Vodafone's response to

BEREC's draft "Report on oligopoly analysis and regulation"

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Executive Summary

Vodafone welcomes the opportunity to respond to BEREC's draft "Report on oligopoly analysis and regulation". This is an important and timely consultation considering the envisaged Telecoms Framework Review as part of the Digital Single Market strategy presented by the European Commission (EC) in May 2015. Our response focuses on the question whether a deviation from existing principles of *ex ante* regulation can be justified in the context of tight oligopolies, before moving on to the issue of joint dominance.

The key question that BEREC's draft report seeks to address is whether the provisions of the present regulatory framework are still appropriate to capture oligopolistic market settings and effectively remedy emerging or persisting market failure. We find that the regulatory framework is still relevant and that BEREC does not provide convincing evidence to justify significant changes to it.

Tight oligopolies

BEREC proposes a lowering of the regulatory threshold by introducing the category of 'tight oligopolies'. We test BEREC's proposals in the following respects.

1. We analyse the need for change in light of the trends BEREC observes, namely consolidation, convergence and emerging duopolistic competition in some fixed markets.
2. We examine the category of 'tight oligopolies' in particular with a view to its adherence to important regulatory principles of predictability, clarity and consistency. To this end we
   a) analyse the theoretical definition provided by BEREC and
   b) scrutinise the criteria identified by BEREC to test for 'tight oligopolies' and investigate whether these have any bearing on enduring market failure in telecom markets.

On this basis, Vodafone cannot find evidence that would call for a divergence from existing principles and justify a lower regulatory threshold as proposed by BEREC in relation to 'tight oligopolies'.

1) Potential competitive threats of oligopolies in telecoms

BEREC introduces the discussion around 'tight oligopolies' by highlighting three key trends - convergence, consolidation and emerging duopoly structures in some markets. Analysing these, Vodafone cannot concur with BEREC's conclusion that a change from the current SMP framework is required.

In the Mobile industry, consolidation in a number of national markets has not affected underlying drivers of competition, because these are not wholly dependent on the number of players in the market. In fact, technological infrastructure upgrades and the rise of smartphones have led to the emergence of over-the top (OTT) players. This has significantly changed the industry and exerts significant competitive pressure on mobile network operators. In conjunction with the rising demand for multi-play bundled offerings (TV, contents), OTT players will drive competition and increase the need for differentiation. As a consequence, mobile network operators require investments in network quality/backhaul or customer service excellence going forward. Further, with commercial wholesale access agreements (MVNO) being the norm today, we do not see evidence for BEREC's concern. Therefore, there seems to be no clear-cut case for a deviation from existing regulatory principles.

With regards to Fixed networks, the promotion of competition and investment requires effective access regulation at the most upstream level. BEREC seems concerned with the emergence of duopolies and retail competition in some markets. However, it must be understood that at the wholesale level SMP patterns persist. BEREC thus needs to ensure effective and proportionate wholesale regulation. In this respect, BEREC should thus focus its attention on how to best ensure appropriate regulation under the existing SMP regime and strengthen ex post measures in cases of abuse. As competitive conditions at the wholesale level evolve, regulation will need to be adjusted such that it is proportionate and targeted to market failures identified. Assessments of competitive conditions in close adherence to the existing "modified greenfield approach" will thus guide a sensible degree of deregulation in downstream markets while removing existing barriers to investment and competition at the most upstream level (e.g. access to passive infrastructure through duct access, dark fibre or poles). Since market power will remain the key driver for enduring market failure, a deviation from SMP principles cannot be justified.

In sum, having examined the trends portrayed as potential competitive threats of current and emerging oligopolistic structures, we cannot find persuasive evidence that would call for a divergence from existing principles and justify a lower regulatory threshold.

2) Demarcating different degrees of ineffective oligopolistic behaviour presents a formidable challenge

BEREC conceives the concept of 'tight oligopoly' to describe an oligopolistic market outcome that represents ineffective competition in absence of collusion and would require market intervention. Predictability, consistency and proportionality need to guide BEREC's recommendations to NRAs to ensure that the benefits of regulation outweigh the inevitable economic costs associated with any type of market intervention. Vodafone's analysis finds that the concept is not sufficiently clear-cut to satisfy generally accepted benchmarks for regulation, such as predictability, consistency and proportionality. This stands in stark contrast to the current SMP framework.

a) The concept of 'tight oligopoly'

BEREC fails to define 'tight oligopolies' in an unambiguous way. This does not surprise as the varied nature of oligopolistic markets will make it very difficult to determine which market outcomes can be deemed sufficiently competitive and which outcomes are deemed insufficiently competitive. There is no theoretical toolkit to demarcate a threshold at which oligopolies cease to deliver effective competition. Accordingly, an ill-defined lowered threshold risks divergent approaches across member states and arbitrary *ex ante* regulation. This runs counter to the Digital Single Market strategy which calls for a more concerted and consistent approach across the EU.

b) Empirical identification

BEREC proposes a number of criteria for identifying a 'tight oligopoly'. First, none of these criteria can be viewed as sufficiently objective to establish a clear 'tight oligopoly' threshold. The subjective nature of many indicators (e.g. "high" market concentration, "low" price elasticity) will make it difficult to define a coherent and predictable regulatory outcome across Europe. Second, indicators seem empirically questionable with a view to the current framework, which recognises that regulation should only be imposed where an enduring market failure is identified and ex post competition law is not sufficient to remedy market failure. It seems to Vodafone that the factors identified by BEREC do not, of themselves,

lead to such an enduring market failure and such a test would be likely to lead to over-regulation and uncertainty – both of which would be significant deterrents of investment.

In sum, BEREC needs to ensure that market intervention is underpinned by a clear concept of practical relevance, which is empirically identifiable and is limited in scope to persistent market failure. The existing SMP framework recognises this and sets the threshold for intervention in a way that ensures a predictable, consistent and proportional regulatory response. Vodafone therefore concludes that the SMP framework remains relevant. The argument put forward by BEREC to lower the regulatory threshold through the introduction of the concept of tight oligopolies is not persuasive. In fact, it endangers future investment in the sector and threatens to undermine the ambitions of Digital Europe.

Joint dominance: Strengthening existing criteria in alignment with existing case law

In line with our previous submission to BEREC's questionnaire on oligopolies[2], we support BEREC's recommendations to strengthen existing guidelines of 'joint dominance' and update Annex II of the Framework Directive by reconciling current criteria with relevant case law (i.e. the Airtours case criteria). We agree that the concept of 'joint dominance' remains relevant and that BEREC's proposed steps will appropriately align existing *ex ante* principles with relevant ex post competition law.

[2] BoR PC01 (15) 06

Introduction

Vodafone welcomes BEREC's draft "Report on oligopoly analysis and regulation". This is a timely and important contribution in light of the envisaged review of the European Regulatory Framework for Electronic Communications Networks and Services, which forms the basis for all national telecommunications laws in EU Member States.

The Framework Directive (the "framework") has been instrumental in establishing objectives and procedural guidance for European national regulatory authorities ("NRAs"). It also puts a general obligation on NRAs to promote competition in electronic communication networks. This establishes the basis for *ex ante* regulation in markets with one or more undertakings with significant market power (SMP) in which ex post competition law is deemed insufficient to address the underlying problem. Market analysis thus comprises three stages: definition of relevant markets, competition assessment and identification of SMP, and finally the imposition of remedies on SMP operators in line with Articles 9 to 13a of the Access Directive for wholesale remedies and Article 17 of the Universal Service Directive for retail remedies.

The imposition of remedies generally depends on finding that there are SMP operators in a relevant market in absence of regulation. Article 14(2) of the framework provides that "an undertaking shall be deemed to have 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". The framework thus establishes a threshold for intervention: the finding of either single or joint dominance.

The key question that BEREC's draft report seeks to address is whether the provisions of the present regulatory framework are still appropriate to capture oligopolistic market settings and effectively remedy emerging or persisting market failure.

Our response thus focuses on the question whether a deviation from existing framework principles is appropriate. We test BEREC's proposals in two respects. Firstly, we analyse the need for change in light of the trends BEREC observes, namely consolidation, convergence and emerging duopolistic competition in some fixed markets. Secondly, we consider the concept of 'tight oligopolies' in particular with a view to explore it's adherence to important regulatory principles of predictability, clarity and consistency. In this process, we examine the definition of the concept. Subsequently, we analyse the criteria identified by BEREC to test for 'tight oligopolies' and investigate whether these have any bearing on enduring market failure in telecom markets.

Based on this analysis we conclude that oligopolistic market structures will be an inevitable element of telecommunication markets because of the underlying economics of network industries. Having examined the trends portrayed as potential competitive threats of current and emerging oligopolistic structures, we cannot find compelling evidence that would call for a divergence from existing principles and justify a lower regulatory threshold. However, we see merit in strengthening the accompanying assessment criteria of (joint) SMP and encourage BEREC to provide further guidance to NRAs in this respect.

Potential competitive threats of oligopolies in telecoms

Today's Mobile markets are not prone to ineffective oligopolistic competition

European mobile markets have been shaped by the 1990s liberalisation policies along with targeted regulatory remedies to foster competition at both infrastructure and service levels. These policies have been successful in facilitating effective infrastructure competition and directed a gradual deregulation.

However, it appears that a regulatory emphasis on allocative rather than dynamic efficiencies has contributed to a challenging industry outlook. This is illustrated by declining industry profitability despite rising demand, in particular of high speed data services across Europe. In response the industry is moving towards a sustainable market structure, which will enable innovation, investment and competition going forward. Accordingly, consolidation cannot be portrayed as a recipe for market failure, as a rigorous merger process ensures a detailed assessment of competitive effects prior to approval. In this context it is important to note that DG Competition has accepted both 2 and 3 player markets that are competitive. There is thus no a priori need to conceive further regulatory action. In fact, merger controls seem best placed to decide appropriate restrictions on a case by case basis.

Empirical evidence on recent mergers seems to support this. Competition in mobile retail as well as wholesale markets, including the wholesale market of access and call origination highlighted by BEREC, does not appear to be negatively affected by consolidation. This illustrates that existing merger controls seem to be appropriate to address competition concerns in the specific case of consolidation.

At a more general level, competitive pressure on Mobile is unlikely to recede on a forward looking basis:

- Incentives to innovate and invest in better and more efficient network technologies are fuelled by significant growth in high speed data demand.
- The need for differentiation e.g. through quality or customer service will become even more important as demand for bundled offerings and over the top services increase.
- Concerns of access and origination markets are unfounded with commercial MVNO deals being the norm across Europe.

A priori, this demonstrates that there is little concern about existing or potential market failure that would justify a significant deviation from the current framework guidelines and principles of *ex ante* regulation in the case of Mobile.

Lack of competition remains a regulatory challenge in Fixed markets

Generally, the situation in Fixed has been one of considerably more constrained infrastructure competition in comparison to Mobile. This is largely due to the underlying network economics, in particular the irreplicability of the last mile and the related perseverance of monopolistic market structures. The presence of sunk costs, market power and the possibility of strategic behaviour on the part of incumbents implies that such market structures are not necessarily contestable in the absence of regulation. On this basis the current SMP framework identified market failure and introduced access regulation which has effectively unlocked competitive potential in retail markets.

Only recently some form of oligopolistic competition has emerged, albeit often confined to specific geographies and retail markets with large variation across EU countries. This change has been the result of a combination of technological changes (e.g. upgrade of cable networks enabling the provision of broadband services), access regulation (uptake of LLU) and competitive roll-out of FTTx networks

(generally based on access to civil infrastructure to avoid the inefficient duplication of fixed costs). The availability of infrastructures such as ducts or cable networks has helped to facilitate competition deeper in the value chain. This warrants deregulation of certain wholesale markets where competition has been deemed effective with regulatory remedies focussing on outstanding bottlenecks. However, it does not require a change of existing regulatory thresholds, as market power remains the driver of competitive constraints.

The reasoning presented in BEREC's draft report thus does not provide a compelling case for a significant deviation from existing regulatory principles. Further, the proposals around 'tight oligopolies' must be viewed with caution as the following discussion illustrates.

Demarcating different degrees of ineffective oligopolistic behaviour presents a formidable challenge

Oligopolies are a common feature of today's economic landscape and as such not necessarily problematic. Interestingly, *ex ante* regulation is absent in most oligopolistic markets with telecoms, postal and utility sectors (e.g. water, energy) being the exception rather than the norm. For the most part this is explained by historical factors where a regulatory framework usually emerged as part of general liberalisation policies geared towards dismantling monopolistic market structures. The telecoms sector is a prime example of this. Oligopolistic market structures emerged due to the effectiveness of liberalisation policies in driving infrastructure and service competition, not the lack thereof. Given the unique characteristics of telecom markets (economies of scale and scope as well as large fixed investment requirements to innovate), the emergence of oligopolistic market structure as a result of this makes perfect sense and should not form an a priori concern.

However, as rightly pointed out by BEREC, there are some inherent risks that accompany any oligopolistic market which by definition is characterised by a small number of firms, existing barriers to entry and some form of interdependence. The current framework recognises this by addressing two key concerns, firstly the issue of market power and secondly the risk of collusion. However, BEREC speculates that there exist oligopoly settings that contribute to sub perfect or non-competitive market outcomes that are not captured by the current SMP framework.

The concept of 'tight oligopoly'

Taking a closer look at BEREC's proposals it is uncertain how different market outcomes would be classified. While a wide array of economic literature attempts to draw a clearer picture of oligopolies' theoretical underpinnings, net welfare effects under different oligopolistic scenarios remain difficult to predict and assess. The two game theoretic representations discussed in the report do not help to dismantle this issue. They merely illustrate that game theory allows the depiction of two modes of oligopolistic behaviour, namely a situation where the dominant strategy is one of competition (the non-cooperative equilibrium of a finite prisoner's dilemma) and one where collusion is likely to emerge (the evolutionary cooperative equilibrium of an infinite prisoner's dilemma). The theoretical background provided by BEREC thus does not establish a meaningful theoretical threshold to identify ineffective competition in oligopolistic markets. In a nutshell, the concept of 'tight oligopoly' is elusive.

Empirical identification

Given these conceptual ambiguities, the only way forward to capture an inefficient market outcome and provide meaningful guidance to NRAs would be empirical. An empirical justification is required for any regulatory regime as it must ensure clear criteria that promote regulatory predictability and consistency.

Recognising this, BEREC presents a set of measures in order to 'identify' ineffective oligopolistic competition in the absence of tacit collusion:

- Market concentration is high
- High entry barriers and no significant new entrants
- No countervailing buying power
- Mature technologies
- Capacity constraints
- Low price elasticity and low cross-price elasticities, e.g. due to switching costs
- Low growth in demand/ a mature market

Unfortunately, none of these criteria can be viewed as sufficiently objective to establish a clear 'tight oligopoly' threshold. The subjective nature of many indicators (e.g. "high" market concentration, "low price elasticity") will make it difficult to define a coherent and predictable regulatory outcome across Europe. This runs contrary to one of the main aims of the digital single market strategy, which highlights the importance of "regulatory consistency and predictability across the EU". Further, in light of existing trends the relevance of these criteria are at least debatable and do not lend credibility to BEREC's call for changing the regulatory threshold.

Illustrating this, we deal with each of the proposed criteria in turns.

- **High market concentration**

Oligopolies will be somewhere on the continuum between perfect competition and monopolies. Therefore, by their very nature, any oligopoly will have a relatively high market concentration. Concentration measures such as the Herfindahl Hirschman Index (HHI) or concentration ratios (CR) usually serve as measures thereof. Different potential concentration cases which may be relevant in both Fixed and Mobile markets illustrate that a concentration index is nothing more than an indicative measure (see tables below).[3] It is also important to note that DG Competition has accepted both 2 and 3 player markets as competitive. As market power is already addressed by means of single and joint dominance in the existing Framework Directive, it is unclear how BEREC would construct a case of 'tight oligopolies' on this basis. Economic literature is not conclusive on the relationship between concentration (or any measure of market structure) and market power per se, thus making it a questionable criterion.

Number of players: 2

	Case 1	Case 2
	80%	50%
	20%	50%
HHI	0.68	0.5

Number of players: 3

	Case 1	Case 2	Case 2
	50%	50%	34%
	30%	40%	33%
	20%	10%	33%
HHI	0.16	0.19	0.11

Number of players: 4

	Case 1	Case 2	Case 3	Case 4
	50%	40%	30%	25%
	25%	40%	25%	25%
	15%	10%	25%	25%
	10%	10%	20%	25%
HHI	0.067	0.051	0.018	0.016

[3] Interestingly, if one were to apply HHI demarcations only duopolies would classify as 'high' market concentration cases (above 0.25).

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

High entry barriers are expected in network industries which require significant capital investment and commitment. Again, this is unlikely to be a defining feature of 'tight oligopolies' as it characterises the telecoms industries underlying economics in general terms. Further, from a market failure point of view, mobile scarcity of spectrum remains a driver of competition and existing entry barriers seem to impede neither MVNO entry nor the entry of new MNOs. In Fixed, access barriers remain an issue, but continue to be strongly linked to patterns of legacy market power which can be effectively addressed within the SMP framework (e.g. by imposing access obligation to ducts and poles on the legacy incumbent).

- **No countervailing buying power**

Countervailing buying power can take a variety of forms, and the analysis needs to be established on a case by case basis. Two cases are often discussed: the possibility of self-supply and exertive pressures from a powerful buyer. The Airtours judgement also identifies large numbers of individual customers who readily switch provider as a source of countervailing buyer power – this is also true of many mobile markets.

- **Mature technologies**

Due to constant technological evolution, telecoms markets are characterised by technology cycles (e.g. 3G to 4G, copper to fibre) and high levels of capital investment. There is little evidence in today's telecoms markets that infrastructure innovation has stalled and thus this seems to be an irrelevant criterion to assess. At a minimum, BEREC should expound on the definition of 'mature technologies'.

- **Capacity constraints**

BEREC builds much of its argumentation on the assumption that there are capacity constraints. In Fixed capacity as such is not an issue. The question is rather one of access to NGA technologies that presents a constraint. In Mobile, capacity constraints are strongly linked to the availability of spectrum and access to backhaul which is often controlled by the incumbent (in particular for fibre which is necessary for 4G). Effective spectrum policy is thus essential and should be addressed holistically across Europe. Further, the access to fibre backhaul (which in many markets is a bottleneck controlled by the incumbent, not an oligopoly) needs to remain a regulatory focus. While the spectrum problem is exogenous, the backhaul issue is classic dominance rather than linked to interdependent strategic interaction among oligopolistic players.

- **Low price elasticity and low cross-price elasticities, e.g. due to switching costs**

Switching costs in Mobile and Fixed are usually low. In mobile switching costs tend to be lower, which is also reflected in higher churn rates. Switching costs for fixed networks tend to be higher for various reasons. Switching in fixed requires e.g. new equipment to be installed and configured, and in addition fixed services are increasingly being bundled into multi-play offers. However, even in the fixed markets we observe that, although switching costs tend to be higher, this does not lead to low levels of switching. Where this is not the case, it can be directly linked to significant market powers of one player and would hence be of limited relevance for establishing the existence of a 'tight oligopoly'.

- **Low growth in demand/ a mature market**

Finally, low demand growth cannot be expected when taken account of existing predictions of overall data growth.

Source: Cisco VNI Mobile, 2015

Considering the list of criteria presented by BEREC, it appears that not a single measure establishes an objective and differentiating threshold for 'tight oligopolies'. Moreover, looking at telecom markets today it remains debatable if these criteria actually apply.

The case for a lower regulatory threshold cannot be made

BEREC needs to ensure that market intervention is underpinned by clear evidence of persistent market failure. Accountability, transparency and consistency need to guide BEREC's recommendations to NRAs in this respect to ensure that the benefits of regulation outweigh the inevitable economic costs associated with any type of market intervention.

Recognising this, our preceding analysis demonstrates that a deviation from the current SMP framework does not seem appropriate. A closer examination of relevant wholesale and associated retail markets shows that that a rigorous application of existing guidelines will ensure effective *ex ante* regulation. The recommendations made in the existing directives remain relevant and continue to provide the right guidance. The current framework recognises that regulation should only be imposed where an enduring market failure is identified and ex post competition law is not sufficient to remedy market failure.[4] It seems to Vodafone that the factors identified by BEREC do not, of themselves, lead to such an enduring market failure and such a test would be likely to lead to over-regulation and uncertainty – both of which would be significant deterrents of investment.[5]

Thus the right level of "competition can best be fostered through an economically efficient level of investment in new and existing infrastructure, complemented by regulation, wherever necessary" under the auspice that "an efficient level of infrastructure-based competition is the extent of infrastructure duplication at which investors can reasonably be expected to make a fair return based on reasonable expectations about the evolution of market shares."

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[4] As the Commission's Recommendation on relevant product and service markets suggests: "The aim is progressively to reduce ex-ante sector specific rules as competition in the markets develops" and that "considering […] strong competitive dynamics in recent years, it is essential that ex-ante regulatory obligations only be imposed where there is no effective and sustainable competition"

[5] When considering the trade-off between ex- ante regulation and the incentives to invest in infrastructure, regulators should adopt a dynamic perspective. Whereas it is conceivable that some oligopolies show certain transitory degree of market power in the short term, that could be necessary to promote innovation and investment in a longer term perspective. As underlined by Professor Motta, currently Chief Economist at DG Competition: "It is precisely the prospect of enjoying some market power (i.e. of making profits) that pushes firms to use more efficient technologies, improve their product quality, or introduce new product varieties." (Motta M., "Competition Policy. Theory and Practice", Cambridge University Press, 2004, p. 59)

Joint dominance: Strengthening existing criteria in alignment with existing case law

While the case of 'tight oligopolies' presents formidable difficulties, we fully support BEREC's recommendations in relation to joint dominance. Here the theoretical underpinnings are clear and empirical evidence supports an update of Annex II of the Framework Directive which will align current criteria with relevant case law.

The Airtours case criteria (possibility of reaching terms of coordination, ability to monitor deviations from the coordination strategy, effective deterrent mechanism to cheating, insufficient reactions of outsiders) thus establish a meaningful basis for assessing joint dominance on an ex ante basis.

With respect to the appropriate standard of proof, we believe that BEREC should orient its guidance to NRAs on the basis of the existing framework. This means that ex-ante regulatory obligations should only be imposed where there is no effective and/or sustainable competition and competition law is unable to sufficiently address the underlying problem. A consistent application of this principle will ensure that regulation is only applied were necessary and removed where effective competition has emerged over time.

Summary: The existing SMP framework remains relevant

One of the many achievements of the Framework Directive is that it includes a clear reference point in order to effectively remedy persistent market failure on an *ex ante* basis. It is crucial to note that BEREC's proposal constitutes a lower threshold for regulation and so, by definition, will entail more regulation. However, the basis for this policy shift is not clear. The overarching principles of the EU Framework require NRAs to:

- Apply objective, transparent, non-discriminatory and proportionate regulatory principles
- Promote regulatory predictability and consistency
- Safeguard competition by imposing obligations only where there is no effective or sustainable competition and relax or lift regulatory obligations

Vodafone's assessment of oligopolistic market outcomes and industry trajectories does not reveal convincing evidence that would justify a substantial deviation without violating some of these basic principles. It is concerning that BEREC proposes a lower threshold which likely results in more regulation based on a questionable theoretical and empirical case. BEREC does not establish any necessity to deviate from the SMP approach. The existence of oligopolies in a network industry such as telecommunications should not automatically necessitate *ex ante* regulation. BEREC's proposal will likely lead to more regulation with detrimental effects for Europe's digital future, because it risks an inconsistent approach to *ex ante* regulation and arbitrary interpretation, which heightens regulatory uncertainty.

The challenge for BEREC is thus to embrace the opportunity and guide NRAs towards a more concerted approach by means of focussed regulation targeting persistent bottlenecks, but overall reducing the degree of existing *ex ante* regulation.

In line with our previous submission to BEREC's questionnaire on oligopolies, we support the recommendation to strengthen existing guidelines of 'joint dominance' and update Annex II of the Framework Directive. This establishes a meaningful basis for assessing joint dominance on an *ex ante* basis and will ensure that the existing framework adequately reflects relevant European jurisprudence.

In sum, Vodafone considers that the case for deviating from existing regulatory principles in the context of tight oligopolies has not been made and that the SMP framework remains relevant as it ensures clear, predictable and consistent rules for *ex ante* regulation.