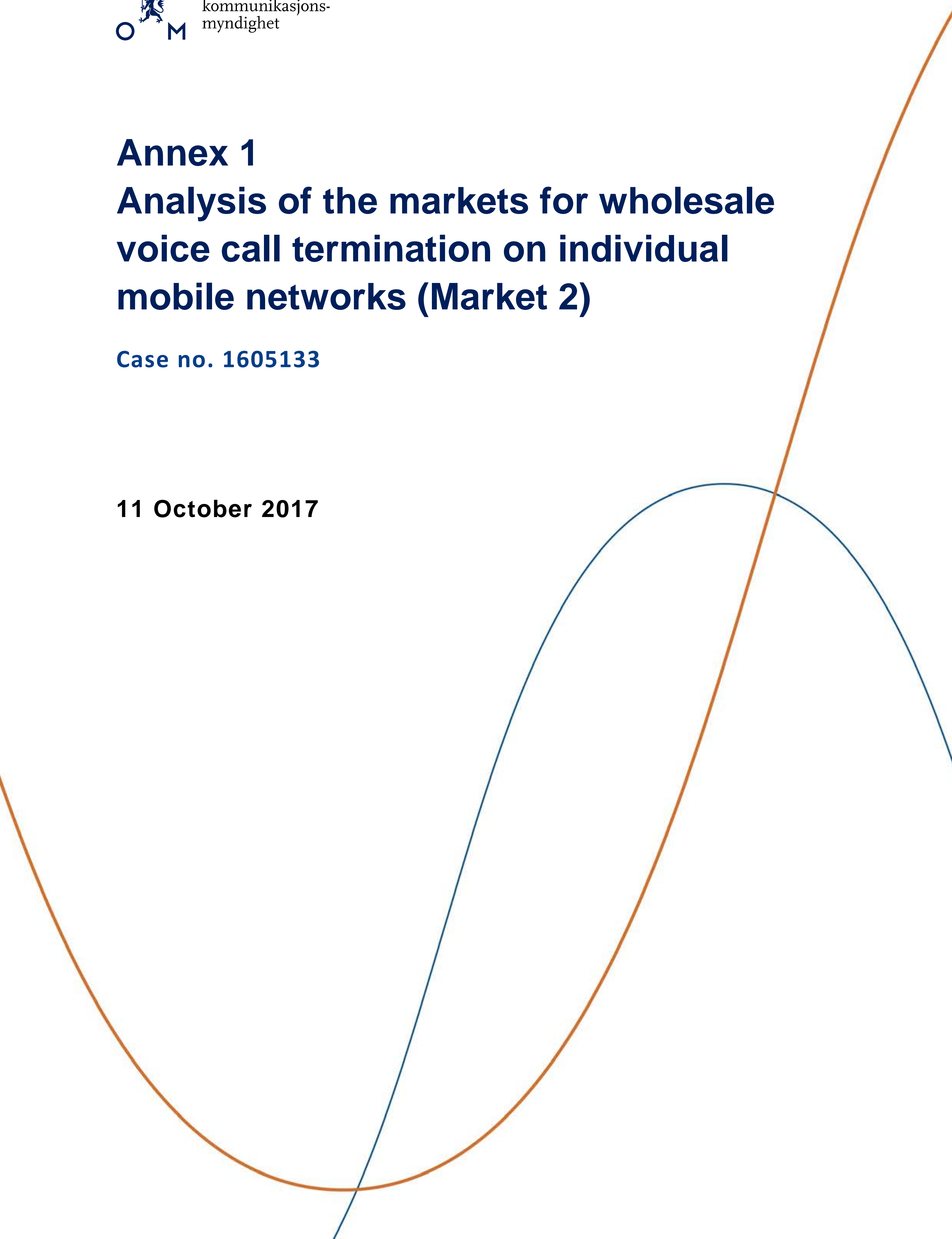

Annex 1
Analysis of the markets for wholesale voice call termination on individual mobile networks (Market 2)

Case no. 1605133

11 October 2017

Summary

This is the Norwegian Competition Authority,s (Nkom) seventh round of analysis of the markets for wholesale voice call termination on individual mobile networks (Market 2). Nkom has previously analysed this market in 2005, 2007, 2008, 2010, 2011 and 2015.

The market analysis contains Nkom's assessment of the need for sector-specific *ex ante* regulation in the relevant markets and an updated analysis of providers with significant market power. The analysis will provide the basis for applying sector-specific measures in those markets in which providers with significant market power are identified.

Chapter 1 contains a description of the background and framework for the analysis.

In chapter 2, Nkom defines the relevant markets, based on guidelines from the EFTA Surveillance Authority (ESA). In its Recommendation on relevant markets, ESA has defined the relevant product markets as wholesale voice call termination on individual mobile networks. Nkom finds that the relevant markets under Norwegian conditions are in line with the Recommendation. No sufficient substitution possibilities exist on the demand or the supply side that make it relevant to broaden the product markets. Nkom assumes that wholesale voice call termination on 2G networks, 3G networks and virtual mobile networks is included in the product markets, irrespective of whether the call originated on a fixed network, mobile network, in Norway or abroad. In line with the principle of technology neutrality, all types of network technologies are included (2G, 3G and 4G).

As regards the geographical definition of the markets, Nkom has concluded that they correspond to the individual mobile networks' respective footprints in Norway, including coverage achieved through national roaming agreements, MVNO agreements, etc.

On the basis of the market definition, Nkom defines the following markets:

- Wholesale voice call termination on Com4's mobile network
- Wholesale voice call termination on Get's mobile network
- Wholesale voice call termination on ICE's mobile network
- Wholesale voice call termination on Lycamobile's mobile network
- Wholesale voice call termination on Phonero's[1] mobile network
- Wholesale voice call termination on TDC's mobile network

[1] On 7 April 2017, the Norwegian Competition Authority decided to authorise Telia Company AB's acquisition of Phonero AS. The services offered by Phonero and Telia are expected to be coordinated. There is a possibility that this will entail a change in the legal entities, i.e. that obligations imposed on Phonero will in practice be transferred to Telia.

- Wholesale voice call termination on Telenor's mobile network
- Wholesale voice call termination on Telia's mobile network

Chapter 3 contains Nkom's analysis of whether there are providers with significant market power in the relevant markets. In Nkom's opinion, the most relevant criteria for analysing significant market power in these markets are *market share, entry barriers and potential competition*, and *countervailing buying power*.

Com4, Get, ICE, Lycamobile, Phonero, TDC, Telenor and Telia are each the sole provider of voice call termination services on their respective mobile networks / virtual mobile networks, which correspond to the relevant markets. They therefore all have a 100 per cent market share. Because the entry barriers within the individual relevant markets are absolute, there is no potential competition within the time horizon of the analysis.

There is therefore a presumption that all eight providers have significant market power throughout the entire period covered by the analysis. However, the provider will not have significant market power if there are weighty factors that have a disciplinary effect on the providers' exercise of market power. These factors are assumed primarily to relate to countervailing buying power. However, Nkom cannot see that there are buyers with enough bargaining power to have a disciplinary effect on the setting of termination charges for the providers mentioned.

In view of this, Nkom has found that Com4, Get, ICE, Lycamobile, Phonero, TDC, Telenor and Telia have significant market power in their respective markets for wholesale voice call termination on individual mobile networks.

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1 Introduction

1.1 Background and framework for the analysis

1. The regulatory framework for electronic communication is based on five directives adopted by the European Union (EU)[2]. These directives have been implemented in Norwegian law by Act no. 83 of 4 July 2003 concerning electronic communications (Electronic Communications Act) and the appurtenant regulations, including Regulation no. 401 of 16 February 2004 on Electronic Communications Networks and Services (Electronic Communications Regulation)

2. The framework shall lay the foundation for the harmonisation of regulation in the EEA area, limit entry barriers and facilitate sustainable competition to the benefit of the users.

3. It follows from Norway's obligations under the EEA Agreement that identification of undertakings with significant market power is to be carried out in accordance with the guidelines and recommendations prepared by ESA under the new Framework Directive for electronic communications services:

- Guidelines on market analysis and assessment of significant market power (hereinafter referred to as "the Guidelines")[3]
- Recommendation on relevant markets (hereinafter referred to as the "Recommendation")[4]

4. According to the Guidelines, an assessment of relevant markets and significant market power must be based on a market analysis. The assessment must be in accordance with competition law methodology. The Guidelines and the Recommendation, together with the provisions of the Act on Electronic Communications, particularly sections 3-1 to 3-3, will therefore form the legal framework for the market analysis.

5. The Electronic Communications Act's definition of significant market power in section 3-1 reads:

> *"A provider has significant market power when the provider individually or jointly with others has economic strength in a relevant market affording the provider the power to behave to an appreciable extent independently of competitors, customers and consumers. Significant market power in one market may result in a provider having significant market power in a closely related market."*

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[2] Directive 2002/21/EC on a common regulatory framework for electronic communications networks and services (Framework Directive); Directive 2002/20/EC on the authorisation of electronic communications networks and services (Authorisation Directive); Directive 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive); Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive); Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications).

[3] EFTA Surveillance Authority Guidelines 14 July 2004. See: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2006:101:0001:0029:EN:PDF.

[4] EFTA Surveillance Authority Recommendation of 11 May 2016 (http://www.eftasurv.int/media/decisions/College-decision---Revision-of-ESA-Recommendation-on-Relevant-Markets-susceptible-to-ex-a.pdf) with the Commission's Explanatory Note (https://ec.europa.eu/digital-single-market/news/explanatory-note-accompanying-commission-recommendation-relevant-product-and-service-markets).

6. The term "significant market power" in the Electronic Communications Act is very close to the competition law standard "dominance".

7. In the document "Methodology for market analysis"[5] (the methodology document), Nkom[6] has elaborated on the Guidelines' criteria for market analysis on a number of points. The methodology document is not legally binding, but expresses Nkom's understanding of the guidelines that Nkom is obliged to follow. The market analyses will therefore be undertaken in accordance with the views and assessments expressed in the methodology document. Should there prove to be discrepancies between the methodology document and the Guidelines or the Recommendation, the Guidelines or the Recommendation will take precedence. This analysis is based on the methodology document dated 11 June 2009.

8. The work on the market analysis can be naturally divided into three stages:

1. Define relevant markets by defining relevant product markets and geographical markets.
2. Carry out market analyses of each of the relevant markets with a view to uncovering whether any providers have significant market power.
3. Impose obligations on providers designated as having significant market power.

9. This analysis contains Nkom's assessments for the first two phases.

10. The market analysis is an annex to a decisions in which Nkom provides information about specific obligations[7] for those providers considered to have significant market power. Pursuant to section 3-4 of the Electronic Communications Act and Norway's obligations under the EEA Agreement, Nkom is obliged to impose at least one specific obligation on providers with significant market power.

11. The market analyses will be subject to regular review and therefore have a limited forward-looking time horizon, cf. paragraph 20 of the Guidelines and section 9-3, second paragraph, of the Electronic Communications Act. This analysis has a time horizon of two to three years.

1.2 Previous market analyses and decisions in the markets for termination on mobile networks

12. This is Nkom's seventh analysis of the markets for wholesale voice call termination on individual mobile networks. The markets are referred to in the analysis as the markets for voice call termination on mobile networks.

13. The previous analyses have been based on the prevailing market definitions recommended by ESA. In the 2004 Recommendation the market for voice call termination on mobile networks was designated as Market 16. The market was retained in the ESA Recommendation from 5 November 2008, but was now referred to as Market 7. The definition of the market remained unchanged.

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[5] http://www.nkom.no/marked/markedsregulering-smp/rammer/introduksjon-til-markedsregulering-smp/_attachment/478?_ts=137da560d48.

[6] On 1 January 2015 the Norwegian Post and Telecommunications Authority (NPT) changed its name to the Norwegian Communications Authority (Nkom). In this document, the Authority is referred to as Nkom, including in references to decisions and processes from the period when it was called the Norwegian Post and Telecommunications Authority.

[7] Cf. chapter 4 of the Electronic Communications Act.

14. ESA has carried out a further revision of the list of relevant markets and adopted a new recommendation on 11 May 2016[8]. The wholesale markets for voice call termination on mobile networks are still included in this list, but are now called Market 2.

15. The previous analyses are dated 19 September 2005, 8 May 2007, 17 November 2008, 27 September 2010, 15 June 2011 and 13 January 2015. The table below provides an overview of Nkom's decisions and providers that have been designated as having significant market power:

Nkom's decisions	Providers designated as having significant market power
19 September 2005	Telenor ASA (Telenor), Teletopia Mobile Communications AS (Teletopia), Tele2 Norge AS (Tele2), Telia Norge AS[9] (Telia)
8 May 2007	MTU Networks AS[10] (MTU), TDC AS[11] (TDC), Telenor, Tele2, Telia
17 November 2008	Barablu Mobile Norway Ltd. (Barablu), Network Norway AS (Network Norway), MTU, Phonero AS[12] (Phonero), TDC, Tele2
27 September 2010	Network Norway, Phonero, TDC, Telenor, Tele2, Telia
15 June 2011	Lycamobile Norway Ltd (Lycamobile)
13 January 2015	Com4 AS (Com4), Lycamobile, Network Norway, Phonero, TDC, Telenor, Tele2, Telia

Table 1: Providers with significant market power in the markets for voice call termination on mobile networks

[8] http://www.eftasurv.int/media/decisions/College-decision---Revision-of-ESA-Recommendation-on-Relevant-Markets-susceptible-to-ex-a.pdf.

[9] Telia Norge AS's formal name at the time of the decision was NetCom AS and TeliaSonera Norge AS. From 1 March 2016, the formal name of the company is Telia Norge AS.

[10] Teletopia Mobile Communications AS was acquired by MTU Networks AS at the beginning of 2007. MTU Gruppen filed for bankruptcy at the end of November 2007.

[11] Its formal name in the decision of 8 May 2007 was TDC Song AS.

[12] The provider's formal name in the decision was Ventelo AS. The companies Ventelo AS and Phonero AS merged on 1 January 2015, and the name of the new company is Phonero AS. Phonero AS was acquired by Telia Company AB in April 2017, but remains an independent company.

2 Market definition

2.1 Market definition – general

16. As stated above, in connection with the market analysis Nkom shall assess whether the markets predefined by ESA are suitable for Norwegian circumstances. In addition, the product market must be described and defined and the geographical market defined. The relevant markets are to be defined in accordance with the principles of competition law.

2.1.1 The product market

17. A relevant product market comprises products or services (the terms are used interchangeably below without any difference in meaning) that are sufficiently substitutable. The starting point for the definition of a relevant product market is an assessment of demand-side substitutability. However, substitutability may also exist on the supply side and may then be relevant in the delimitation of the relevant market.

18. Demand-side substitutability exists when two or more products in the market are, in the perception of the end user, mutually exchangeable or substitutable on the basis of characteristics, price and area of utilisation.

19. Supply-side substitutability exists when providers of other (non-substitutable) products, as a response to a marginal price change in the short term, can change their production or distribution and offer substitutable products without incurring significant additional costs or substantial risk.

20. An acknowledged method of analysing substitutability is the so-called "hypothetical monopolist test" (SSNIP test)[13], which attempts to find the best-defined market in which a hypothetical monopolist can exercise market power[14]. This test assesses the effect of a small, but significant (in practice 5–10 per cent) and permanent increase in the price of the relevant product, based on the assumed price level in a market with effective competition. All other prices are assumed to be unchanged. The effect of the price increase in the relevant market and the overall effect on the producer's revenues are then assessed. The point of the SSNIP test is to assess the effect of the relative price increase on revenues of the relevant product with a view to establishing whether the price increase will be profitable for the hypothetical monopolist.

21. The Recommendation does not make use of the SSNIP test an absolute requirement in the market definition. Similar methods may therefore also be used. Regardless of method, the hypothetical assessment should be supplemented by factual information about behaviour on the supply and demand sides to the extent that such information is available. On the demand side, factors such as the end users' access to information, the costs of changing provider and other lock-in mechanisms should be taken into consideration. On the supply side, account should be taken of the actual opportunities a provider has to change production as well as any regulatory conditions that prevent rapid market entry by competitors in the market.

2.1.2 The geographical market

22. Once the relevant product markets have been determined, the geographical market is defined. In accordance with paragraph 57 of the Guidelines, the geographical market may be defined as the area in which the relevant product is offered on virtually equal and sufficiently homogeneous competitive terms.

[13] "Small but Significant Non-transitory Increase in Price". See the paragraph 40 of the Guidelines.

[14] This report uses the concepts "countervailing buying power" and "buyer power" synonymously.

23. However, it is stated in paragraph 60 of the Guidelines that geographical markets in the electronic communication sector have traditionally been determined by reference to the relevant network's area of coverage as well as the effective boundaries (jurisdiction) of the legal regulation of the market.

24. Nkom can define regional or national markets. The jurisdiction for defining transnational markets is vested with ESA.

25. It might make sense in the case of some product markets to divide them into geographical markets that are smaller than the nation state, since there are local providers of electronic communications services covered by the relevant product market, or to identify local variations in the competitive conditions.

26. BEREC[15] published its updated Common Position on geographic aspects of market analysis (definition and remedies)[16] in 2014. In this document, BEREC describes the recommended procedure for any geographical definition of the market.

27. In section 2.2.4 Nkom assesses whether there is a need for a more detailed geographic analysis of the Norwegian markets for voice call termination on mobile networks.

2.2 Definition of the markets for voice call termination on mobile networks

2.2.1 Product definition in the Recommendation

28. The definition of the markets for voice call termination on mobile networks was not changed in the ESA Recommendation of 2016. Nor did the Recommendation entail any significant changes to the guidelines issued for the definition of this market in the Commission's Explanatory Note[17] to the Recommendation. The Commission concludes that the relevant market is defined as the individual terminal network of each MNO[18] and each MVNO[19] that negotiates termination charges with other mobile operators, regardless of the host operator[20]. In concrete terms, this means that the Commission defines the relevant markets for voice call termination in individual mobile communications networks, where the principle of technology neutrality entails that all types of network technologies are included: 2G (GSM[21]), 3G (UMTS[22]) and 4G (LTE[23])[24].

[15] Body of European Regulators for Electronic Communications (BEREC).

[16]http://berec.europa.eu/eng/document_register/subject_matter/berec/regulatory_best_practices/common_approaches_positions/4439-berec-common-position-on-geographic-aspects-of-market-analysis-definition-and-remedies.

[17] https://ec.europa.eu/digital-single-market/news/explanatory-note-accompanying-commission-recommendation-relevant-product-and-service-markets.

[18] MNO stands for Mobile Network Operator.

[19] MVNO stands for Mobile Virtual Network Operator. Providers with an MVNO agreement offer end-to-end communication to their own retail customers, but without having their own frequencies or radio network. MVNOs lease access to radio capacity from providers who own their own radio network. An MVNO has a 100 per cent market share in its own virtual network, enters into special interconnection agreements with other providers, and, like network owners, controls the right to terminate voice telephony with their end users.

[20] From the Explanatory Note: *"As regards the market for mobile termination, this is composed of the markets for termination offered by MNO and full MVNO that can negotiate call termination charges with other mobile operators independent of their host network"*.

[21] GSM stands for Global System for Mobile Communications.

[22] UMTS stands for Universal Mobile Telecommunications System.

[23] LTE stands for Long Term Evolution.

[24] 2G and GSM, 3G and UMTS, and 4G and LTE are used interchangeably and synonymously throughout.

29. In this section Nkom summarises the main guidelines for defining the relevant product market.

30. The Commission refers to the previous Explanatory Note[25] where it is established that voice call termination in mobile networks is the least replicable input factor in the production of voice services for the retail market. Voice call termination thus represents a significant bottleneck.

31. The Commission emphasises the market failure in the termination markets as a result of the calling party pays (CPP) principle. According to this principle, only the party placing the call (the calling party) pays for the call. Because the termination charge is set by the party that controls the network receiving the call (the terminating operator), the calling party has little or no ability to influence the termination charge. The CPP principle is currently the norm in all European countries.

32. The Commission finds there is no demand-side substitutability at the wholesale level. A call to one particular end user is not substitutable with a call to another end user. For an end user to be able to reach a particular end user on another mobile network, the originating operator has no choice other than to terminate the call on the mobile network to which the end user in question is connected. For that reason, demand at the wholesale level is derived directly from demand at the retail level.

33. Similarly, supply-side substitutability is regarded as irrelevant. However, the Commission does not rule out that, in compliance with general competition law, there may be mechanisms in the retail market that could restrict competition. It is pointed out that if a national analysis were to come to such a conclusion, it would be supported by empirical evidence.

34. Since the operator and product are perfectly linked, the Commission discusses whether other forms of communication could represent real substitutes on the supply and demand sides, respectively. In that case, this might represent a *de facto* limitation on the ability of providers to set termination charges regardless of customers, competitors and consumers. However, the Commission concludes that other forms of communication do not currently represent full substitutes, on either the demand or the supply side. To the extent substitutes exist on the demand side, such as calls to a fixed-line telephone[26], use of SMS or use of other communication channels, such as OTT services[27], these alternative forms of communication do not appear to be able to have a disciplining effect on the pricing of termination on mobile networks.

35. In a supplementary observation, the Commission mentions that it does not propose to define separate markets for SMS termination, even though termination of voice calls and termination of SMS messages share the same market characteristics. The Commission does not rule out that national three-criteria tests may result in these kinds of markets being defined nationally, but emphasises that demand-side substitutability must be assessed specially, cf. the increased availability of e-mail and instant messaging as a result of the proliferation of smartphones and broadband.

36. One consequence of the definition is that all mobile operators have a 100 per cent market share of voice call termination on their own mobile networks. According to the Commission, the absence of significant market power (SMP) in this kind of situation can only be determined if there is buyer power that can sufficiently discipline the market power.

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[25] https://ec.europa.eu/digital-single-market/sites/digital-agenda/files/sec_2007_1483_2_0.pdf.

[26] In this context, no distinction is drawn between traditional circuit-switched fixed telephony (PSTN) and broadband telephony based on packet-switched technology (VoIP).

[27] OTT stands for "over-the-top" and refers to services offered over the internet.

2.2.2 Definition of the Norwegian product markets

37. In the market analysis for the decision of 8 May 2007, Nkom performed a relatively extensive assessment of substitutability on the demand and supply sides based on Norwegian market conditions. In that assessment Nkom concluded that the relevant Norwegian product markets were in line with the Recommendation. Nkom has also reached the same conclusion in subsequent analyses. As stated above, the market definition in the Recommendation from 2016 is unchanged from the definition in the 2008 Recommendation. Nkom regards the market and technological conditions related to termination as largely unchanged from the previous analyses, and refers here to the assessment in the previous market analyses.

38. These assessments of product market definition entail that termination of SMS messages is not included in the market definition for termination of voice calls on mobile networks[28]. Nkom maintains that, from an end-user perspective, it cannot be claimed that there is sufficient substitutability between voice calls and SMS messages, for a variety of reasons. For the end user, a call entails instant, two-way communication. By contrast communication via SMS can be delayed in that the recipient is free to choose when to read the message. Indeed the sender can never even be 100 per cent certain that the message will reach the recipient.

39. On the wholesale level there are both contractual and technical differences between voice call termination and SMS termination, entailing that SMS is not included in the market for termination of voice calls. Whereas termination of voice calls is charged per minute, termination of SMS is charged per unit. Technically there is also the possibility that SMS, which unlike voice calls does not depend on real-time processing, can be transported on the network in a way that allows delays.

40. In the past Nkom has not included termination of voice calls on 4G networks in the product market, primarily because voice calls have not been offered on 4G networks at the time of the decisions. In line with the principle of technology neutrality and in light of the fact that voice calls over LTE networks are now available, Nkom believes that in reality the product definition in the Norwegian market does not deviate from the Commission's recommendations. The assessment related to the definition of the Norwegian product market thus indicates that voice call termination on 2G, 3G and 4G networks and virtual mobile networks is covered by the product markets. Nkom's assessment is supported by the fact that end users will not notice which network technology the call is terminated on, nor are termination charges expected to differentiate by technology in the future.

41. NPT also upholds the reasoning and conclusion in the above-mentioned market analysis that traffic terminating as machine-to-machine traffic (M2M) shall be included in the product market definition. Although voice calls are expected to account for only a minor share of the M2M traffic, such applications cannot be ruled out.

42. The number series 58x and 59x have been reserved for M2M traffic and will be used for automated or semi-automated communication services for voice calls or data traffic. Both number series have been set aside for M2M communication to relieve the ordinary number series for mobile communication (4x and 9x). From 1 July 2010 it has not been permitted to produce new SIM cards for M2M in the 4x and 9x series. However, it is still possible to use these series for existing M2M applications.

43. While there is not considered to be demand-side substitutability between ordinary voice services and M2M communication, the situation is different on the supply side. Providers of voice termination services on mobile networks will be fully able to offer termination to SIM cards used in M2M communication without substantial adjustment costs. The numbering plan does not distinguish between M2M applications with and without voice, nor is there any

[28] See, for example, section 2.3.6.2 of Annex 1 to Nkom's decision of 8 May 2007.

distinction within the 4x and 9x series between ordinary mobile subscriptions (with voice) and older M2M subscriptions (with or without voice). Supply-side substitution thus suggests that time-charged traffic for M2M subscriptions should be included in the markets.

44. With regard to termination on mobile providers' voice mail services too, Nkom upholds the reasoning and conclusion that the service is a part of the relevant product market, primarily because the voice mail service is an integral part of the mobile subscription and that for practical reasons it is not possible to separate this service from it.

2.2.2.1 New technologies, including VoLTE and Wi-Fi calling

45. Voice over LTE (VoLTE) is basically voice calls via a data connection. LTE is the technical term for a fourth generation (4G) mobile network, where voice calls can be made without using circuit-switched technology. This differs from voice over 2G and 3G, which occurs through allocation of a fixed resource (a "line") on the network. LTE / 4G, with VoLTE technology enabled, has significantly more voice and data capacity than 2G and 3G and can thus be more efficient when it comes to use of bandwidth and spectrum. Voice calls over LTE have the potential for HD audio and require noticeably shorter time to set up a call if both phones are using VoLTE. VoLTE is thus positive for the end users and the network owner alike. Telenor has also included access to VoLTE and Wi-Fi calling in its MVNO and service provider agreements.

46. Wi-Fi calling (also known as Voice over Wi-Fi or VoWi-Fi) uses a Wi-Fi connection as an alternative data carrier for access over a mobile network. The service can, in principle, use a wide range of Wi-Fi networks including home networks. Wi-Fi calling does not replace a public mobile network, but the service uses the wireless network to connect the terminal via a broadband line and into the provider's voice platform. Wi-Fi calling makes use of the internet in much the same way as OTT services like Skype and Viber, but unlike these, Wi-Fi calling is usually connected to the operator's voice platform and thus to the public telephone network.

47. In principle, as far as termination is concerned, it makes no difference whether a call is terminated via 3G, VoLTE or Wi-Fi. The end user continues to use their normal phone number, and the calling party dials this number to make the call. The price is the same as for other voice traffic. This kind of voice traffic does not use the end user's data allowance.

2.2.3 Conclusion regarding definition of the Norwegian product markets

48. The Norwegian product market is delimited on the basis of a technology-neutral definition of termination of voice calls on individual mobile networks. This means termination to MNOs and MVNOs in 2G, 3G and 4G networks and includes VoLTE and Wi-Fi calling.

2.2.4 Definition of the Norwegian geographical markets

49. In the previous market analyses of voice call termination on mobile networks, Nkom has concluded that the geographical market is to be defined nationally and to the extent of each individual provider's network, irrespective of which country the call originated in.

50. Defining the product markets as termination on individual mobile networks functions inherently as a geographical definition. In Nkom's view, the geographical market definition should be based on the area where the providers in question control the termination charges and where the market conditions are sufficiently homogeneous. The mobile networks used for termination are geographically limited to Norway. Moreover, the geographical jurisdiction of the Electronic Communications Act is limited to Norway. However voice call termination could happen abroad. Within the EEA-area the rules regarding international roaming ensures that the customer normally will note face additional charges when receiving calls. Outside the EEA-area the customer will normally face additional charges for such services.

51. In accordance with section 1-3 of the Electronic Communications Act, cf. Regulation no. 882 of 4 July 2003, the Electronic Communications Act applies to Svalbard, Jan Mayen, the

dependencies and Antarctica. In respect of Svalbard, exemptions have been made for chapter 3 (significant market power), chapter 4 (access) and section 9-3 (consultation procedure). However, electronic communications on Jan Mayen, the dependencies and Antarctica are assumed to have very little significance for the market analyses Nkom carries out pursuant to the Electronic Communications Act.

52. Different prices or different product quality for wholesale services in different parts of the country are elements that might lead to division into several geographical markets. However, there are no indications that market and competitive conditions in Norway would justify this kind of division. Both Telenor and Telia have virtually nationwide networks, and providers with national roaming or MVNO access agreements achieve similar coverage through their agreements. Thus, all providers of termination services offer termination in practically all of Norway, and the termination charges are the same throughout the country. Nor with regard to the quality of the call termination product is it possible to differentiate between service providers or areas.

53. In Nkom's opinion, competitive conditions do not differ consistently in clearly defined parts of the country in a way that suggests a geographical division of the market is necessary. For this reason, Nkom believes that no further analysis is necessary regarding the question of whether the market should be divided up geographically, and there continue to be grounds for a national approach to market definition and analysis.

54. Nkom thus maintains that the geographical market for access and call origination on mobile networks is mainland Norway.

2.2.5 Overview of the markets and operators

55. Mobile providers that technically and financially control access to terminate voice telephony with end users are providers in the relevant market.

56. In all, roughly 5.5 billion minutes (excluding internal traffic) were terminated on Norwegian mobile networks during 2016, which is at roughly the same level as in 2013[29]. Figure 1 below shows the breakdown of terminated call minutes among the providers that control termination based on the figures for 2016[30].

[29] Cf. the market analysis of 13 January 2015: https://www.nkom.no/marked/markedsregulering-smp/marked/marked-7/_attachment/16136?_ts=14ae3abc1b5.
[30] There is no traffic data from Get in its start-up year.

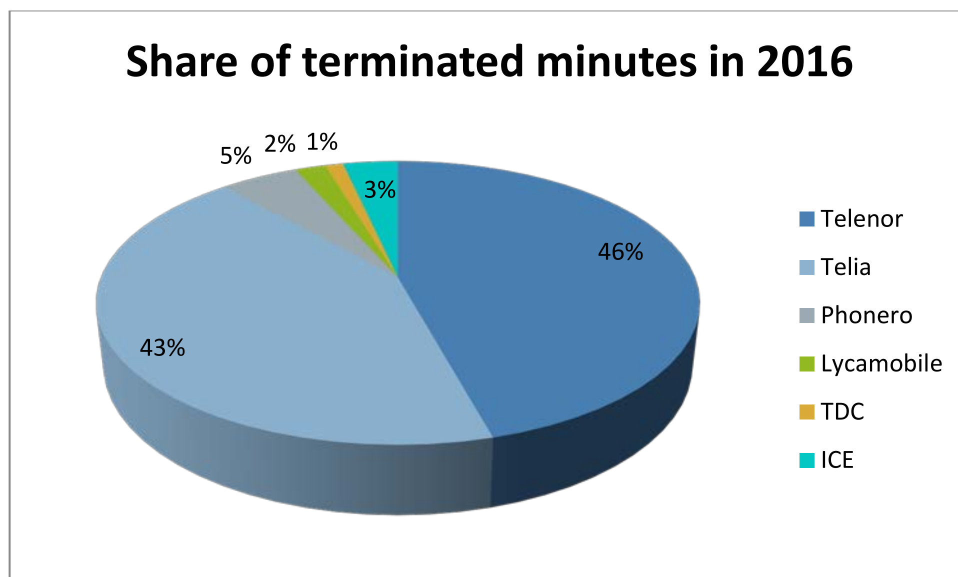

Figure 1: Share of terminated minutes that originated externally. Source: Nkom's ecom statistics for 2016.

57. For 2016, revenues from voice call termination on mobile networks account for a total of approximately NOK 0.4 billion. Revenues for 2013 were NOK 0.9 billion[31]. Regulated price reductions are the reason for the decline in revenues. From 1 January 2013, charges were symmetric for all the providers, and from 1 July 2015 the termination charges were based on pure LRIC (long run incremental costs).

58. Telenor and Telia are established mobile providers with both radio and core networks. The companies' GSM networks (2G) and UMTS networks (3G) are virtually nationwide in terms of population coverage. The roll-out rate and ambitions for LTE networks (4G)[32] indicate that this technology will also be nationwide within the time horizon of this analysis. Both companies have entered into interconnection agreements with other providers and through these agreements offer voice call termination on their own mobile networks. Both Telenor and Telia offer voice over LTE (VoLTE), provided the end user has a handset that supports the technology. Telenor also offers Wi-Fi calling, while Telia is currently in the test phase with this technology[33].

59. Network Norway and Tele2 established the infrastructure company Mobile Norway AS (Mobile Norway) in autumn 2007, in which they each owned 50 per cent. In the autumn of 2011, the Swedish parent company of Tele2 (Tele2 AB) acquired Network Norway. At the end of 2013, Mobile Norway had achieved roughly 75 per cent population coverage and had thus fulfilled the obligations arising from asymmetric termination charges. Mobile Norway did not win any licences in the frequency auction[34] held in December 2013 and therefore concluded its activities in the 900MHz-band. The remaining frequencies in the 2GHz band were not considered sufficient to continue operation.

60. On 4 July 2014, Telia Company AB entered into an agreement with Tele2 AB for the acquisition of all shares in Tele2's Norwegian activities, and the Norwegian Competition

[31] See footnote 29.

[32] These companies primarily offer packaged retail products with 4G data traffic and 3G voice and SMS.

[33] https://telia.no/4g-tale

[34] http://www.nkom.no/teknisk/frekvensauksjoner/auksjoner/planlagte-avsluttede/auksjon-14-790-862-mhz

Authority approved the merger on 5 February 2015. As a result of these events, Network Norway and Tele2 are no longer providers in the Norwegian mobile market.

61. ICE Communication Norge AS (ICE) was formally founded in 2013. However, as a brand of mobile broadband, ICE has been on the market for more than ten years. ICE offers services based on its own network with CDMA technology in the 450 MHz band. The company has more than 75 per cent population coverage in this network. In 2015, ICE replaced its CDMA network with LTE and transferred its mobile broadband customers to this network. In addition, on 15 June 2015 ICE launched traditional mobile products based on the access agreement with Telia[35]. More recently the company has also based its retail services on partial production on its own network. The company buys national roaming from Telia for that part of traffic flows linked to own customers that are not produced over ICE's own network.

62. Lycamobile, Phonero[36] and TDC offer voice call termination based on MVNO access agreements. MVNOs have their own core network, switching network and associated support systems, and their own mobile network code (MNC). However, MVNOs do not have their own spectrum resources or radio network; rather they enter into agreements with providers that own their own network for access to the radio portion of this network. An MVNO will conclude separate interconnection agreements with other providers in the same manner as ordinary mobile providers, thereby controlling the right to terminate voice telephony with their end users.

63. Get AS[37] (Get) has had a long-standing presence in Norway as a provider of cable television and later on also as a broadband provider. In 2014 the company came under control of the Danish TDC group and now offers mobile telephony in the retail market based on an MVNO agreement with Telia. Get's interconnection is routed partly through TDC's interconnection agreements and partly through the MVNO agreement with Telia. Get is regarded as being in a position to control termination to its own customers and is therefore included as a provider in the relevant market.

64. Com4's core business is machine-to-machine communication (M2M) based on MVNO access with Telia. M2M is primarily the exchange of SMS. Com4 also has a modest amount of voice termination. The voice services have entered into interconnection agreements with other providers and thus fall within the market for voice call termination. However, Com4 has stated that they have arranged the business such that voice calls are terminated on the host operator's network. Nkom nevertheless finds that Com4 is in a position to control its own interconnection through its MVNO agreement, and Com4 will therefore be treated in the same way as the other MVNOs.

65. In addition there are approximately 15 other providers in the Norwegian mobile market that have entered into service provider agreements with a network owner, MVNO or service provider. These agreements grant the right to offer, market and deliver services to end users through pre-paid cards or subscriptions. The end user has a solely contractual relationship with the service provider. All traffic is routed according to the net operator's interconnection

[35] ICE buys access to both national roaming and service provider access from Telia. ICE has interconnection agreements with Telenor and Telia for all services, plus some interconnection agreements with individual companies for certain services. The company is considering extending its existing interconnection agreements and entering into new ones.

[36] On 7 April 2017, the Norwegian Competition Authority decided to authorise Telia Company AB's acquisition of Phonero AS. The services offered by Phonero and Telia are expected to be coordinated. There is a possibility that this will entail a change in the legal entities, i.e. that obligations imposed on Phonero will in practice be transferred to Telia.

[37] In 2014 the Danish TDC Group acquired Get AS. Formally TDC and Get are two separate Norwegian companies, but their operations in Norway are coordinated.

agreements with others. The service providers thus do not control voice call termination and have therefore been omitted from the further analysis.

2.2.6 Conclusion regarding market definition

66. In Nkom's opinion, the relevant markets are:

- Voice call termination on Com4's mobile network
- Voice call termination on Get's mobile network
- Voice call termination on ICE's mobile network
- Voice call termination on Lycamobile's mobile network
- Voice call termination on Phonero's mobile network
- Voice call termination on TDC's mobile network
- Voice call termination on Telenor's mobile network
- Voice call termination on Telia's mobile network

67. The individual markets include voice call termination in GSM, UMTS and LTE networks, regardless of which country the call originated in. It is emphasised that termination of VoLTE and Wi-Fi calling are included in the markets. In addition the markets include termination on voice mail services. Time-metered traffic to mobile-based M2M subscriptions in the 4x, 58x, 59x and 9x number series are included in the market. In geographical terms, the market for voice call termination on mobile networks shall be defined as the individual mobile networks' respective footprints in Norway, including coverage achieved via national roaming or MVNO access agreements. Norway is understood to mean mainland Norway, i.e. the Norwegian land territory, cf. the definition in section 2.2.3.

3 Analysis of the markets

3.1 General – significant market power

68. Section 76 of the Guidelines lays down that the assessments used to identify providers with significant market power shall be based on a forward-looking market analysis, using existing market conditions.

69. Nkom emphasises that the relevant subject of assessment is the existence of significant market power and not anti-competitive abuse of market dominance. It is therefore not central to the SMP assessment whether any market power or dominance is actually misused or not. A provider's behaviour in the market will nevertheless be relevant to the assessment of significant market power. Even if structural factors are accorded the greatest weight in the assessment, behaviour that helps create or maintain competitive advantages may justify the conclusion of significant market power.

70. The analysis of significant market power is based on the Guidelines and Nkom's methodology document. The providers' *market share* forms the basis of the analysis. Then Nkom assesses *prices and price developments, entry barriers* and *potential competition* as well as *countervailing buying power (buyer power).* In Nkom's view, the remaining criteria specified in the Guidelines provide little or no information that is essential for the assessment of significant market power in the relevant termination markets. The analysis does not therefore include these criteria.

71. Significant market power may be held by one provider alone (single dominance) or together with others (collective dominance). However, for the markets concerned, the issue of collective dominance is irrelevant, since there is only one provider in each market.

3.2 Market shares

72. A natural starting point for analyses of significant market power is to assess market share, cf. paragraph 76 of the Guidelines. ESA points out that the Commission assumes that single dominance will normally be found in providers with a market share of 40 per cent or more and that it is only in exceptional cases that a market share of more than 50 per cent does not imply dominance. ESA writes:

> *"According to established case-law, very large market shares – in excess of 50 per cent – are in themselves, save in exceptional circumstances, evidence of the existence of a dominant position. An undertaking with a large market share may be presumed to have SMP, that is to be in a dominant position, if its market share has remained stable over time."*

73. Market share can be measured by revenue, volume or number of customers. The characteristics of the relevant market will be decisive for the choice of market share measurement, cf. paragraphs 77 and 78 of the Guidelines.

74. It follows from the definition of the markets for voice call termination on mobile networks that there is only one provider in the individual market. Thus, regardless of the criteria used to measure market share, each mobile provider has a 100 per cent market share in its respective market. Consequently Com4, Get, ICE, Lycamobile, Phonero, TDC, Telenor and Telia all have a monopoly on voice call termination on their own network.

75. The companies' market shares in the relevant markets are 100 per cent and thus far higher than the thresholds specified by ESA and the Commission for there to be a presumption of significant market power.

76. It follows from paragraph 79 of the Guidelines that the identification of significant market power must not be based solely on market share; rather it must be viewed in context with the other relevant assessment criteria. In the following, Nkom considers prices and developments in prices, entry barriers and potential competition as well as buyer power.

3.3 Prices and price developments

77. Price levels and developments in prices over time can often indicate the degree of competition in a market, or the degree of potential competition, and can thereby provide an indication of whether a provider has market power. However, in the markets for call termination on mobile networks, it follows from the definition that each market consists solely of a single provider. All the providers of voice call termination on mobile networks have been subject to price controls. Price developments have thus largely been dictated by these price controls, meaning this information is of limited value for the assessment of market conditions.

78. The table below shows selected termination charges in the period 2001 to 2017.

Provider	1.1.01	1.12.03	31.3.06	1.2.07	1.2.09	1.7.10	1.1.12	1.1.13	1.7.15	1.1.16	1.1.17
Telenor	0.95	0.78	0.73	0.65	0.60	0.50	0.30	0.16	0.083	0.075	0.065
Telia	1.21	1.11	1.01	0.91	0.60	0.50	0.30	0.16	0.083	0.075	0.065
Tele2		1.26	1.16	1.16	1.00	0.90	0.40	0.16	0.083		
Teletopia/MTU		1.26	1.26	1.26	1.00	0.75					
TDC			1.16	1.16	1.00	0.75	0.30	0.16	0.083	0.075	0.065
Network Norway				1.16	1.00	0.90	0.70	0.16	0.083		
Phonero				1.16	1.00	0.75	0.30	0.16	0.083	0.075	0.065
Barablu				1.61	1.00	0.75					
Lycamobile							0.30	0.16	0.083	0.075	0.065
Com4									0.083	0.075	0.065
ICE											0.065
Get											0.065

Table 2: Developments in mobile termination charges in NOK from 2001 to 2017. The rates are per minute, including any call set-up charges, but excluding VAT.

79. None of the providers chose to follow Telenor and Telia's gradual reduction of termination charges in the period until they themselves were made subject to price controls. After that, they have set their termination charges to their own regulated maximum price. Such a pricing strategy would not be possible over time in a market with competition. If there were competition in providing a uniform commodity like termination, the providers would have to be at virtually the same price level to be able to sell their product. The price development shown in the table above thus indicates that the providers do not face competition in the termination markets and that there are not sufficiently disciplinary mechanisms for price setting.

80. ICE and Get have entered the market since the previous market analysis and are therefore not subject to obligations related to termination. These companies thus have the opportunity to set higher termination charges than the regulated maximum rate imposed on the other providers in the market. However, both companies have chosen prices that correspond to the regulated rate. In this context, reference is made to the discussion concerning buyer power in section 3.5.

3.4 Entry barriers and potential competition

81. Potential competition from new operators may affect a dominant provider's behaviour in the market, including in connection with price setting. Various forms of entry barriers may, however, weaken or remove the basis for potential competition.[38]

82. The relevant markets are defined as voice call termination in the individual providers' physical or virtual mobile networks. Given the current technology it is not possible for parties other than the provider that controls this mobile network to provide termination to their own customers on the network in question. For that reason, within the time horizon of the analysis of up to three years, it appears to be impossible for other providers to enter the respective termination markets. In such a market, the entry barriers will therefore be absolute, and there is thus no potential competition. Therefore, Nkom does not find it necessary to carry out a more detailed assessment of entry barriers such as sunk costs and economies of scale.

[38] In paragraph 81 of the Guidelines, ESA writes the following about entry barriers: "In fact, the absence of barriers to entry deters, in principle, independent anti-competitive behaviour by an undertaking with a significant market share."

83. Assuming that there nevertheless was competition in the termination markets, this would be reduced as a result of the calling party pays principle[39] (CPP). This principle enables the operator with high termination charges to subsidise its own customers' calls with revenues from termination. Thus, the end users of the operator with the high termination rates will not have an incentive to change provider.

84. Absolute entry barriers, and thus the absence of potential competition within the time horizon of the analysis, indicate that Com4, Get, ICE, Lycamobile, Phonero, TDC, Telenor and Telia have significant market power in their respective markets for termination.

3.5 Buyer power and countervailing buying power[40]

3.5.1 General comments on buyer power

85. Buyer power[41] is a factor that may indicate that, contrary to expectations, providers of termination services on mobile networks do not actually have significant market power. It is stated in the comments to the Commission's Recommendation[42] from 2007 that:

> *"A market definition for call termination on each mobile network would imply that currently each mobile network operator is a single supplier on each market. However, whether every operator then has market power still depends on whether there is any countervailing buying power, which would render any non-transitory price increase unprofitable."*

86. Nkom believes that buyer power exists when a defined buyer or group of buyers is sufficiently important to the seller to be able to exercise influence on the price that the seller charges for the goods or service. Thus, exercising buyer power in the individual markets for voice call termination on mobile networks will mean that buyers of termination are able to have an impact on the monopolists' determination of their own termination charges.

87. However, in assessing buyer power in connection with significant market power it is not enough to ascertain that providers that demand the termination service potentially have some buyer power or that the provider has actually exercised buyer power. The question in this context is whether the seller of termination is subject to buyer power to such a degree that the buyer power provides a basis for departing from the presumption that the seller may act independently of competitors, customers and consumers. This issue is discussed in the following as a question of whether the buyer power is sufficiently effective.

88. Buyer power is deemed to be sufficiently effective if it is able to generate virtually the same outcome that could be expected in a market characterised by competition. This means, among other things, that the provider is prevented from setting termination charges that are substantially higher than the price that could be expected in a competitive market.

89. Providers of termination services are in a reciprocal relationship in that they act as buyers and sellers of termination in one another's networks. Profits from the call termination product will thus depend on the difference between revenue from termination on the operator's own network and expenses for termination on other operators' networks. For that reason, a

[39] The calling party pays principle entails that the subscriber placing the call also pays for it.

[40] The criterion corresponds to "absence of, or low countervailing buying power" in paragraph 79 of the Guidelines.

[41] The terms "countervailing buying power" and "buyer power" are used interchangeably without any intended difference in meaning.

[42] Cf. Explanatory Note, page 44.

reduction of termination charges by one seller of termination may provide a reason for the buyers of termination to reduce their own termination charges. Termination charges that are higher than a cost-oriented price and the price that would have been achieved in a functioning market indicate that the buying power is not sufficiently effective. A decrease in others' termination charges that is not reflected in a provider's own termination charges may also be an indication that the buying power is not sufficiently effective.

90. Buyer power is not an absolute concept, but refers to the relative strength a buyer has in bargaining with a seller for a given good or service. Thus, the degree of buyer power will vary according to the particular constellation of buyers and sellers.

91. Some factors generally serve to reduce the providers' ability to exercise buyer power in the markets for voice call termination on mobile networks. These factors include:

- If the buyer of access is able to cover his needs in a way other than by buying from the seller, including the possibility of reducing or refraining from purchasing.
- The regulatory context in which any buyer power is exercised, including any specific obligations, as well as the parties' expectations of the outcome of bringing any disputes on interconnection agreements to Nkom for resolution.

92. Nkom has considered these factors that generally serve to reduce the ability to exercise buyer power (see Annex 1 to the decision dated 13 January 2015, cf. the decision dated 27 September 2010) and finds that the assessments there are still valid. Reference is therefore made to that decision for an assessment of these factors. In the following chapter Nkom examines factors that are pertinent to determine whether any of the companies covered by this analysis are exposed to buyer power that is regarded as being sufficiently effective.

3.5.2 Nkom's assessment of whether the specific providers are exposed to buyer power

93. In its previous analyses Nkom has discussed whether there are factors that, on an individual basis, indicate that the companies covered by these analyses were exposed to buyer power. Nkom concluded that the buyer power that the analysed providers were subject to was not sufficient to change the presumption that the providers were able to act independently of the market. In Nkom's opinion, there is no specific evidence to suggest that the previous conclusions about buyer power should be amended. Against this backdrop, Nkom deems it sufficient to undertake a limited individual assessment of buyer power.

94. In addition to the factors mentioned in the previous section, buyer power may be exercised on the basis of:

- The buyer's importance to the seller by virtue of the buyer's purchase volume.
- Whether the buyer can offer something of interest to the seller, such as access to other markets.

95. The buyers of voice call termination on mobile networks consist of other fixed network providers and mobile providers. The largest buyers in Norway are Telenor and Telia. In addition to buying termination for its own mobile and fixed network customers, Telenor also acts as a supplier of transit services for other mobile and fixed network providers.

96. Negotiations on interconnection ordinarily take place bilaterally between the service providers. In view of Telenor and Telia's role as the biggest buyers of termination on Norwegian mobile networks, Nkom finds that these companies are most able to exercise buyer power. The fact that Telenor and Telia produce services that are necessary inputs for the other providers' production of services is assumed to further support this.

97. Nkom finds it appropriate to use Telenor and Telia's ability to exercise buyer power as a starting point. To the extent that the analysis shows that Telenor and Telia would not be in a position to discipline the analysed providers' termination charges, it is assumed that the other buyers of termination would also not be in a position to exercise buyer power that provides a basis for deviating from the presumption that the company has significant market power.

98. Smaller providers can normally be expected to be more exposed to pressure in negotiations than the larger providers. However, the minor providers' relatively low traffic volume means that the charges that the minor providers set have a relatively small impact on the larger providers' interconnection costs, and may pull in the opposite direction. Thus, it can be assumed that Telenor and Telia's *incentives* to exercise buyer power have been greatest vis-à-vis one another and vis-à-vis those providers that have previously benefited most from asymmetric termination charges, namely Network Norway and Tele2. At the same time, it is not unreasonable to assume that their *ability* to exercise buyer power is greater vis-à-vis Com4, Get, ICE, Lycamobile, Phonero and TDC.

99. The termination charges of all the providers included in this analysis, with the exception of Get and ICE, are subject to price controls in the form of a price cap. As part of its assessment of buyer power, Nkom will choose a "modified greenfield approach", namely disregarding the obligations in the market that is the subject of the market analysis. One starting point for assessment of buyer power could be how the companies used to set their termination charges before the companies had regulatory price caps imposed. Most of the companies covered by this analysis have, however, been subject to regulatory price caps for some time now. Nevertheless, price caps will not prevent any buyer power from driving prices down to a level below the price cap. In this light Nkom finds it most relevant to consider the providers' behaviour after the regulatory price caps were imposed.

100. Until 2013 Network Norway and Tele2 benefited from asymmetric price controls, meaning they had a significantly higher proportion of the termination revenues than their share of the terminated minutes would suggest. The relatively high costs that Telenor and Telia had from purchasing termination from Network Norway and Tele2 boosted the companies' incentives to try to exercise their buyer power. Similarly Telenor and Telia's positions as sellers of access gave these companies the opportunity to exercise buyer power vis-à-vis Network Norway and Tele2 as buyers of access. Nevertheless, NPT has not found empirical evidence that Telenor and Telia actually succeeded in exercising buyer power in a way that forced Network Norway and Tele2 to reduce their termination charges.

101. As regards Phonero and TDC, Nkom notes that before the companies' termination charges were subject to regulatory price caps, these companies set their termination charges at a level that was significantly higher than Telenor's and Telia's. Nkom believes that the price level was also substantially above the rates the providers could expect to attain in a market with functioning competition. None of these providers reduced their termination charges beyond what was required by the price controls, which imposed falling prices, and therefore not because Telenor and Telia implemented several mandatory price reductions. In Nkom's opinion, these factors indicate that the buyer power the companies are exposed to has an insufficiently disciplinary effect on the providers' setting of their own termination charges.

102. Lycamobile launched end-user services based on Telia MVNO access in April 2010 and set its termination charges at the same rate as the other MVNOs[43], i.e. at a level that was higher than Telenor and Telia's prices, but that did not exceed the price caps for other MVNOs. Nkom believes that this, seen in isolation, may indicate that the company was exposed to buyer power. Nkom also finds it reasonable to assume that Lycamobile was familiar with

[43] With the exception of Tele2 (which used to have an MVNO agreement with Telia), which had a higher termination charge because of the company's development of a third mobile network in Norway.

Nkom's regulation towards symmetric prices for all mobile providers and that Lycamobile's knowledge of the price controls has had a disciplining effect on its pricing. On this basis Nkom's overall assessment is that Lycamobile's pricing shows that the company, without price controls, has both the incentive and the opportunity to set prices that exceed the rates that it could expect to attain in a market with functioning competition.

103. Com4 entered into an access agreement as an MVNO with Telia in December 2012 and in May 2013 launched its machine-to-machine communications (M2M) services. Com4 entered into its first interconnection agreements with termination charges that matched the regulated price cap at that time of NOK 0.16. In line with Nkom's assessment of Lycamobile's pricing, Nkom finds that Com4 was aware of the symmetric price controls and that it is reasonable to assume that this had influenced its setting of termination charges. At the same time, there is potential for monopoly pricing from Com4 in the same way as from the other providers of termination.

104. As mentioned above, ICE has launched traditional mobile telephony products and has entered into interconnection agreements with several companies where the charge for termination of voice calls is equal to the regulated price. In the same way as the other MVNOs that have entered the market in recent years, Get has set termination charges that match the regulated maximum prices. The assessments above related to Lycamobile and Com4, about knowledge of symmetrically regulated prices and the possibility of monopoly pricing also apply to Get and ICE. Both companies probably expect to have regulatory price caps imposed on them at the same level as the other mobile providers.

105. Nkom expects that Telenor and Telia will have a certain ability to achieve lower rates by exerting bargaining pressure on minor operators such as Com4, Get, ICE, Lycamobile, Phonero and TDC. This is because by virtue of their access agreements, these companies are in a dependency relationship with Telenor and Telia on account of the need for favourable access charges. On the other hand, these operators have the opportunity to change network provider. However, such a switch would entail transaction costs and a potential for loss of customers, weakening this alternative in a negotiation situation.

106. Even if Telenor and Telia could each actually successfully negotiate lower termination rates with their buyers of access, this does not necessarily mean that other operators that depend on buying termination would be able to achieve the same result. As part of their MVNO agreements with Telenor, both Phonero and TDC have, in periods with asymmetric termination charges, agreed to accept lower termination charges for traffic coming from Telenor's mobile network than for traffic originating on other networks. Nevertheless Phonero and TDC's termination charges vis-à-vis other operators in the market were higher than the prices Telenor and Telia charged at the time. Thus, it does not appear that any buyer power that Telenor or Telia may have in this area will benefit other buyers of termination. For that reason, such buyer power is unlikely to push the general price level of a provider downwards, only the rate that the seller of access itself has to pay. In view of this, Nkom believes that any buyer power that either Telenor or Telia may have is insufficient to justify departure from the presumption of significant market power in the individual termination markets of the companies in question.

107. Nor has Nkom found any reason to change its conclusion that neither Telenor nor Telia is exposed to buying power that is sufficiently effective to change the presumption that these operators have significant market power. After the introduction of regulatory price caps, both companies have set termination charges that are equal to the price cap.

3.5.3 Summary of buyer power

108. A lack of alternative providers and ability to ensure any-to-any communication through interconnection obligations severely curtail opportunities to exercise buyer power vis-à-vis sellers of voice call termination on mobile networks.

109. There are signs that some of the smaller operators have been subjected to a certain degree of buyer power. However, Nkom believes that none of the companies have been subjected to a degree of buyer power that would justify departing the presumption that the providers can behave independently of customers, competitors and consumers in the markets for voice call termination on their own mobile networks. Neither Telenor nor Telia has been exposed to sufficiently disciplining buying power in their respective termination markets.

110. As explained above, the key question is whether the companies concerned are exposed to buyer power that can discipline the companies' termination charges to the level they could expect in a market characterised by competition. Nkom believes that the price level that the various companies used both before and after they had regulatory price caps imposed shows that this is not the case. On the contrary, in Nkom's opinion the price level set shows that without price controls the providers have both the incentives and the ability to set rates that are higher than they could have done in a market with functioning competition.

111. Accordingly, Nkom's conclusion is that the buyer power that the analysed service providers are subject to is not sufficiently effective to depart from the presumption that the service providers have significant market power in the market for call termination in their own mobile networks.

3.6 Conclusion – single dominance

112. Com4, Get, ICE, Lycamobile, Phonero[44], TDC, Telenor and Telia are each the sole provider of voice termination services on their respective mobile networks, which correspond to the relevant markets. Thus each has a 100 per cent market share. The assessment of price developments for voice call termination also shows that the providers do not have an incentive to voluntarily reduce their termination charges to a level corresponding to a market with competition. Because the entry barriers within the individual relevant markets are absolute, there is no potential competition within the time horizon of the analysis. As a starting point, all providers will therefore stand to have significant market power. There would have to be compelling factors with a disciplinary impact on market power for this not to be the case. Such factors can primarily be assumed to be associated with buyer power or countervailing buying power.

113. Nor, as the discussion above shows, can Nkom see that countervailing buying power will be able to sufficiently curtail the providers' exercising of market power for call termination on their own networks.

114. In view of this, Nkom has concluded that Com4, Get, ICE, Lycamobile, Phonero, TDC, Telenor and Telia have significant market power in their respective markets for voice call termination on individual mobile networks.

[44] On 7 April 2017, the Norwegian Competition Authority decided to authorise Telia Company AB's acquisition of Phonero AS. The services offered by Phonero and Telia are expected to be coordinated. There is a possibility that this will entail a change in the legal entities, i.e. that obligations imposed on Phonero will in practice be transferred to Telia.