers, NRAs assessment should also include a detailed analysis of other potential focal points within the terms for access.

[76] Namely: low elasticity of demand, similar market shares, high legal or economic barriers to entry, vertical integration with collective refusal to supply, lack of countervailing buyer power, and lack of potential competition. As stated in the annex, this list of characteristics is an indicative list and not exhaustive

9.2 Regulatory treatment of tight oligopolies

As stated in chapter 7, there may be difficulties in establishing significant market power under the existing regulatory framework regarding competition in market structures where although coordinated effects may not be present, there are still impediments to effective competition that cannot be addressed by existing *ex ante* regulatory measures.

These market structures, labelled in this report as tight oligopolies, are *inter alia* characterized by high barriers to entry, product differentiation, high switching costs and/or other factors such as capacity constraints and/or low elasticity of demand.

Regulatory intervention in tight oligopoly scenarios may be limited under the existing framework, and any remedy that may have been imposed for a previous single SMP position cannot be maintained where the single SMP position no longer holds.

The solution to fill this gap in *ex ante* regulation is not as straightforward as to directly transpose the M&A legislation to the *ex ante* regulatory framework. As stated in the previous chapter, the focus of the prospective analysis for *ex ante* regulation is different. Due to the fact that *ex ante* remedies were previously imposed and a (“modified”) greenfield approach must be applied.

More work is needed to set a clear threshold to trigger regulatory action. So, any extension of the *ex ante* regulatory framework is challenging and a careful analysis should be done to ensure regulatory certainty, providing, at the same time, enough room for NRAs to address issues of non-effective competition.

Thus, further analysis should be done to adapt the regulatory framework in an adequate way, taking into account regulatory certainty, while at the same time providing an adequate standard of proof for a trigger in case of tight oligopolies where no SMP can be found and enabling *ex ante* regulatory action. BEREC does not currently have a definitive solution to address this gap in the regulatory framework, which has wider effects on other policy objectives. However, BEREC is open to engage in a constructive dialogue with the EU institutions as well as with stakeholders to evaluate how potential competition problems arising in tight oligopolies may be tackled.

Draft

10 References

[1] ANACOM, Statement about its concerns of joint dominance in a document informing the public about the revision of market 15 of the 2003 Recommendation, http://www.anacom.pt/render.jsp?categoryId=159942#.VQ_IbJX9mHs (2005)

[2] BEREC (2014), BoR (14) 71 *BEREC Opinion on the Commission Recommendation on relevant product and service markets susceptible to ex ante regulation,* http://berec.europa.eu/eng/document_register/subject_matter/berec/opinions/4438-berec-opinion-on-the-commission-recommendation-on-relevant-product-and-service-markets-susceptible-to-ex-ante-regulation

[3] Canoy, M. and Onderstal, S. (2003), *Tight Oligopolies In Search of Proportionate Remedies*, CPB Document, No. 29/2003. http://www.cpb.nl/sites/default/files/publicaties/download/tight-oligopolies-search-proportionate-remedies.pdf

[4] Committee on Industry, Research and Energy of the European Parliament (2013), Report on implementation of the regulatory framework for electronic communications (A7-0313/2013).

[5] Competition Commission (2012), *Anglo American PLC/Lafarge S.A.*, https://assets.digital.cabinet-office.gov.uk/media/53304a34e5274a22680003b1/Final_report__PDF__1.0_Mb_.pdf

[6] Competition Commission (2012), *Aggregates, cement and ready-mix concrete market investigation*, https://assets.digital.cabinet-office.gov.uk/media/5329df9ae5274a226800035f/140114_aggregates_final_report.pdf

[7] Competition Policy Newsletter (2005) – "First collective dominance cases under the European consultation mechanism on electronic communications" , Number 2 Summer 2005

[8] Court of Justice, Case 27/76 United Brands v. Commission, 14 February 1978. (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:61976CJ0027&from=NL)

[9] Europe Economics (2001)*, Study on Assessment Criteria for Distinguishing between Competitive and Dominant Oligopolies in Merger Control,* Final Report for the European Commission Enterprise Directorate General, May 2001. http://ec.europa.eu/enterprise/newsroom/cf/itemdetail.cfm?displayType=library&tpa_id=203&item_id=2978

[10] European Commission (2007), *Sony/BMG,* COMP/M.3333, http://ec.europa.eu/competition/mergers/cases/decisions/m3333_20071003_590_en.pdf

[11] European Commission (2008), *ABF/GBI*, COMP/M.4980, http://ec.europa.eu/competition/mergers/cases/decisions/m4980_20080923_20600_en.pdf

Draft

[12] European Commission (2014), *HOLCIM/CEMEX West*, COMP/M.7009, http://ec.europa.eu/competition/mergers/cases/decisions/m7009_20140605_20682_3836837_EN.pdf

[13] European Commission (2014), *CEMEX/HOLCIM Assets*, COMP/M.7054, http://ec.europa.eu/competition/mergers/cases/decisions/m7054_20140909_20682_4001455_EN.pdf

[14] European Commission, Guidelines on the assessment of horizontal mergers under the Council regulation on the control of concentrations between undertakings, OJ C31/03, 05.02.2004

[15] European Commission, Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services, OJ C165/03, 11.07.2002.

[16] European Commission, Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings (the EC merger regulation), OJ L24, 29.01.2004.

[17] European Commission, White Paper – Towards more effective EU merger control, COM (2014) 449 final

[18] General Court, Case T-78/89 SIV v. Commission, 10 March 1992. (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:61989TJ0068&from=EN)

[19] General Court, Case T-102/96 Gencor Ltd v. Commission, 25 March 1999. (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:61996TJ0102&from=EN)

[20] General Court, Joint Cases C-395/96 and C-396/96, Compagnie Maritime Belge Transports, Compagnie Maritime Belge SA (C-395/96 P). March, 2000. (http://curia.europa.eu/juris/showPdf.jsf?text=&docid=45048&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=406216)

[21] General Court, Case T-342/99 Airtours v. Commission. June 2002. (http://curia.europa.eu/juris/showPdf.jsf?text=&docid=47383&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=185503=)

[22] General Court, Case T-464/04 Impala v. Commission. July, 2006. (http://curia.europa.eu/juris/showPdf.jsf?text=&docid=56489&pageIndex=0&doclang=EN&mode=req&dir=&occ=first&part=1&cid=185762)

[23] Ivaldi, M. Jullien, B. Rey, P. Seabright, P. Tirole, J. (2003), The Economics of Unilateral Effects, Interim Report for DG Competition, European Commission

[24] Motta, M. (2004), *Competition Policy: Theory and Practice*, Cambridge University Press

Draft

[25] OECD (2013), Wireless Market Structures and Network Sharing, (OECD Digital Economy Papers, No. 243, OECD Publishing, http://dx.doi.org/10.1787/5jxt46dzl9r2-en)

[26] OLG Frankfurt am Mein, 11 U 37/09, 21 December 2010 (http://ec.europa.eu/competition/elojade/antitrust/nationalcourts/).

[27] OPTA (2010), *Analyse mobiele communicatiemarkten,* Advice to the Ministry of Economic Affairs (2010), https://www.acm.nl/nl/publicaties/publicatie/10113/Advies-en-analyse-mobiele-communicatiemarkten/

[28] OPTA (2006), *Is two enough?*, Economic Policy Note #6, https://www.acm.nl/nl/publicaties/publicatie/9113/Economic-Policy-Note-6-Is-two-enough/

[29] Tirole, J. (1988), The Theory of Industrial Organization, MIT Press

Draft

11 Annex A: Detailed presentation of the relevant joint dominance cases analysed by NRAs

11.1 The market for access and call origination on public mobile telephone networks

Concerning the in depth analysis of the relevant cases, BEREC summarises the most important information presented by the NRAs and the Commission regarding the identification of joint dominance in the mobile market.

11.1.1 COMREG's case – IE/2004/0121

ComReg, the Irish regulator, identified two mobile operators, Vodafone and O2, as being jointly dominant in 2004.

Relevant market characteristics analysed by ComReg in view of assessing joint dominance
In view of assessing the presumed joint dominance in the Irish market for wholesale access and call origination on public mobile telephone networks, ComReg analysed both structural characteristics, as well as behavioural elements. Regarding the *structural characteristics* conducive to coordinated behaviour between the two main operators in the market, ComReg took account of: ▪ the market concentration – the first two operators held jointly 94% market share in terms of subscribers (97% in terms of revenue), while the presence of a third operator in the market was not expected to alter the high degree of concentration. Also, there was a forth operator present in the Irish market at the time of the review, but its services were launched in September 2003 and, therefore, it had no impact on the market in the analysed period; ▪ the incentives to coordinate – ComReg considered that there were high incentives for coordination driven by the low number of market players (four), the symmetry present in the case of the two main operators, their repeated interactions and the steadily increasing demand. Furthermore, there was a lack of drastic innovation favouring one of the two network operators; ▪ the ability to coordinate (dependent on a simple and transparent focal point) – ComReg identified a focal point with two dimensions, one being price[77] (at retail level) and the other being the denial of access to the network (at wholesale level); ▪ the ability to detect cheating – ComReg explained that cheating was fairly easy to detect in terms of both dimensions of the focal point. On the one hand, price movements could be detected by the system of MMB, while, on the other, the granting of access to upstream wholesale elements would immediately be visible in the market through the appearance of a new services provider; ▪ the enforceability of compliance - ComReg considered that the simple threat of reversion to the normal competitive conduct, by either lowering prices or granting access, represented a serious disciplinary mechanism; ▪ the actual and/or potential market constraints – In this respect, ComReg noted that the existence of a fringe competitor in the market did not pose a threat to Vodafone and O2 and it will not do so in the timeframe of the market review. Furthermore, there are high entry barriers present in the market which negatively affect the level of potential competition. Unlike in other EU countries, MNOs in Ireland at that moment were unlikely to negotiate wholesale access voluntarily.

[77] ComReg argued that Vodafone's and O2's complex tariffs can be made transparent by the method of Minimum Monthly Bills (MMB thereafter), a measure used by operators to monitor rivals' tariffs.

Concerning the *behavioural elements* analysed, for further strengthening the relevant structural market characteristics, ComReg presented evidence that Vodafone and O2 were tacitly colluding. The evidence comprised of data on price trends, absolute price levels, profitability of the two MNOs and the existence of pent up demand as a consequence of the systematic denial of wholesale network access.

Joint dominance - SMP designation

ComReg proposed to designate Vodafone and O2 as being jointly dominant in the relevant market for wholesale access and call origination on public mobile networks in Ireland.

Remedies to be imposed

ComReg proposed the following remedies to be imposed to both the operators which were found to be jointly dominant:

- the obligation to provide network access following reasonable requests by access seekers;
- the non-discrimination obligation;
- the obligation of price control implemented by means of cost orientation;
- the account separation obligation;
- the obligation to implement appropriate accounting systems.

ComReg proposed also to allow a period of time for the dominant operators to meet their obligations concerning access and non-discrimination and only thereafter the other obligations should be implemented.

Commission's comments relevant for joint dominance

Having analysed all the evidence provided by ComReg, including additional information subsequently sent, the Commission had the following comments:

1. **Analysis based on the retail market**: ComReg's analysis was, to a large extent, based on transactions occurring at retail level, as there were no transactions present at the wholesale level at the time of the market review. However, an operator's performance on the retail market does not necessarily mirror its position and conduct on the upstream wholesale market. Furthermore, the EC highlighted that the finding of joint dominance in the wholesale market was not indispensable of the finding of joint dominance in the retail market. Therefore, even if retail market conditions may inform an NRA of the structure of the wholesale market, they need not, in themselves, be conclusive with regard to the finding of dominance at wholesale level.

2. **Fringe competitors**: In the context in which the third operator in the market, even if it had previously concluded a national roaming agreement with O2, was not able to currently attract a large proportion of subscribers, the Commission considered that it might still pose a challenge on the future coordination of Vodafone and O2. Therefore, the behaviour of fringe competitors needed to be closely monitored. Furthermore, even if fringe competitors were not able to exert a competitive constraint at retail level, they may do so at wholesale level.

Conclusions drawn from the Commission's comments

In the light of the evidence presented above, the EC highlighted the link between the retail market and the wholesale market, which needs to be thoroughly analysed by the NRA. Also, should an NRA have all the concluding, non-equivocal evidence at disposal, it must assess the behaviour of the jointly dominant entities at both retail and wholesale level, from a forward looking perspective.

In ComReg's particular case, for example, in the context of the first comment, the Commission notes that, given the information available, it has taken account of the level of competition at retail level, as well as of the effects for consumers, while, in case of the second comment, it notes that ComReg has not exceeded its margins of discretion in concluding, at that stage, that the market developments in the case of fringe competitors were too uncertain to affect the finding of joint dominance.

Draft

Even though the Commission agreed with ComReg's main findings in the market for access and call origination on public mobile networks in Ireland, the proposed measures were annulled at a national level by the Electronic Communications Appeal Panel, in December 2005, with the consent of all the parties involved.

The appeal concerning ComReg's decision was brought forward to the Electronic Communications Appeal Panel by all the three established MNOs (Vodafone, O2 and Meteor). The grounds on which ComReg's decision was questioned had to do with the fact that, while the outcome observed in the market was consistent with tacit collusion, it could have been equally consistent with non-cooperative/competitive behaviour by the two operators which were deemed to be jointly dominant (Vodafone and O2).

In this respect, ComReg was expected to have undertaken a detailed quantitative analysis based on which to conclude on the competitiveness of the market. According to the operators, ComReg failed to establish whether or not the market was actually competitive. Particularly, it failed to establish that prices were above the competitive level and that the market shares were similar enough for tacit collusion not to be questionable[78]. Furthermore, concerning the failure to conclude wholesale network access agreements with potential MVNOs, the lack of existence of such agreements could have also been attributed to the fact that it was not in the parties' best interest to conclude such agreements, option which was not analysed by the Irish regulator. Other issues which were questioned had to do with the somewhat mixed evidence on prices[79] which has been brought by ComReg as an argument for the fact that mobile phone charges were excessive in Ireland, the relatively high average revenue per user when compared to the EU standards (which could have been a consequence of the high usage rather than the high prices), respectively with the fact that the conclusion of the national roaming agreement between O2 and Meteor had, as consequence, an increase in the market shares for Meteor, on Vodafone's expense, resulting, therefore, in a competitive constraint.

After the hearing procedures started, ComReg agreed to the Electronic Communications Appeal Panel annulling the decision.

11.1.2 ARCEP's case – FR/2005/0179

In 2005, ARCEP, the French regulator, identified three mobile network operators as holding a jointly dominant position in the market for access and origination on public mobile networks.

Relevant market characteristics analysed by ARCEP in view of assessing joint dominance

ARCEP was concerned that there is lack of effective competition on the market for wholesale access and origination on public mobile networks in France based on the assessment of the following factors:

- the market structure, which was considered to lead to coordinated behaviour by the three main MNOs, who jointly held close to 100% market share. In this respect, ARCEP noted that a low number of MVNOs were also present, but they were either simply resellers or enhanced service providers. Thus, a high degree of concentration was present in the market;
- the ability to coordinate, motivated by the existence of a common interest in not providing wholesale access to the existing mobile networks. ARCEP explained that there were

[78] Vodafone had, in September 2004, a market share of 54% in terms of subscribers, while O2 only 40%.

[79] International comparisons showed that pre paid services in Ireland were low compared to EU tariffs, while post paid services were above the EU average for certain users' categories.

Draft

incentives not to grant access, as, in the long run, the costs from losing market shares in the retail market would outweigh the benefits of developing the wholesale markets. Therefore, the identified focal point was the denial of access to the network; - the ability to detect cheating – ARCEP considered that, due to the high degree of transparency in the market, it was easy for each established MNO to monitor the potential negotiation process taking place between the other MNO(s) and an access seeker. The French regulator explained that every potential MVNO had incentives to negotiate network access simultaneously with all the three established MNOs in order to gain bargaining power; - the presence of high entry barriers in the market – ARCEP noted that there were high legal barriers in the form of radio spectrum licenses, while economic barriers in terms of potentially sunk network deployment costs were present, as well; - the actual and/or potential market constraints – The market was characterised by lack of countervailing buyer power, which was reflected in the low churn rates and in the high switching costs faced by consumers.
Joint dominance - SMP designation
ARCEP proposed to designate the three established MNOs with joint dominance.
Remedies to be imposed
ARCEP proposed to impose the following remedies to each operator deemed to be jointly dominant: - the obligation to offer wholesale network access; - the agreements between MNOs and MVNOs were bound to follow certain minimum requirements.
Commission's comments relevant for joint dominance
The information available shows that the Commission did not agree with ARCEP's reasoning and arguments presented in the market analysis and envisaged the opening of a Phase II investigation. As a consequence, ARCEP withdrew its notification of the market review.
Conclusions
Since not all the relevant information is available, BEREC can only formulate some preliminary conclusions based on incomplete information. However, it seems that one of the main issues involved in this case was the lack of evidence based on data. The assessment of the competitive scenarios, especially from a forward looking perspective, seemed to have been based on the opinion of the EC more on theoretical/ logical arguments than on actual data from the market. Furthermore, it seems that not all the potential scenarios have been taken into account and, thus, the analysis was not complete. In this respect, it is worth mentioning that the French Competition Authority considered that ARCEP should have analysed also a scenario in which the third MNO had some incentives to deviate from the collusive behaviour. The reason was that, as there was a gap in market shares between the three MNOs (MNO1 – 45%, MNO2 – 35%, MNO3 – 20%), it was possible that MNO3 would grant access to its network, since it had less to lose in the retail market and more to win in the wholesale market, because it experienced overcapacity in its network. However, the NCA recognised that the scenario presented by ARCEP was equally probable, while the final outcome could only be observed *ex post*.

In the end, given that the concerns highlighted in the market analysis persisted, in 2009, when the spectrum assignment was prepared, the mobile licences were designed to include obligations of access in favourable conditions for access seekers.

Draft

11.1.3 CNMC's case – ES/2005/0330

Another case in which three mobile operators were identified as being jointly dominant was the Spanish case notified to the Commission in 2005 by the Spanish regulator CNMC (former CMT).

Relevant market characteristics analysed by CMT in view of assessing joint dominance

CMT's assessment of the competitive conditions prevalent in the market for mobile wholesale access and call origination was based on the assumption that, since no MNO was granting access to its network, the structure of the supply at retail level was relevant for the assessment of the corresponding wholesale market. CMT based its analysis of joint dominance on the following main factors:

- the market structure, which was conducive to coordinated behaviour among the three established MNOs[80]. In this respect, CMT noted that there were only three operators actively present in the market, while their market shares were stable and expected to stay so in the foreseeable future;
- the incentives to coordinate due to the symmetry of the cost structures of the MNOs – CMT noted that the potential differences in the cost structures of the MNOs were not significant. CMT believed that the two market followers had similar cost structures concerning the distribution between fixed and variable costs. Furthermore, taking account of the high levels of profitability already reached by the three MNOs in the retail market and of the high barriers to entry, they had high incentives not to provide access to MVNOs that would threaten their profitable business model;
- the ability to coordinate – CMT identified the denial of wholesale network access to third parties as the focal point. As it pointed out, despite the evidence regarding pent up demand of service providers seeking wholesale access, none of the established MNOs voluntarily granted access on a commercial basis[81]. By denying access, the MNOs managed to keep the high levels of profitability attained in the retail market;
- the ability to detect deviations from the common conduct, due to the transparency in the market – Since the identified focal product was denial of wholesale access, CMT considered that the most credible retaliation would occur at wholesale level, while if actual access was granted, the other established operators could timely adopt the same strategy. However, CMT pointed out that there were other retaliation mechanisms easily detectable at retail level, such as starting of a price war;
- the actual and/or potential market constraints – Concerning the actual market constraints, CMT noted that it can be concluded, due to the evidence from the market - especially the high profitability levels reached by the MNOs in the retail market, that there were no actual market constrains for the three. In a forward looking perspective, Xfera, the fringe competitor, could not challenge the already established behaviour in the market. CMT explained that Xfera held a 3G licence since March 2000 and that it planned to commercially launch its services in March 2006. However, the entry was postponed and CMT was sceptical about Xfera's entry impact. Furthermore, no MVNO would have been interested in concluding an access agreement with a MNO lacking geographical coverage and relying on a national roaming agreement.

Joint dominance - SMP designation

[80] A fourth MNO, Xfera, was not yet active in the market at the time of the review. However, it had concluded a national roaming agreement with Vodafone. But, the agreement had a regulatory backdrop in the sense that a failure to reach an agreement between them would have led to a regulatory intervention, since it was mandatory according to the licences granted to Vodafone and Xfera.

[81] CMT noted that, at the time, access agreements had already been voluntarily negotiated in many EU member states, like UK, Germany, Belgium, Austria, Sweden, Finland, Denmark).

Draft

CMT proposed to designate the three MNO established in the market, Telefónica, Vodafone and Amena, as being jointly dominant.

Remedies to be imposed

The three jointly dominant MNOs were proposed to meet the following obligations:

- the obligation to grant access to their networks on reasonable requests;
- the obligation to charge reasonable prices.

Commission's comments relevant for joint dominance

The Commission had the following relevant comments:

1. **The competitive conditions at retail level**: CMT did not find evidence on joint dominance at retail level, but some deficiencies, such as the high level of prices and their limited evolution, parallel market strategies of the established MNOs and their high level of profitability sustained for a longer period of time. In this view, the Commission reiterated the comment it had in ComReg's case, that in order to find joint dominance in the wholesale market for mobile access and call origination, it was not indispensable to find joint dominance at retail level. In this view, however, CMT had to demonstrate that the retail level of profitability was high enough to motivate the collective refusal of network access. Given that CMT's analysis of the dynamics of the retail market was mainly based on aggregate indicators, the Commission invited CMT to monitor the evolution of the retail prices by market segment and/or customer profiles, for the purpose of a future market review. After analysing all the evidence provided, the Commission acknowledged that the characteristics of the retail market were such as to determine the refusal of network access at the wholesale level.
2. **The focal point**: Given the focal point defined by CMT, the Commission considered it to be transparent and that the non-deviator MNO(s) could easily detect any deviation resulting in the entry of a new competitor at retail level. However, CMT did not explicitly define a focal point at retail level, which could have further supported the finding of the sustainable coordinated outcome at wholesale level.
3. **The retaliation mechanism**: The Commission highlighted that importance of the time effectiveness of implementation of the retaliatory mechanism. Even though the networks of the established MNOs were dimensioned in such a way as to sustain the forecasted traffic, according to CMT, all the MNOs had sufficient spectrum enabling them to rapidly adapt to the traffic flows. However, it appeared that signing an access contract might require negotiation on pricing, commercial and technical terms of supply, which would be time consuming. Concerning a potential retaliatory mechanism at retail level, the Commission explained that a reduction in retail prices or a deviation from the common principles of the 'agreed' commercial strategy would be likely to have a disciplinary effect on the deviating MNO. Thus, the retail mechanisms could be considered as credible tools for retaliation, as well.
4. **Close monitoring of the market and entry of the fourth MNO**: The Commission stressed the need for close monitoring of the market, as any concrete developments in the retail market not linked to the regulatory measures would cast serious doubts on the sustainability of the jointly dominant position.

Conclusions drawn from the Commission's comments

At the stage of the notification, CMT seemed to have raised eloquent arguments for the sustaining of a collusive equilibrium in the market for wholesale mobile access and call origination. However, the Commission seemed to have expected a more in depth analysis of the competitive conditions in the retail market in Spain. In this respect, it is worth mentioning that the Commission itself states that the additional information provided by CMT, in the form of price trends, profitability measures,

Draft

detailed description of retaliatory mechanisms, as well as concerning the unsatisfactory level of wholesale demand) was crucial in its assessment of CMT's notification.

CMT's market analysis was adopted, the draft notification having been supplemented with the additional information provided to the Commission in the replies to the request for information.

11.1.4 MCA's case – MT/2006/0443

In 2006, the Maltese regulator notified its market review of the wholesale market for access and origination on public mobile networks to the Commission.

Relevant market characteristics analysed by MCA in view of assessing joint dominance

The main elements analysed by MCA in the context of joint dominance were the following:

- the market concentration – There were only two operators active in the Maltese market, at the time and, even though there was a certain gap between their market shares, it was diminishing in time. Furthermore, the Maltese market for retail mobile services was still expanding, albeit slowly, hardly leaving space for a new entrant;
- the incentives to coordinate – MCA explained that the incentives for the two MNOs to coordinate were high due to the homogeneity of the products offered and the similar cost structures due to the similar network infrastructures – in particular, a fairly equal number of base stations and controllers. Furthermore, none of the operators benefited from a technological advance, while the impact of the use of the 3G technology would be limited in the timeframe of the review. Another argument sustaining the presence of incentives to coordinate was the similarity of the tariffs charged by the two operators, which were also relatively high compared to other EU countries;
- the ability to coordinate (dependent on a simple and transparent focal point) – MCA identified the denial of wholesale network access to third parties as the focal point of coordination;
- the ability to detect cheating – According to MCA, any deviation from the focal point would be immediately visible through the entrance of a new provider in the retail market. Also, MCA added that, at retail level, the common policy would be not to decrease prices, which were transparent for residential customers;
- the enforceability of compliance - MCA explained that the retaliatory mechanism in the event of deviation from the common policy would be for the non-deviating MNO to open its network to other MVNO(s). In MCA's view, the first mover advantage of the presumed MVNO active through the network of the deviating MNO would not prevent it to effectively compete with other MVNO(s) hosted on other MNOs' network(s);
- the actual and/or potential market constraints – Concerning the actual and potential market constraints, MCA noted that the market was featuring high entry barriers due to the spectrum scarcity and to the high up-front costs. However, there was a third operator which requested frequencies for the deployment of a 3G network. Furthermore, MCA presented evidence that there was pent up demand present in Malta and made the point that countervailing buyer power did not constitute a credible competitive constraint neither at wholesale, nor at retail level.

Joint dominance - SMP designation

MCA identified the two established MNOs (Vodafone and Go Mobile, the brand of MobIsle) as being jointly dominant in the relevant market for wholesale access and call origination on public mobile networks in Malta.

Remedies to be imposed

Draft

The Maltese regulator proposed to impose the following remedies on both operators deemed to be jointly dominant:

- the obligation to negotiate access to network infrastructures and use of specific network facilities, including national roaming and MVNO access obligations, in good faith and at reasonable conditions;
- the obligation of non-discrimination;
- the obligation of transparency;
- the cost accounting and price control obligations;
- the accounting separation obligation.

Commission's comments relevant for joint dominance

Having analysed MCA's notification, the Commission had the following comments:

1. **The competitive conditions at retail level**: The Commission noted that even if it did not find joint dominance at retail level, MCA presented evidence concerning the two MNOs' incentives to limit competition in the retail market. The evidence was based on the high level of prices, when compared to other EU countries, the price stability since 2004, respectively the high levels of profitability of the two MNOs. In this respect, the Commission stressed again the fact that a finding of joint dominance at retail level is not indispensable in order to find a joint dominance in the wholesale market. Also, since MCA pointed that new cheap on-net tariffs were recently offered in the market, their impact on the profitability of the operators being too early to assess, the Commission explained that the Maltese regulator should monitor closely the developments in the market. Furthermore, the recently introduced number portability (March 2006) could have a significant impact on the consumers' ability to change providers.
2. **The existence of pent up demand**: Given the evidence provided by MCA with respect to the existence of pent up demand, the Commission asked the NRA to further substantiate the point in its final measures, with reference to the concrete demand formulated and a description of the response by MNOs.
3. **The retaliatory mechanism**: MCA explained that since both the established MNOs disposed of excess capacities, two mechanisms were present at the wholesale level in case of a deviation: on the one hand, the non-deviating MNO could have attracted the MVNO hosted by the deviating MNO in its network or, on the other hand, it could have hosted another MVNO. In the first case, the Commission highlighted that the option was credible only if the hosting agreement between the deviating MNO and its MVNO contained no exclusivity clauses and that transaction costs, including negotiation costs, should be also taken into account. In the case of the second option, the Commission recalled that according to MCA the conclusion of a MVNO agreement took 6 months and, therefore, the MNO could benefit from a first mover advantage. Additionally, the Commission explained that a retaliatory mechanism was present at retail level, as well, in the form of a potential price decrease. For example, if the non-deviating MNO decreased its prices as a response to the deviation of the other MNO, the MVNO hosted by the deviating MNO would be in a position of decreasing its prices even further in order to attract customers. Under these circumstances, market shares would remain stable, albeit at lower prices. Thus, given that the aforementioned market outcome would lower the profitability levels of the MNOs, the retaliatory mechanism at retail level constituted a credible incentive to act according to the common policy.
4. **Market entry of a third MNO**: Given that a third operator requested spectrum resources in Malta, the Commission requested the MCA to closely monitor any concrete evidence of developments in the market and conduct another market review, should it be the case.

Conclusions drawn from the Commission's comments

Draft

In the case of MCA, as in a couple of other previously mentioned cases, the Commission took particular interest in the link between the retail and the wholesale markets, especially with respect to the retaliatory mechanisms present. Therefore, it seemed that the retaliatory mechanism at retail level played an important role in the ability of the NRA to prove existence of joint dominance. Furthermore, the Commission was particularly interested in the proof regarding the pent up demand.

Taking utmost account of the Commission's comments, MCA adopted the draft measures, as notified.

BEREC notes that, starting in December 2007, when the adoption of a new Recommendation concerning the relevant markets susceptible to *ex ante* regulation took place, the wholesale market for access and call origination on public mobile networks was removed from the list of relevant markets. Therefore, all the NRAs that considered this market still susceptible to *ex ante* regulation had to conduct the three criteria test in their market reviews.

11.1.5 AKOS' case – SI/2008/0806

In 2008, AKOS (former APEK), the Slovenian regulator, identified two of the four MNOs present in the market for access and call origination as being jointly dominant.

<table>
<tr><th>Relevant market characteristics analysed by APEK in view of assessing joint dominance</th></tr>
<tr><td>APEK based its market review of the competitive conditions in the wholesale market for access and call origination on public mobile networks in Slovenia, in the view of establishing a jointly dominant position held by the main two mobile operators, taking account of the following factors:
▪ the market concentration – APEK presented relevant data concerning the high cumulated market share attained by the first two MNOs (Mobitel and Si.mobil) in the retail market for mobile call services (89% in terms of subscribers), as well as the tendency of the respective market shares to converge. Beside the two main MNOs, there were other two MNOs present in the market (which jointly held 3.5% of the relevant market share) and two resellers that used Mobitel's infrastructure. However, the degree of market concentration was high and stable;
▪ the incentives to coordinate – APEK noted that there were relatively strong incentives to coordinate due to the high entry barriers present in the market, the lack of countervailing buyer power, respectively the similarity of the cost structures;
▪ the ability to coordinate – APEK argued that there was relatively easy for the two MNOs to coordinate their behaviour with respect to the collective refusal to supply national roaming services, which was the identified focal point. Furthermore, the specific circumstances in the Slovenian market showed that there was evidence that access seekers had already contacted both established operators in view of negotiations on national roaming agreements, but the negotiations failed;
▪ the ability to detect cheating – Closely connected to the transparency of the analysed market, APEK considered that although the wholesale access price offered by the network operator was confidential as such, it could have been revealed during the negotiation process, if access seekers conducted parallel negotiations with the established MNOs;
▪ the enforceability of compliance – According to APEK, coordination was sustainable since any deviation from the commonly established conduct would mean retaliation on the side of the non-deviating MNO, at wholesale and/or retail level. Concerning the fact that there were two resellers which used Mobitel's infrastructure already present in the market, APEK</td></tr>
</table>

explained that, since Mobitel was already regulated (which was also known by the other main MNO), it would never open its network to access on a commercial basis.

Joint dominance - SMP designation

APEK proposed to identify two (Mobitel and Si.mobil) of the four established MNOs as being jointly dominant in the relevant market for wholesale access and call origination on public mobile networks in Slovenia.

Remedies to be imposed

The main remedies envisaged were, in the case of both operators deemed to be jointly dominant:

- the obligation to provide access to and use of certain network elements and associated facilities in the case of access seekers;
- the obligation of non-discrimination;
- the obligation of transparency;
- the obligations of price control and cost accounting.

Commission's comments relevant for joint dominance

After having thoroughly analysed APEK's notification, as well as the additional evidence provided in the answers to the two requests for information, the Commission expressed its serious doubts concerning the compatibility of the notified draft measure with the Community law. The expressed serious doubts were with respect to the sustaining evidence for the incentives to coordinate, the ability and incentives not to deviate from the coordinated outcome, as well as for the presence of rents to be protected.

1. **Insufficient evidence to support APEK's conclusion regarding joint dominance in the market**: The Commission explicitly stated that it expected APEK to analyse the following elements, which it did not:
    - the existence of pent up demand, in the view of the fact that where there is no demand for access, there cannot be any collective denial of access;
    - the role of fringe competitors, from the perspective that maverick operators which prove capable of breaking the collusive equilibrium put into question the joint dominance finding;
    - in case national roaming agreements were already signed absent regulation, the collective denial of access had little credibility;
    - given that joint dominance need not be established at retail level, competitive conditions at retail level will, nevertheless, inform the NRA about the state of competition at wholesale level.

Coming to particulars concerning APEK's assessment, the Commission is not convinced about:

- the retail price competition – APEK, on the one hand, suggested that business strategies of new entrants/ the other smaller MNOs had an impact on the prices of the two main MNOs, but, on the other, the data concerning the evolution of the ARPM suggested that prices were rather stable;
- the level of profitability – the data on the ROCE, being an important indicator of the rents to be protected by the two MNOs and, therefore, of the level of incentives to coordinate, were not considered excessively high by the Commission, when compared to the situation in other EU countries. Accordingly, APEK failed to demonstrate that profits were generated above the competitive level in a stable manner, over a certain period of time;
- the retaliation mechanism – the Commission noted that it was difficult to draw clear conclusions regarding the future behaviour of the two established MNOs solely on the basis of past retail price movements, in case a price war was started;
- the individual incentives to refuse access – the Commission explained that, in its view, given that Mobitel was under regulatory obligations concerning wholesale access, the other MNO

Draft

had also incentives to grant access on a commercial basis, in order to generate wholesale revenues. As a consequence, the fact that no MVNO succeeded in concluding an agreement with the respective MNO might have actually meant that there were individual incentives to refuse access.
Conclusions drawn from the Commission's comments
BEREC considers this case to be of particular interest, in the view of the lessons learnt, for several reasons. First, it is one of the few cases where the Commission explicitly states which its unfulfilled expectations were regarding the factors to be taken into account for a positive finding of joint dominance. Second, the Slovenian case has some interesting specificities that ultimately made the Commission write a serious doubts letter. In this respect, it should be highlighted that according to the previously notified market review of the wholesale market for mobile access and call origination, Mobitel was designated as holding individual SMP in 2005. As a consequence, at the time, there was a demand for wholesale access services which was actually satisfied, as indicated by the supply of these services by Mobitel. Therefore, even if the APEK's analysis was conducted under the 'absent regulation' assumption, while the demand of wholesale access would be expected to stay the same, the reactions of the supply were unclear. Third, in its reasoning, the Commission also builds up certain scenarios which were not taken into account by APEK, but which are informative about the type of analysis expected at the notification stage.

Under the aforementioned circumstances, APEK withdrew its notification and conducted a new market review in 2009, under case SI/2009/0913. In contrast to the 2008 market review, with respect to the SMP identification, APEK proposed to identify Mobitel as holding individual SMP in the relevant market. It showed that later in depth research revealed the fact that the mobile networks of Mobitel and of the market follower were not comparable in terms of their capacity to provide wholesale mobile access and call origination services to third parties. Accordingly, the other MNO would require a large and disproportionate investment both in its core and access networks to increase capacity to meet any possible wholesale demand and, respectively, in technical equipment and software tools to enable it to provide third party access. Therefore, in the light of the new information, the fact that the respective MNO did not grant access to its network was attributable to capacity constraints and not to competition foreclosure.

Concerning the Commission's comments with respect to the new proposal by APEK, it asked the regulator to distinguish more clearly in its final measures between the three criteria test and the SMP assessment. Also, it invited APEK to further substantiate its new findings with more evidence in the final document. Other comments of the Commission referred to the close monitoring of the market developments with a view to promoting effective infrastructure competition and investment and to the notification requirements as to the price control obligation.

11.2 The market for broadcasting transmission services

Another market which has been identified by some NRAs as a market where joint dominance was present was the market for the provision of broadcasting transmission services. Two NRAs identified joint dominance in the market 18/2003. In one of the cases the draft measures were adopted as proposed, while, in the other, the market review was withdrawn.

Draft

11.2.1 OFCOM's case – UK/2004/0111

The British regulator conducted the first review of the market for broadcasting transmission services in 2004, the notification of Ofcom's conclusions having been done at the end of the year. However, this case is somewhat special in that Ofcom actually presented the draft measures concerning the market for broadcasting transmission services to the Commission in two instances: the first time the notification included both draft measures concerning access to masts and sites and, respectively, to managed transmission services, while, the second time, given that the Commission has certain concerns regarding Ofcom's analysis of the managed transmission services, the draft measures referred solely to access to masts and sites. Therefore, what is relevant for the current BEREC report is Ofcom's first notification, as the markets on which Ofcom proposed the identification of joint dominance were the markets relating to managed transmission services. On the other hand, the Commission's assessment letter made reference only to the final document. However, BEREC presents some relevant pieces of information in the table below.

<table>
<tr><th>Relevant proposed market definitions</th></tr>
<tr><td>The relevant proposed market definitions were the following:
the market for the provision of national analogue and/or digital terrestrial broadcast managed transmission services;
the market for the provision of regional, metropolitan and local analogue and/or digital terrestrial broadcast managed transmission services.
The geographic dimension of the product markets was national.</td></tr>
<tr><th>Relevant market characteristics analysed by Ofcom in view of assessing joint dominance</th></tr>
<tr><td>Ofcom focused its analysis on:
the market concentration – There were only two established operators active in the market, featuring similar market shares.
the incentives to coordinate – Ofcom argued that the identified relevant market was a mature market, with high entry barriers, providing high incentives to coordinate for the two operators. The product was homogenous, the operators had similar cost structures.
the ability to detect cheating – Ofcom explained that the market was fairly transparent (a statement which was challenged by the Commission later on). In this respect, the British regulator's view was that it was more relevant to discuss transparency with respect to the degree of aggression with which firms competed for each other's legacy customers, which Ofcom did not find evidence for. Furthermore, since the two operators shared their masts and sites for the scope of providing national services, a certain degree of each other's costs was present.
the enforceability of compliance – Ofcom noted that there was scope for retaliation in the event of any deviation from the coordinated outcome (also challenged by the Commission). In this view, it highlighted that, even if the market players were involved in long-term contracts, the next round of transmission contracts to cover the digital switchover process were likely to be agreed at the same time, giving the non-deviating operator the possibility to retaliate.
the actual and/or potential market competition – Due to the specificity of the market concerning the long-term contractual relationships present (at least 10 years), the scope of actual and/or potential market competition was limited. Also, due to the high barriers present in the market, which were further strengthened by the digital switchover, Ofcom noted that</td></tr>
</table>

Draft

the digital switchover further reduced the potential for new entrants and enforced the position already held in the market by them. Furthermore, there was evidence on the lack of countervailing buyer power of the broadcasters.
Joint dominance - SMP designation
Ofcom proposed to identify two operators (Crown Castle and National Telecommunications Limited) as being jointly dominant in the relevant market for national terrestrial managed transmission services, while the relevant market for regional, metropolitan and local terrestrial broadcast managed transmission services was found to be competitive.
Remedies to be imposed
The main remedies envisaged were, in the case of all operators deemed to be jointly dominant: ▪ the obligation to provide access to and use of certain network elements and associated facilities on reasonable requests; ▪ the obligation of non-discrimination; ▪ the obligations of cost-orientation of tariffs.
Conclusions drawn from the discussion with the Commission
The preliminary conclusion of the Commission regarding Ofcom's findings of joint dominance was that if one were to look at the functioning of the managed transmission services in practice, the finding of joint dominance was questionable. It considered that Ofcom neither provided sufficient evidence that the two operators had the possibility and incentive not to compete amongst each other, nor that such collusion was sustainable (in the view of existence of an effective retaliatory mechanism). First, it seemed that Ofcom failed to establish a focal point on which the two operators were likely to collude. For example, as contracts in the managed transmission services market were generally awarded through single round bidding procedures, prices and other contractual terms were not transparent at all, which made collusion difficult. Second, another point raised by the Commission concerned the frequency of the interaction between the respective operators. The Commission basically argued that the two operators proposed for joint dominance featured infrequent interaction, playing a finite game (while economic theory shows that collusion is not sustainable in finite games). In this respect, the Commission highlighted that TV broadcasting contracts were awarded by bidding, while bidding procedures typically take place with low frequencies (the contracts had a duration of at least 10 years). Moreover, since the timeframe of the bidding processes is typically known in advance, the retaliatory mechanism did not seem credible under the aforementioned circumstances.

In the end, as previously briefly mentioned, Ofcom decided to withdraw the draft measures relating to managed transmission services and to revise them, taking account of the issues raised by the Commission.

11.2.2 AGCOM's case – IT/2006/0424

In 2007, AGCOM notified the first review of the market for broadcasting transmission services delivering broadcasting content to end users in Italy. The summary of the most important elements of the case is presented in the table below. Concerning remedies, AGCOM did not notify the specific remedies under this case, but later on, under case IT/2007/0729. Also, another specificity of this case was that the time horizon of the market review was solely of 18 months (up to the end of 2007).

Draft

Relevant proposed market definitions
AGCOM, after having sub-divided the market for wholesale broadcasting transmission services in 7 relevant markets which had the potential to be susceptible to *ex ante* regulation, identified solely the market for analogue terrestrial television broadcasting services as a market where dominance was present.
Relevant market characteristics analysed by AGCOM in view of assessing joint dominance
In its draft notification, AGCOM analysed the following factors: ▪ the market concentration – Even though there were six operators active in the market for analogue broadcasting services, three of them were considered by AGCOM to be the main operators, while the cumulated market shares of the first two amounted to 82%. Therefore, the market concentration was considered to be high. ▪ the incentives to coordinate – As AGCOM briefly mentioned, there existed incentives to coordinate for the two operators considered, stemming from the same cost structures and the offering of the same products. ▪ the ability to coordinate – Even though not explicitly, AGCOM seemed to have identified the denial of access to part of the installations and already held frequencies for third parties in the view of provision of retail analogue broadcast transmission services. ▪ the ability to detect cheating – AGCOM noted that the ability to detect cheating was directly linked to the transparency in the market. In this respect, in AGCOM's view, in a fully vertically integrated market (where there were no price strategies), transparency derived from the absence of innovating strategies in investments and commercial offers, having also to do with the analogue broadcasting switch-off. ▪ the enforceability of compliance – As for the sustainability of the common conduct over time, AGCOM argued that the high amount of frequencies held by the two respective operators came from a parallel conduct aimed at foreclosing the market. Given the circumstances, none of the operators had incentives to deviate from such a profitable behaviour. Furthermore, AGCOM pointed out that retaliation was also possible in the content and advertising market. For example, it could be assumed that potential reductions in advertising slot pricing, aiming for an increase in sales volume, would result in counterproductive effects for the deviating operators, since both of the operators have previously reached near saturation of their advertising space (which, anyway, was limited use to regulatory constraints). ▪ the actual and/or potential market competition – AGCOM explained that the entry barriers were high as a consequence of the future digital switchover, the scarcity of the spectrum, the legal barriers present in Italy – the so-called non-issuing licences (which had to do with the fact that certain facilities for acquiring channels were initially in place, while at the moment of the market review they were not available anymore, should new similar licences be awarded) and, respectively, of the fact that the market power in the upstream market could easily be leveraged to the retail market, since the wholesale services were mainly self-supplied. AGCOM highlighted that, in order to gain advertising revenues, a new operator needed coverage, which was not possible to attain under the market conditions at the time. Furthermore, the potential new entrant could not reach the level of revenue necessary to invest in its own infrastructure.
Joint dominance - SMP designation
AGCOM proposed to designate the two main operators (RAI and RTI) in the market for analogue broadcasting services as being jointly dominant.
Commission's comments relevant for joint dominance

Draft

After having analysed the information provided by AGCOM, the Commission had the following comments:

1. **Demand for analogue TV broadcasting transmission services**: The Commission highlighted the fact that in the absence of current or past demand for analogue TV broadcasting transmission services, any claimed tacit coordination could be exercised by the potential demand. However, in the Commission's view, AGCOM did not assess the existence of such potential demand and was invited to include such an assessment in the final draft measures.
2. **Basis for calculation of the market shares**: Regarding AGCOM's computation of the market shares (with respect to the absolute number of transmitters), the Commission noted that AGCOM did not use the most relevant measure for market power. Furthermore, the Commission noted that AGCOM used the share of advertising revenue, as a proxy. In this respect, the Commission considered that AGCOM should have provided stronger evidence on why the revenues from the advertising market were considered an appropriate indication of the market power on the upstream market, since the advertising market was dependent on the audience, through the attractiveness of the programs broadcasted (this factor was exogenous from the market review perspective). Finally, since the coverage related information was considered one of the most appropriate indicators and AGCOM did not present fully reliable information regarding the parameter, the Commission requested AGCOM to continue monitoring the coverage of the operators present in the market and to notify again the analysis, should it be the case.
3. **Ownership of facilities (masts, sites and antennas)**: Since not all the transmission facilities used by the service providers were owned by them according to the Commission's understanding, AGCOM should clarify to which services providers used facilities that they did not own and assess the extent to which new entrants would have the possibility to rent those facilities.
4. **Objective of collusion**: Considering the vertical integration of the two operators, revenues from third parties were collected in the downstream advertising market, at the time. However, no evidence on the rents achieved in the advertising market have been presented. Therefore, AGCOM should define the boundaries of the advertising market and assess the level of rents and development of price levels in its final draft document.

Conclusions drawn from the Commission's comments

Overall, the Commission seems to have agreed with the general conclusions presented by AGCOM, but specifically requested the Italian regulator to substantiate its reasoning with evidence. Also, AGCOM's approach to the assessment of joint dominance seems to have been a checklist approach following the SMP guidelines. However, from the Commission's standpoint, AGCOM did not provide enough reasoning attributable to the specific national circumstances in Italy, in all cases. Furthermore, even if solely on a speculative basis, it seems that also the fact that the time horizon of the review was short (the digital switchover was expected to take place thereafter) might have played a role in the Commission's acceptance of the adoption.

Having taken utmost account of the Commission's comments and amended the final draft notification correspondingly, AGCOM adopted the draft measures.

11.3 The market for wholesale broadband access

The other market where jointly dominant situations were identified is the market for wholesale broadband access, market 5/2007.

11.3.1 MCA's case – MT/2007/0563

The only NRA having identified joint dominance in its market reviews in the wholesale market for broadband access was MCA, the Maltese regulator. However, the Commission had serious doubts concerning the compatibility of the notified draft measures with the Community law. As a consequence, MCA withdrew its draft measure. The specificities of the case are presented in the table below.

Relevant proposed market definition

MCA proposed that the relevant market for wholesale broadband access in Malta excluded simple resale products, included wholesale products provided over all available broadband platforms (cable, as well) and self-supplied services.

Relevant market characteristics analysed by MCA in view of assessing joint dominance

In its draft notification, MCA made reference to the following elements:

- the market concentration – There were just two operators present in the market for the provision of wholesale broadband access services at the time. Thus, the degree of market concentration was very high.
- the incentives to coordinate – MCA argued that there were several characteristics which incentivised the operators to coordinate their behaviour, like: the homogeneity of the cable and DSL products[82] (in terms of functionality and prices at both retail and wholesale level), the similarity of the market shares of the two operators (one operating over the copper infrastructure, while the other on the cable network), the similarity in cost structures of the two operators, the lack of technological innovation and maturity of the technology and the reduced scope for price competition (owing notably to the ability to replicate products and the availability of price information).
- the ability to coordinate – There existed ability to coordinate in the Maltese regulator's view with respect to the identified focal point, which was the denial of access to third parties.
- the ability to detect cheating – According to MCA, it was not difficult to detect any deviation from the commonly 'agreed' behaviour due to the transparency in the market.
- the enforceability of compliance – MCA explained that the coordinated behaviour was sustainable over time due to the transparency in the market and to the lack of incentives to grant third party access, as this would imply loss in retail market shares and corresponding revenues.
- the actual and/or potential market competition – In this respect, MCA noted that there were hardly any constraints on the analysed duopoly because the market was mature, there were high barriers to entry, while potential competitors (broadband wireless access networks operators) were not expected to have any significant impact on the competitive conditions in the market in the timeframe of the review. Furthermore, MCA observed a low elasticity of the wholesale demand and a lack of countervailing buyer power.

Joint dominance - SMP designation

Based on its assessment, MCA proposed the identification of the two operators (Maltacom and Melita Cable) present in the wholesale market as featuring joint dominance in the relevant market for wholesale broadband access services.

Draft

[82] In this respect it is worth mentioning that MCA provided evidence of the existence of solutions for the provision of bitstream-equivalent services over cable, as well as of existing commercially viable cable wholesale broadband access solutions.

Remedies to be imposed

MCA proposes the imposition of the following relevant remedies, on both of the operators that were identify to be jointly dominant:

- the obligation of access provision, including bitstream access obligation for Maltacom and obligation to provide access at two different levels of its network in the case of Melita Cable. Furthermore, collocation and associated services fell under the aforementioned obligation;
- the obligation of non-discrimination;
- the obligation of transparency, including the publication of a reference offer;
- the price control obligation, including cost accounting obligation;
- the accounting separation obligation.

Commission's comments relevant for joint dominance – Opening of the Phase II investigation

The main comment from the Commission's side concerned:

1. **The inclusion of wholesale broadband access provided over cable network in the definition of the relevant product market.** The Commission first highlighted that the demand side substitution represented the most immediate and disciplinary force on the suppliers of a given product. Differently put, in this case, the market definition process consisted of identifying alternatives sources of supply. In this view, even though MCA argued that the wholesale broadband access services provided over DSL and cable were similar, also in terms of their costs, the Commission considered that further factual evidence was needed concerning the capacity of cable wholesale broadband access to offer comparable product characteristics as the DSL service, notably in terms of service management. Other issues which could have been analysed by MCA were the existence of potential difficulties of ISPs in the case of switching from a wholesale DSL service to a cable-based service (i.e. modem replacement, reconfiguration etc.). Furthermore, the total cost of a potential migration was relevant, which included the costs of communication and overall project management, respectively costs generated by the impact of the migration in terms of relationship with the retail customers.

On the reasoning behind the serious doubts expressed by the Commission, the following are noted:

1. **Competitive situation at retail level**: Given that MCA concluded that there was evidence which pointed at the lack of effective competition at retail level, the Commission mentioned a series of factors which seemed to contradict MCA's view, namely:
   - the broadband penetration in Malta could not be considered low, especially when compared to the situation in other EU countries;
   - the level of retail broadband prices was not considered high, while there was recent evidence of a certain degree of price competition in Malta;
   - there was an average variety of offers available in the market, when compared to the situation in other member states of the EU.
2. **Characteristic conducive to tacit coordination**: In the context, the Commission questioned the lack of competition dynamic which could allow operators to protect rents by the collective refusal of access supply.
3. **Reaching the coordinated outcome**: Given that MCA considered the outcome of the coordination to be the establishment of two vertically integrated operators, from the Commission's standpoint it was not clear that Maltacom would cease the access provision. Maltacom would have risked the large share of its wholesale market in order to evict alternative ISPs from the retail market and had no warranties concerning the balancing gaining of retail customers. As a consequence, the Commission asked for further development on the argumentation with regard to the predicted establishment of the collusive equilibrium.

Draft

<table>
<tr><td>

4. **Retaliation mechanism**: Although the MCA described the retaliatory mechanism at retail level (consisting in undercutting of retail broadband prices to regain market share from the deviating duopolist), the scenario was highly dependent on prices being above the competitive level at the time of retaliation. However, MCA did not make that fact clear and it also did not provide a description of the retaliatory mechanism at wholesale level. Thus, the Commission's conclusion in this respect was that in order to find credible the sustainability the prospective collusive equilibrium at wholesale level, a sufficiently reasoned description of the retaliatory mechanism at retail and/or wholesale level should have been provided.
5. **Market constraints**: The Commission had also serious doubts concerning the absence of potential competitive pressures form the broadband wireless access networks operators, especially in the view of the fact that two of the three licensed wireless access networks operators had the obligations to cover half of the Maltese population by April 2007. However, there seemed to have been informal requests for postponement of the term by which the coverage obligations needed to be fulfilled. Moreover, the MCA should have further clarified on the possibly significant impact of the local loop unbundling on the competitive conditions at retail and wholesale level.

</td></tr>
<tr><th>Conclusions drawn from the Commission's comments</th></tr>
<tr><td>BEREC highlights that the possibility of joint dominance finding was 'opened' in this case by the fact that the retail market and, correspondingly, the wholesale market were defined as comprising both DSL and cable technologies/infrastructures. However, the Maltese case was quite special in that the market potential in Malta was, by nature of things, low, while it was questionable that there was room for many operators on the wholesale market for broadband access.</td></tr>
</table>

The outcome was that the Commission's position, reinforced by the conclusion of the BEREC expert group who reviewed the case, did not change, while it had initiated the proceedings to adopt a Veto decision. Ultimately, the NRA withdrew its market analysis and started a new assessment.

Draft

12 Annex B: Joint Dominance Cases in the context of non-telecommunication markets

12.1 Introduction

This section considers cases outside of telecoms market reviews where concerns over tacit co-ordination have been upheld or closely scrutinized. The examples come from mergers or market investigations considered by national regulators or the European Commission. As with telecoms market reviews, it is rare for tacit co-ordination to be proven, and only a handful of examples exist.

Given the low number of examples of joint dominance cases in telecoms, these cases may provide a useful further insight into how to tacit co-ordination might be proven (and why concerns are not upheld). It is worth noting that where concerns about tacit co-ordination were upheld they went further than simply considering whether the market characteristics were conducive to tacit co-ordination and had a clearly spelled out theory of co-ordination, describing the focal product, how adherence to the agreement was monitored, how punishment might come about, as well as considering whether external forces, such as buyer power or entry might destabilize co-ordination. In many cases these stories of co-ordination suggested that concerns may be upheld even though some industry characteristics were not generally associated with co-ordination. In cases which were not upheld, the story of co-ordination did not hold because for example, expansion by fringe players would destabilize co-ordination.

The cases considered are:

- Two merger cases in which the burden of proof for tacit co-ordination concerns was overcome. The first is a merger between two yeast companies considered by the European Commission where concerns about co-ordination were upheld in Spain and Portugal, but not in France. The second is a merger between two UK aggregates companies.
- A UK market investigation into aggregates which followed the aggregate merger and considered concerns about co-ordination which existed independently from the merger. This example could be considered more similar to telecoms market reviews in that it considers existing competitive conditions, rather than considering how a merger might change the situation.
- Two further mergers in cement in Germany and Spain considered by the European Commission in which tacit co-ordination was considered carefully but ultimately dismissed because the conditions for collusion were not believed to be fulfilled.

Draft

12.2 ABF/GBI Merger case (COMP/M.4980)[83]

12.2.1 Overview

In 2007, the European Commission examined the merger between ABF and GBI both of which produced yeast products in various European countries. ABI was one of the worldwide leaders in the yeast industry, along with a second firm Lesaffre. GBI was one of the main European yeast producers and had been acquired by Gilde in 2005. After less than two years owning the company, Gilde reached an agreement to sell the yeast businesses of GBI in South America and the UK to Lesaffre, and the European assets to ABF. The end result of the two deals was a significantly more symmetric presence of the two main players in the yeast industry in the various regions in the world. The Lesaffre/GBI merger was cleared subject to commitments in the first phase. This case study concerns the second transaction between ABF and GBI.

The Commission was concerned that the ABF/GBI transaction may give rise to coordinated effects (i.e. tacit collusion) in prices and/or the levels of sales of compressed yeast in individual regions in Portugal and Spain.[84] The Commission therefore requested remedies intended to deal with this concern. In contrast, it did not believe there would be concerns in the French Market. In fact, it believed the transaction would create a stronger second force, to rival the market leader, in the French yeast markets.

The Commission did not use extensive econometrics evidence to arrive at a robust standard of proof. Transaction data was analysed but this was used to supplement the qualitative findings. Instead, the Commission aimed to step into the shoes of the main players, reviewing internal documents, conducting extensive interviews with competitors and distributors, and attending trade shows. This qualitative evidence, supported by transaction data, showed how competitors would be able engage in tacit co-ordination. As background, there had also been some past cases of alleged cartel behaviour in the yeast industry, focusing on price co-ordination.[85]

12.2.2 Market Characteristics

There were a number of market characteristics which are often associated with tacit collusion in Portugal and Spain.

There were a small number of active competitors (essentially three, which were reduced to two post-merger). Post-merger, in Spain, the market shares of these two leading players would be fairly symmetric, although in Portugal they were highly asymmetric, with the second firm, Lesaffre, having a much smaller market share of about 20-30%, than the merged firm which would have most of the rest of the market.

These firms were interacting on a relatively stable or slightly declining market which is very mature and shows a low risk of leap-frog innovation, while demand elasticity is low and the

[83] The decision for this case can be found at http://ec.europa.eu/competition/mergers/cases/decisions/m4980_20080923_20600_en.pdf. This case is also discussed in http://ec.europa.eu/competition/publications/cpn/2009_1_22.pdf.

[84] See paragraphs 207 and 331 of the decision.

[85] See Section 3.3 of http://ec.europa.eu/competition/publications/cpn/2009_1_22.pdf.

product is quite homogenous (a couple of brands of yeast in standard packaging for each competitor).

There was a high frequency of repeated interaction and without any large or bulky orders which might destabilise collusion. This was because artisan bakeries, the final users of compressed yeast in Spain and Portugal, are too small to own refrigeration systems and so are served on a nearly continuous basis by distributors operating refrigerated transport.

There was a high degree of market transparency in competitors' prices, volumes and capacity, significantly aided by very stable exclusive relationships with distributors which existed in Spain and Portugal (which was evidenced by the internal documents and interviews). The distributors regularly collected market information and fed this back to suppliers – indeed in some cases this was stipulated in the contract between the manufacturer and distributor.

The markets in question were protected from outside reactions by high barriers to entry or to expansion of fringe competitors (as fringe competitors have no local distribution networks, which tend to be very traditional and hard to establish; they were located relatively far away from the region and have little spare capacity and very limited incentives to enter/expand in Spain and Portugal) and, on the other hand, by the relatively low buyer power of customers (being typically smaller local distributors of bakery products for artisan bakers).

In addition there was extensive multi-market contacts between the companies involved, who met in a number of neighbouring product and geographic markets.[86]

In France, the situation was in some ways similar in that there were also only three main players present, which would be reduced to two post-merger. However, importantly, the structure of the distributors was different in France. Here, most distributors were regrouped in one of the three large purchasing groups (which together cover more than four fifths of the distribution market) which negotiate the supply conditions (mainly discounts) on behalf of their members with the yeast producers. These large distribution groups do not have exclusive relationships with a single supplier of yeast. The presence of more parallel distribution groups, in addition to independent distributors and private networks, make the market more complicated and reduce transparency, in comparison to Spain and Portugal.[87]

12.2.3 Theory of harm

Price – and more precisely price increases – was found to be the core focal point of collusion in Spain and Portugal. In particular, the Commission believed that there would be collusive price leadership where one firm would lead the market and the other would follow.

The Commission believed that monitoring of price increases would be possible in Spain and Portugal. Market demand was relatively stable, thus, inferring deviations from collusive conduct was thought to be easier and require less market data than when the market demand fluctuates significantly and unpredictably. The Commission also believed deviations could also be detected via monitoring of price. This was because bakeries would often enquire about prices charged by different suppliers and inform competing distributors with the expectation of obtaining a better price. In this sense, customers serve as an effective communication channel regarding prices of the other two market players.[88] Also, distributors play a significant role in

[86] See section 3.2 of http://ec.europa.eu/competition/publications/cpn/2009_1_22.pdf.
[87] See paragraphs 197 and 350 of the decision.
[88] For example, see paragraph 211 of the decision.

discovering to whom the quantities have gone to, in order to identify the deviator and trigger the retaliation against him. With weekly deliveries, the time lag to detect a deviation from tacit coordination is relatively short. However, in France, the presence of more parallel distribution groups, in addition to independent distributors and private networks, made the market more complicated and reduce transparency. The Commission believed this made the deviations more difficult to monitor.

The Commission believed that a return to fully competitive interaction would act as a sufficient deterrent mechanism. This was for at least two reasons. First, given the low elasticity of demand for compressed yeast any output expansion would likely have a significant impact on prices thereby rapidly reducing profitability. Second, all three players - GBI, ABF and Lesaffre - held excess capacity in their plants serving Spain, sufficient to initiate a long-lasting price war in the event of any of them deviating from coordinated interaction.

The credibility of deterrence was thought to be enhanced by multi-market contacts (e.g. in other yeast markets or with respect to a specific segment of customers) among the three players.[89] The Commission believed this would help overcome highly asymmetric market shares in Portugal. This was because any competitive action of the smaller player in Portugal on this relatively small market, could lead to an undesired response in the larger Spanish market.

Consistent with the view that the incentives to deviate are limited and that it is relatively easy to monitor deviations (as discussed above) there were found to be very few instances of switching from one producer to the other on the part of direct customers or distributors.[90]

The Commission also believed there would be no reaction from outsiders in Spain or Portugal as fringe competitors faced high barriers to entry and/or expansion and there was limited countervailing buying power of distributors and artisan bakeries. Artisan bakers, a large majority of the final customers, were very numerous and small and were reliant for their yeast purchases on distributors, given that their bread making process is highly dependent on yeast. As to distributors, they had only a limited role to play as independent players from the suppliers of bakers' yeast. In effect, the division of Portugal and Spain by producers into small territories for its distributors ensured that each individual distributor only accounts for a small share of total sales. This reduced the risk of any given distributor growing in size so as to increase sufficient bargaining power vis-à-vis suppliers.

In contrast to Spain and Portugal, France has a much higher proportion of industrial bakers. These clients were served directly by the producers and they tended to multisource in order to achieve a better security of supply and also gain more leverage in negotiations with the suppliers. The industrial clients, in particular the larger ones, we thus thought to have a certain degree of buyer power with which they could encourage competition.

[89] See paragraphs 240-244 of the decision.
[90] See paragraphs 237-238 of the decision.

12.3 Anglo American PLC and Lafarge S.A.[91]

12.3.1 Overview

In 2011, one of the UK competition regulators, the Competition Commission (CC), considered a joint venture between Lafarge and the Anglo American. The companies overlapped in a number of construction and building materials. This case study concerns the overlap in cement where the CC had concerns that the merger would lead to increased co-ordination on market shares. It therefore required the main parties to implement a number of divestitures as a condition of clearing the merger.

The evidence relied upon included observed market outcomes, such as trends in market shares, changes in margins, a "price-concentration analysis", and evidence of behaviour of producers and of customer switching, as well as internal documents from the parties and competitors. This evidence was consistent with a degree of pre-existing tacit co-ordination. In particular, the pricing behavior and sustained margins did not appear to be consistent with the excess capacity in the industry and there were stable market shares despite large changes in demand and in industry structure. The case study discussed in section [1.5] below considers the tacit co-ordination which existed independently from the merger.

12.3.2 Market characteristics

The CC found that the UK cement industry was very concentrated with only four UK cement producers. The market shares were also relatively stable. There was also a high degree of product homogeneity and the market was not particularly complex. There was no evidence of expansion plans by existing competitors. There were also high barriers to entry into the production of cement in the UK. Startup costs were high and there was substantial excess capacity at a national level which would act as a barrier to entry by reducing the incentives for new entry.

On the other hand, there were asymmetries in shares of sales, capacity and degree of vertical integration in the GB cement markets. However, the merger would reduce this asymmetry, and the CC believed that co-ordination would be possible.

12.3.3 Theory of harm

The CC considered that the main variables on which cement producers could coordinate were likely to be shares of production and/or wins and losses of customers, rather than directly on prices. The incentives to co-operate were thought to be strong because the lack of differentiation between cement made by different UK producers and the large capital investment required meant that, without coordination, competition would be strong in times of excess capacity.

The CC thought that UK producers could monitor, with a fair degree of accuracy, their own shares of production with a one-month time lag[92], and this could be complemented with monitoring of gains and losses of their own customers and sales volumes and information

[91] The references to specific paragraphs, tables and pages in this case refer to the document available at https://assets.digital.cabinet-office.gov.uk/media/53304a34e5274a22680003b1/Final_report__PDF__1.0_Mb_.pdf.

[92] See paragraph 6.151.

Draft

from their in-house operations of the downstream product ready-mix concrete (RMX). The practice of sending out price announcement letters could assist the UK cement producers in coming to a common understanding on the timing and direction of price movements.

Moreover, punishment was thought to be possible as there was sufficient excess capacity in the cement market and customers were able to switch sufficiently easily between cement producers to enable punishment strategies based on taking cement sales from a deviator to be effective. For example, one mechanism would be to reduce cement prices to the deviator's customers so as to reduce the deviators' cement sales volumes. The CC thought this was likely to be effective in this market given the lack of long-term contracts, regularity of cement purchasing, and customer price sensitivity. Moreover, the limited transparency of realised prices for cement and the existence of a large number of local markets for RMX (the downstream product) would limit the disruption to the market in general (in terms of pushing industry cement prices down). It would therefore be relatively inexpensive for the punishing firm to implement.

The CC suggested that repatriation of cement volumes (i.e. the bringing of volumes purchased from another producer back into in-house supply) would potentially also be an effective signalling or punishment mechanism or both. It would be swift, targeted and (if used as a signalling mechanism) could reduce the risk of more costly punishment being required and (if used as a punishment mechanism) could be very costly to deviating firms while having a low risk of destabilising the market. The CC found that repatriation had occurred regularly in the past three years.

It would also be feasible for cement producers to punish deviations in the cement market through targeted reductions in the price of RMX sold by their integrated RMX business.

Finally, the CC considered there were high barriers to entry into the production of cement in the UK; there were high barriers to entry, and imports would also not constrain the UK majors.

It believed the merger would enhance the chances of co-ordination by, among other things, reducing the number of players in the market, increasing the symmetry of the business, and increasing the effectiveness of punishment due to a larger RMX business.

12.4 Aggregates, cement and ready-mix concrete market investigation[93]

12.4.1 Overview

Following the merger between Anglo American and Lafarge, the UK Competition Commission (CC) opened a market investigation into Aggregates, cement and ready-mix concrete (RMC). It investigated a number of ways in which competition may not be working, one of which was coordination between suppliers in the cement market.

It considered aspects of market structure, market outcomes and conduct as well as analysing the impact of recent market developments. When considering market outcomes, it looked at profitability, which it found exceeded the cost of capital; variable profit margins which remained stable, or even in some cases increased, despite a drop in demand for cement and increasing

[93] The references to specific paragraphs, tables and pages in this case refer to the document available at https://assets.digital.cabinet-office.gov.uk/media/5329df9ae5274a226800035f/140114_aggregates_final_report.pdf.

Draft

costs; the shares of sales, which had not changed to a significant extent despite a demand slump. To assist in interpreting the results, they assessed a large body of internal documentary evidence, which provided direct evidence of coordination.

The CC requested remedies to alleviate this (and other) concerns. This included divestiture of a cement plant by one company and two measures aimed at reducing transparency in the cement market. The first transparency measure was to require restrictions on the publication of GB cement market data. The second was a prohibition of the practice of issuing generic price announcement letters.

12.4.2 Market characteristics

The GB cement markets were characterized by high concentration; a significant degree of transparency of sales, production shares and wins and losses; frequent interactions between the main cement producers; cross-sales (e.g. as a mechanism to share commercial information or for side-payments); and a lack of complexity in the competitive environment and the products, which were quite homogeneous.

Additional factors that were thought to increase the susceptibility of these markets to coordination included high barriers to entry, limits to the competitive constraint imposed by imported cement and vertical integration into downstream operators. The vertical integration was felt to be important as it acted as a barrier to entry and expansion by fringe players. It also increased the transparency in the market by providing the opportunity and logistical justification for cross-sales of cement.

On the other hand, there were asymmetries in shares of sales, capacity and degree of vertical integration in the GB cement markets. For example, Tarmac was a fringe player, in contrast to Lafarge, Cemex and Hanson which had larger shares of sales. Lafarge was also the least vertically integrated producer. The CC believed, however, that this did not, undermine co-ordination, although it lead the firms to adopt different roles. For example Lafarge had stronger incentives to take on the costs of co-ordination, including the costs of accommodating the growth in share of sales of fringe cement suppliers, i.e. Tarmac and importers. This in turn explained why shares of sales had not been perfectly stable.

Moreover, there was some change in the players in the market as Tarmac exited and HCM entered (HCM entered by purchasing the assets that the CC required Anglo American and Lafarge Group to divest as a condition of their joint venture). The evidence suggested this had some effect on co-ordination, but the CC did not consider this evidence to be representative of the longer-term state of the market, given that HCM has had to build its customer and sales base up from its formation.

Draft

12.4.3 Theory of harm

The CC found evidence that share of sales was a focal point for co-ordination. This evidence included a strategic focus on maintaining market stability between the members of the coordinating group rather than independently pursuing unconstrained growth, manifested in a focus on maintaining existing (or returning to pre-existing) relative shares of sales; tit for tat used for share balancing (i.e. if firm A targeted firm B's, then firm B would respond by targeting a customer of firm A); use of cross-sales as a mechanism for transparency (i.e. if Firm A's share has increased compared with B, it then increases volumes of cement purchased from B), signalling and, on occasion, share balancing; price announcement behaviour (contributing to price parallelism and to softening of customer resistance to price increases); and targeting of importers beyond normal competition on price and service.

Monitoring of adherence to the coordinated outcome was achieved through each member of the coordinating group monitoring its own share on a monthly basis, using information from a trade association supplemented by monitoring of customers won and lost and from whom they were won/lost, and also using information on prices of cement gathered from cement customers and through cross-sales.

While there was no coordination directly on prices as these are individually negotiated, the direction of prices was signalled through price announcement letters (which facilitated price parallelism and soften customer resistance to price increases). There was also potential signalling of the desired level of prices through members of coordinating group accepting higher prices for cross-sales than might otherwise be the case.

If deviation was detected "tit-for tat" behaviour was engaged in to rebalance market shares. In addition, a return to competitive prices was likely to provide a deterrent for large-scale deviations. Another punishment mechanism included "internalization", i.e. replacing supplies purchased from other firms with in house production or increasing the price of sales to the deviating company. The CC thought that multi-market contact would provide further opportunities for punishing deviations.

There was evidence that there were periods when coordination was more successful and periods when it was less successful.

12.5 COMP/M.7009[94] and COMP/ M.7054[95] – HOLCIM / CEMEX WEST and CEMEX / HOLCIM ASSETS

12.5.1 Overview

In 2013, the Commission examined the merger between Holcim Beteiligungs GmbH (Deutschland) (Germany) which intended to acquire part of Cemex Group's activities in cement, ready-mix concrete, aggregates and cementitious materials in western Germany, including a small number of plants and sites located in France and the Netherlands (together "Cemex West", Germany). Concerns around tacit co-ordination were considered closely but ultimately not upheld.

---

[94] Available at http://ec.europa.eu/competition/mergers/cases/decisions/m7009_20140605_20682_3836837_EN.pdf.
[95] Available at http://ec.europa.eu/competition/mergers/cases/decisions/m7054_20140909_20682_4001455_EN.pdf.

A similar case to COMP/M.7009 was submitted to the Commission in 2014. In this case, Cemex España, S.A. ("Cemex España", Spain) intended to acquire sole control over the production and distribution assets of Holcim España, S.A. ("Holcim Assets"), in cement, ready-mix concrete, aggregates and mortar in Spain.

12.5.2 Market Characteristics

Cement is a rather homogeneous product and the technology used to produce it has reached a mature stage. Accordingly, cement producers share similar cost components in terms of costs for raw materials and operations.

Moreover, in both cases, the market shares were relatively stable and entry barriers seemed to be high. There was also a high degree of transparency in the markets and competitors seem to be well aware of each other's capacities, production costs and volumes, market shares as well as prices and customers.

In contrast to the case in Germany, in Spain some level of vertical integration existed, e.g. in the form of integrated grinding mills. There was also multi-market contact as all players were present as cement producers in different regions of Spain and in different European countries, as producers of aggregates and are also vertically integrated downstream into RMX and mortar as well as upstream into clinker.

However, in both cases, although barriers to entering from scratch were high, the Commission believed that there were fringe firms which could destabilise the collusion by increasing production, i.e. barriers to expansion were low.

12.5.3 Theory of harm

The most likely focal point for coordination in the cement markets under investigation would be customer allocation whereby competitors refrain from approaching rivals' customers with low prices.

The Commission believed that monitoring would be possible as the market was transparent. Moreover, punishing could take the form of reacting to "expansions" by competitors (that is to say to actual and potential customer losses) by using targeted counter measures.

However, the Commission believed that the merged entity would, post-transaction, continue to face competition from a number of competitors, including cement suppliers importing clinker or cement by sea. The reaction from these outsiders, meant that the Commission concluded that co-ordination among the major players was unlikely.

Draft

12.6 COMP/M.3333[96] of Sony/ BMG

12.6.1 Overview

On 19 July 2004, the Commission authorised the creation of Sony and BMG's joint venture for recorded music following an in-depth investigation. While a number of market characteristics which appeared to be conducive with collective dominance were identified, the Commission did not think there was sufficient transparency in the market to sustain it. An appeal to the CFI by Impala resulted in the decision being overturned, but a further appeal to the Court of Justice by the parties, supported by the Commission, resulted in the case being remitted back to the Commission. The Commission then reassessed the joint venture under the then current market conditions and cleared it again in 2007. This decision was also appealed by Impala, but became irrelevant when Sony purchased the whole of SonyBMG, a transaction approved by the commission in 2008.

The scope of the joint venture covered only so-called *'Artist and Repertoire'* (A&R) activities, which comprise the discovery and development of performing artists (singers), and in addition the marketing and sale of records. By contrast, SonyBMG would not be active in the manufacturing and the physical distribution (logistics) of records as these activities remained in the hands of each of the parent companies. Likewise, Sony and Bertelsmann's music publishing businesses were not integrated into the joint venture.

12.6.2 **Market Characteristics**

The record industry was characterised by the strong position of the five 'majors', namely universal Music, Sony Music, EMI, Warner Music and Bertelsmann Music Group (BMG) which all had a worldwide presence and accounted together for approximately 80% of the market, both in Europe and worldwide. In the European Economic Area (EEA), the rest of the market was composed of a large number of 'independents' with mostly national activities and much lower market shares than those of the majors. Following the merger, Universal and SonyBMG would both have market shares of approximately 25%, ahead of EMI and Warner. Some independents were concerned that the increased degree of concentration might lead to the foreclosure of smaller record labels, for example regarding their access to media and distribution. These concerns were carefully assessed in the Commission's competitive analysis of the proposed transaction.

The market investigation indicated a number of market characteristics which appeared to be conducive to collective dominance, such as multi-market contacts due to the vertical integration of the majors, a stable common customer base, and the weekly publication of charts. In addition, there are considerable structural links among the majors in the form of compilation, licensing and distribution joint ventures and agreements. The Commission's assessment was conducted in line with the criteria laid down by the European Courts, in particular in the General Court's Airtours judgement of 2002.

[96] Available at
http://ec.europa.eu/competition/mergers/cases/decisions/m3333_20071003_590_en.pdf

Draft

12.6.3 **Theory of harm**

The Commission examined whether the proposed concentration would create or strengthen a collective dominant position as a result of which effective competition would be significantly impeded on the following markets: (i) recorded music; (ii) licences for online music; and (iii) online music distribution. In addition, as both parent companies remain active as music publishers, the Commission also assessed whether the joint venture would result in the coordination of Sony and Bertelsmann's competitive behaviour in the music publishing market which is closely related to the recorded music market. However it concluded that this would be unlikely and this case study focuses on the first theory of harm.

Relevant markets

The market for recorded music comprises the recording of music in different formats, in particular CDs. The geographical scope of the market for recorded music was considered to be national, in particular because consumer preferences and prices vary significantly among Member States.

The Commission concluded that the emerging online music markets are separate from the recorded music market. Within online music, two markets could be distinguished: (i) the wholesale market for licences for online music where online music service providers acquire licences from record companies to exploit the music of the artists of these record labels; and (ii) the retail market for online music distribution where service providers deliver online music to end consumers, either for (permanent) downloading or (temporary) streaming. The Commission considered that both online markets were still national in scope.

Creation or strengthening of a collective dominant position

On the market for recorded music, the Commission examined whether the proposed concentration would either create or strengthen a collective dominant position of the four remaining major record companies.

In assessing whether there was an existing collective dominant position on the national markets for recorded music that could be strengthened as a result of the concentration, the Commission examined whether a coordinated pricing policy of the five majors could be identified for the last four years. For this purpose the Commission examined, using a three-step process, whether there had been any alignment of (i) average wholesale net prices, (ii) wholesale list prices, and (iii) discounts to customers. As far as net prices were concerned, the Commission analysed the development of average wholesale net prices for each major's 100 top selling albums which cover 70-80% of their total music sales. The econometric analysis of these data showed a certain parallelism of the five majors' wholesale average prices in most of the countries considered. However, the correlation of the price development among the majors was not sufficiently close to establish by itself price coordination in the past.

Secondly, the Commission therefore examined whether any price coordination could have been reached in using list prices, so-called ‘Published Prices to Dealers’ (PPDs), as focal points. Although some of the majors apply more than 100 PPDs in some countries, the investigation showed that each party's five most important PPDs account for 50-80% of their respective total sales, depending on the country. In addition, the Commission found that the most important PPDs of all majors are usually set relatively close to each other. On the basis of the list price analysis price coordination would thus have been possible.

Thirdly, the Commission looked at any indications of coordination on the level of discounts. According to the parties, different kinds of discounts were granted to their customers, namely file and campaign discounts on the invoice level, as well as retrospective discounts on a volume basis and ‘co-op’ spending for marketing measures. The market investigation showed that, although the relative importance of these discounts varies to some extent among Member States, invoice discounts are regularly the most important category of discounts. However, in a customer-by-customer comparison the Commission found a certain degree of fluctuations and differences between the parties' invoice discounts as well as variations over time and from album to album. The market investigation indicated that these fluctuations are mainly the result of so-called *‘campaign discounts’.* On the basis of these observations the Commission could therefore not find sufficient evidence that invoice discounts have been aligned between the parties.

The Commission further assessed whether the market for recorded music has been sufficiently transparent to enable the majors to monitor each other's pricing behaviour. Whilst the investigation indicated a certain degree of transparency with respect to weekly charts and the use of PPDs, it also showed that some discounts are less transparent. The rather flexible use of campaign discounts decreased transparency and would make the monitoring of any common understanding quite difficult. In addition, market transparency was somewhat reduced by the largely differentiated music content, in spite of a certain homogeneity in the format, pricing and marketing of records. On balance the Commission therefore concluded that there was not sufficiently strong evidence to establish an existing collective dominant position of the five majors in the markets for recorded music.

The Commission also examined whether the concentration would create a collective dominant position on the markets for recorded music. The proposed operation leads to a consolidation from five to four majors and thereby reduces the number of competitive relationships among them. This would in principle facilitate the monitoring of the market. However, in view of the lack of sufficient transparency on the level of discounts in the past, the Commission did not find sufficient evidence to prove that the reduction from five to four majors in itself would alter the market structure substantially enough to result in the likely creation of collective dominance in the recorded music markets.

On the wholesale market for licences for online music, the Commission examined whether the concentration would lead to the creation or strengthening of a collective dominant position of the majors. As this market was emerging at that time and no public industry data was available, it was difficult to determine the market positions of the different record companies. On the basis of the information collected by the Commission it appeared that the market positions of the majors on the wholesale market for licences for online music were by and large similar to their positions on the markets for recorded music. Regarding prices, some responses of market players stated that online licence fees were quite high given the cost savings for the production and distribution of the physical carrier and given that no obsolescence costs are incurred. The Commission thus further investigated whether there was any alignment of licence fees. However, it found some differences among the majors in terms of prices and rules of usage and therefore concluded that there was not sufficient evidence of an existing collective dominant position. Regarding the possible creation of a collective dominant position on the market for licences for online music, the Commission did not find sufficient evidence that the reduction from five to four majors would lead to a coordination of prices and usage conditions since these were currently in flux due to the developing state of the market. Therefore, the likely creation of collective dominance on this market could not be established.

Draft