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Draft decision - Principles for the use of margin squeeze tests for VULA fibre and stricter gross margin requirements

The Norwegian Communications Authority (Nkom) refers to the decision in the wholesale market concerning local access to fixed access networks (the Market 3a Decision) and the decision in the wholesale market concerning centralised access to fixed access networks (the Market 3b Decision) of 20 December 2018. Nkom also refers to the decision concerning the determination of final requirements of VULA fibre (the VULA Decision) of 31 March 2020, the decision concerning price regulation of ODP (the ODP Decision) of 13 November 2020, and the decision to maintain access to the copper network (the Copper Decision) of 2 September 2020. Nkom also refers to the remarks of the EFTA Surveillance Authority (ESA) of 19 July 2020 concerning Nkom's draft copper decision.

1 Background and legal basis

In the Market 3a Decision, Telenor ASA (Telenor) was designated as a provider with significant market power and made subject to a number of special obligations, including a duty to meet any reasonable request for local, virtual access to fibre-based PON networks (VULA fibre).

It is stated in section 330 of the Market 3a Decision that Nkom requires Telenor to take the VULA product offered in Market 3b as the starting point and to offer a further developed product that fulfils the criteria for local virtual access in Market 3a. On 31 March 2020, Nkom adopted a decision concerning requirements for VULA fibre in Market 3a.

The Market 3a Decision also provides guidelines for the price regulation of VULA fibre. In section 661, Telenor was required to offer access to VULA fibre in line with Chapter 7.3.5 at prices which entail that access seekers are not subject to margin squeeze.

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It follows from sections 579 and 661 of the Market 3a Decision that, as far as possible, Nkom will apply the same method and principles to the margin squeeze test for VULA fibre in Market 3a as apply to the margin squeeze test for VUA fibre in Market 3b. It is furthermore stated that Nkom will make a separate decision concerning the specific design of margin squeeze tests for VULA fibre in Market 3a, and that Nkom will conduct gross margin tests according to the same method as in the Market 3b Decision.

The principles that form the basis for the margin squeeze test in Market 3b are set out in Appendix 3 to the Market 3b Decision, and the principles that form the basis for the gross margin test are set out in Chapter 7.3.4.3.

On 19 January 2021, Nkom notified a decision concerning principles for margin squeeze tests for VULA fibre and stricter gross margin requirements for national consultation. On the basis of remarks from ESA concerning Nkom's draft copper decision, Nkom also notified changes to the Market 3a Decision regarding requirements for the documentation of passing margin squeeze tests and gross margin tests prior to the launch of changes in Telenor's retail offering.

2 Summary of consultation

2.1 Method of price regulation of VULA fibre

Nkom's notification of a decision

Nkom's notification states that the price regulation for VULA fibre is stipulated in section 661 of the Market 3a Decision. It is stated that Telenor must offer VULA fibre at prices which entail that access seekers are not subject to margin squeeze.

Consultation remarks

GlobalConnect disagrees with Nkom that a prohibition on subjecting competitors to margin squeeze is an appropriate or efficient instrument for VULA fibre. Telenor should instead be subject to a cost orientation requirement based on price minus or cost plus, possibly combined with a price cap in line with the copper regulation model. GlobalConnect refers, among other things, to the Commission's NGA recommendation and the recommendation concerning consistent non-discrimination obligations and cost methods, and believes that the conditions for making exceptions to the general rule concerning cost orientation are not fulfilled, in view of the situation in the Norwegian market today. Furthermore, the margin squeeze prohibition will not effectively prevent Telenor from overpricing access to VULA fibre, and the obligation is thus not appropriate to promote sustainable competition.

NextGenTel believes Market 3 is not suitable for margin squeeze regulation. Price cap regulation whereby the access price reflects underlying costs would be better adapted to this market's structure and is also the form of regulation used in markets with equivalent characteristics. This regulation would not compromise the infrastructure investments in Norway. NextGenTel refers, among other things, to how so far the regulation has not yielded the required results and that economic theory dictates that regulation must be designed to favourise minor new players in the market, in order to achieve positive, dynamic market effects. NextGenTel also believes that the wholesale product must be regulated so that it is possible to offer broadband without being a double- or triple-play provider. The results of the margin squeeze tests show a significant negative net margin for Telenor's exclusively fibre-based products.

RiksTV disagrees with the choice of regulation method. A prohibition on subjecting access seekers to margin squeeze is an excessively mild, inappropriate instrument that does not take sufficient account of access seekers. Margin squeeze regulation has negative implications for several stages of the value chain and gives erroneous incentives to Telenor. Among other things, RiksTV refers to how the results of the margin squeeze tests show that an access seeker is dependent on providing double- or triple-play services and on being of around the same size as Telenor. This impedes competition in both the broadband market and the market for delivering content via broadband. The current regulation gives Telenor incentives to bundle more services and increase retail prices.

Furthermore, RiksTV believes that cost-oriented (cost plus) regulation of the wholesale products, possibly combined with a price cap, would be appropriate and in best accordance with the aim of the Norwegian Electronic Communications Act to promote sustainable competition. The Internet is an infrastructure with unlimited capacity to offer top-level services. If the access price solely covers the underlying infrastructure costs, including a reasonable return, the error of content providers' costs affecting the price for access seekers is avoided. A cost-oriented approach will ensure that Telenor receives an adequate return on its investments and cannot therefore be said to impede the incentives for the further development of fibre broadband. RiksTV also refers to how further development of fibre broadband will depend on government subsidies to a great extent. Going forward, it will be more important to ensure healthy and sustainable competition in the existing fibre networks. There is no business or economic basis for building parallel fibre infrastructure in Norway to any great extent.

Nkom's assessment

Nkom believes that the general principle for price regulation of VULA fibre should remain unchanged during the current regulation period. The assessments are based on the existing market analyses, the competition problems identified and the choice of regulatory principle for Markets 3a and 3b. In Nkom's opinion, any new and significantly different regulation must be based on new market analyses, possible new designation of the provider(s) with significant market power, and a new assessment of any competition problems. Nkom has commenced the work on new market analyses, and this work will of necessity take some time. As Nkom interprets the remarks from NextGenTel and RiksTV, these players also seem to understand that it will of necessity take some time to establish any new regulatory regime.

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2.2 Inadequate analysis

Consultation remarks

Telenor refers to how Nkom has made a number of intrusive decisions to correct and make additions to the market decisions in connection with the decommissioning of the copper network. The analysis in the notification appears to disregard Nkom's own decisions that are already intended to remedy the competition problem to which reference is made. Nkom has concluded that the economic tests will contribute to increased competition in the business segment. No analysis is made, however, of why the current principles are inadequate, whether the changes are appropriate to remedy the competition problem in question, and whether it is proportionate or necessary to impose the changes on the entire market. Telenor believes that Nkom should better justify the changes in the price regulation of VULA fibre.

Telenor furthermore states that the notification will entail a reduced return on commercial fibre development and an increased need for subsidies for non-commercial fibre development. According to Telenor's analyses, between 2,000 and 6,000 households that currently have no 100 Mbit/s coverage will fall outside the commercial framework for profitable development. A further consequence of the notification is that between NOK 12 and 24 million annually will also be needed in the form of increased subsidies to maintain Telenor's current development rate for publicly-subsidised projects. Nkom requested Telenor's analysis and received this on 15 February 2021. Telenor had then adjusted its estimates somewhat and concluded that between 1,600 and 5,700 households will fall outside the commercial framework for development, while the need for increased subsidies will lie between NOK 10 and 27 million.

Nkom's assessment

Nkom does not agree with Telenor that Nkom has disregarded other decisions made in order to change the regulation in the broadband markets in the light of the decommissioning of the copper network. The notified regulation has been assessed in connection with the main decision in Market 3a and the decisions that Nkom has subsequently made. On the basis of Telenor's remarks, Nkom has elaborated on some of the assessments that form the basis for this decision.

With regard to Telenor's argument that the decision will result in reduced returns and an increased need for subsidies for non-commercial fibre development, Nkom points out that it is to be expected that the earnings of a provider with significant market power that is subject to special obligations might be affected. Since Nkom has noted a need for regulation, Nkom does not consider this submission to be relevant. Nkom has therefore not seen any need to specifically assess Telenor's analysis and the various assumptions on which the analysis is based. Nkom also refers to the assessment of proportionality below and in the Market 3a Decision.

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2.3 Principle 1

Nkom's notification of a decision

Nkom notified that the alternative provider modelled has a market share of 20% of the available households connected to Telenor's fibre network, on ODPs with at least 100 connected subscribers.

Consultation remarks

GlobalConnect believes that the premise of a market share of 20% of the available households in Telenor's fibre network is not realistic and also makes little sense if the margin squeeze test is also intended to ensure competition in the business market. No efficient alternative provider will be able to achieve a market share close to 20% within the time horizon of the decision. The market share should not exceed what is assumed in the mobile market, i.e. 3% in both the private and business markets. The principle must also be changed so that not only households, but also businesses, are included. Nkom should also define precisely when an end customer is considered to be connected.

GlobalConnect furthermore believes that if the model is to provide a realistic picture of the profitability of an efficient player that solely operates in the business market, or that serves both the private and business markets, the test must model Telenor's entire network. This means that all ODPs must be included.

NextGenTel supports the proposal to change the number of accesses for ODPs to be included in the model from 1,000 to 100. Furthermore, NextGenTel believes that under the current regulation, no access seekers will be close to achieving a 20% market share, as the model assumes. In this case, the framework conditions must be changed.

RiksTV believes that even if an adjustment to include all ODPs with more than 100 accesses is a right path the take, the point of departure should be that all ODPs are applied, irrespective of the number of connections.

RiksTV furthermore believes that it is difficult to envisage how one access seeker alone would be able to achieve a market share of 20% of the available households in Telenor's network. RiksTV refers to the regulation in the mobile market (Market 15), for which reference operators with a 3% market share in the private and business markets, respectively, are defined, and proposes that the principle be changed so that these shares are applied.

Telenor has conducted equivalent sensitivity analyses to Nkom and believes that Nkom's margin model documents that an efficient alternative provider will have no financial incentive to become established on such small ODPs as proposed by Nkom. The model shows that for all ODPs with fewer than 1,000 subscribers, the marginal costs of establishment exceed the revenue that can be expected from customers on the relevant ODP. The limit to the number of subscriptions on an ODP therefore cannot be set below the current level.

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Nkom's assessment

Nkom believes that the ODP Decision makes it realistic that an efficient alternative provider will be able to become established on ODPs with a smaller number of connected subscribers than the current assumption of at least 1,000. Nkom undertook a sensitivity analysis of modelling of a larger part of Telenor's PON network under the consultation, and proposed modelling ODPs with at least 100 connected subscribers.

Concerning the submission from GlobalConnect and RiksTV that Nkom should have gone further from the outset and modelled all the ODPs in Telenor's fibre network in the margin squeeze model, Nkom refers to how the ODP Decision has reduced the barriers to establishment, but that it is not realistic that an efficient alternative provider would become established on all the smallest ODPs. Figures reported from Telenor in the autumn of 2020 show that changing the limit from 1,000 to 100 subscribers would entail an increase in the number of ODPs from 60 to 115, while all ODPs would entail an increase in the number to 151.

Nkom furthermore refers to Telenor's submission that they have conducted an equivalent sensitivity analysis to Nkom and believe that Nkom's margin model documents that an efficient alternative provider would not have any financial incentive to become established on ODPs with fewer than 1,000 subscribers. The number of subscribers connected to an ODP is not constant over time, however, and an access seeker might therefore assess it to be financially profitable to become established on an ODP with fewer than 1,000 subscribers in the expectation that growth would be achieved.

In this regard Nkom refers to the latest updated list of ODPs in Telenor's fibre network, which we received on 1 March 2021 in connection with data collection for the margin squeeze test. The overview shows that several new access seekers have established ODP connection since the previous report. The smallest ODP for which an agreement has been established with an access seeker has 313 connected subscriptions, and a total of four access seekers have established connection to ODPs with less than 1,000 subscriptions.

Nkom also refers to how the decommissioning of the copper network means that access seekers want to migrate end-customers to the fibre network. In such cases, where the access seeker has already established customer relationships, smaller ODPs are likely to be established, particularly if more customers are expected to be connected over time.

Nkom also received data from Telenor on 4 February 2021 showing almost a doubling of the number of business subscriptions in the PON network from end-2019 until end-2020. The revenue potential from business subscriptions is higher than from private households. This contributes to reducing the level of the number of connected subscriptions necessary for an efficient alternative access seeker to find it profitable to become established on an ODP.

As a consequence, Nkom concludes that modelling ODPs with at least 100 subscribers is a realistic condition to apply in the margin squeeze model.

Nkom furthermore notified a market share of 20% of available households connected to Telenor's fibre network for the alternative provider modelled, on ODPs with at least 100 connected subscribers. A market share of 20% is a continuation of the principle applied to the margin squeeze test in Market 3b, but the calculation basis is proposed to be increased from ODPs with at least 1,000 connections to ODPs with at least 100 connections.

Concerning the submissions from GlobalConnect, NextGenTel and RiksTV that an efficient alternative provider will not be able to achieve a market share anywhere near 20% and that Nkom must consider the 3% market share in the mobile market, Nkom points out that the largest access seeker had a market share of close to 8% of available subscribers on ODPs with at least 1,000 connections. It is not relevant either to compare the market share in the margin squeeze model for VULA fibre with the market share in the mobile market directly, among other things due to the two models' differing calculation bases.

Nkom believes that reduced ODP prices and the ongoing migration process from the copper network to the fibre network make it realistic to assume that an efficient alternative provider can achieve a rather higher market share than the largest access seeker has achieved so far. Experience so far also indicates that the assumption of a 20% market share of Telenor's ODPs with 100 subscribers or more is unrealistically high. Nkom has therefore concluded that the market share should be reduced to 15%.

Nkom agrees with GlobalConnect that the wording must in principle be changed to reflect an increasing number of businesses in the PON network, by clarifying that the market share is calculated on the basis of available accesses in Telenor's fibre network on ODPs with at least 100 connected subscriptions, and not on the basis of available households. This is not a change in methodology, however, as the calculation has always been made on the basis of available accesses.

2.4 Principle 2

Nkom's notification of a decision

Nkom has notified that the relevant retail products in the margin squeeze test are Internet access, voice services and IPTV, either standalone or as a package. Standardised private and business products are included in the test.

Consultation remarks

GlobalConnect is concerned that Nkom is proposing a narrow test that only covers products adapted to private market players. Historically, this has opened the door to a pricing model whereby profitability can only be achieved with a triple-play offering of content services in the private market. Business customers do not request IPTV, while their demand for connected data services is declining. Telenor and Telenor's partners often bundle fibre-based broadband access with data communication services such as IP-VPN in market 4. The test must take this into account when defining relevant retail products.

RiksTV proposes that the principle be changed so that the relevant retail products in the margin squeeze test are solely Internet access. The principle of including double- and triple-play products impedes competition by favouring players who can (and must) replicate Telenor's service portfolio. RiksTV does not consider it relevant for revenue and costs for TV products to also form the basis for determining wholesale prices for exclusively broadband-based products.

Nkom's assessment

The point of departure for the regulation in Market 3a is the retail market for standardised broadband access, cf. the Commission's and ESA's recommendation concerning relevant markets and the market delineation made in Nkom's market analysis for Markets 3a and 3b. Standardised Internet access is the main product in this retail market, while a high proportion of fibre subscribers also purchase IPTV. In addition, a small proportion buy voice services.

Nkom still considers it necessary to include IPTV in the margin squeeze test, in order to model a realistic business scenario for an efficient alternative provider. This is also in line with BEREC's recommendations.[1] A large majority of private fibre customers buy IPTV together with Internet access, and Nkom therefore does not consider it realistic to assume that an efficient alternative provider will only offer Internet access. Even though voice services in fixed networks appear to be declining in significance, Nkom will also continue to take the inclusion of such products into account, since this functionality has already been implemented in the margin squeeze test used in Market 3b for VUA fibre.

In the market analysis for Markets 3a and 3b, Nkom has concluded that standardised broadband access marketed towards the private and business segments, respectively, belongs to the same product market. This entails that a realistic margin squeeze test for VULA fibre in Market 3a should include relevant retail products in both the private and business segments. Nkom also believes that an efficient alternative provider caters for both the private and business segments. In the market analysis, Nkom furthermore distinguishes between the retail market for standardised broadband access and the retail market for high-quality access products, in line with the recommendation of the Commission and ESA. Data communication services, e.g. IP-VPN, are part of the retail market for high-quality access services. Even though fibre access included in Market 3a may in some cases be used as an input factor in a product that is part of the retail market for high-quality access, Nkom believes that retail products that do not belong to the retail market for standardised broadband access should not be included in a margin squeeze test for VULA fibre in Market 3a.

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[1] *Commission draft Recommendation on non-discrimination and costing methodologies, BEREC Opinion, BoR (13) 41, 26 March 2013.*

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2.5 Principle 3

Nkom's notification of a decision

Nkom notified that the test would be performed for the most commercially attractive products (flagship products). Furthermore, Nkom notified that the portfolio of flagship products must include at least one standalone product.

Consultation remarks

GlobalConnect believes that the portfolio of retail products must also include the fibre accesses that are bundled with data communication (e.g. IP-VPN), if the margin squeeze test is to have any real value.

RiksTV believes that the test should take into account that it should be possible for providers offering other products and services than Telenor to achieve a positive net margin. If the test is to take the perspective of the decommissioning of the copper network into account, a requirement for only one standalone product is far too lenient. RiksTV proposes that a separate margin squeeze test be carried out solely with standalone flagship products. This will determine whether an operator that only provides Internet is subject to margin squeeze or not.

Telenor believes that Nkom does not explain why the decommissioning of the copper network should entail a need to ensure that there is always at least one standalone flagship product in the portfolio. Telenor assumes that Nkom maintains that customers who have not purchased TV via the copper network will not do so via fibre access either. This is contrary to Telenor's experience in the market. A large proportion of new fibre customers buy two or more products, and a principle of always including at least one standalone product is based on erroneous information. The order is thereby intended to resolve a competition problem that does not exist, and is thus disproportionate.

Nkom's assessment

Concerning the remarks made by GlobalConnect and RiksTV, we refer to Nkom's assessment under principle 2.

With regard to Telenor's remark that Nkom has not justified why at least one standalone broadband product must be included in the portfolio of flagship products, Nkom believes that it must be financially replicable for an efficient alternative access seeker to migrate a portfolio of customers from copper to fibre without all of the products having to include additional services such as TV. Even though a large proportion of new fibre customers buy two or more services, a proportion of customers will only buy access to the Internet. To ensure that the portfolio of flagship products to be replicated by an efficient alternative access seeker covers the market situations in the best possible way, Nkom believes that the portfolio should always include at least one standalone broadband product in addition to the commercially most attractive products that Telenor offers its retail customers.

Nkom also points out that the portfolio of flagship products is weighted according to how many subscriptions Telenor has for the products. This entails that if a standalone product has fewer subscriptions than the other products in the portfolio of flagship products, this product will also have least weight in the model. Until now, the portfolio of flagship products has always consisted of at least one standalone broadband product, without explicitly defining such a product.

Nkom maintains the conclusion that the portfolio of flagship products must always include at least one standalone product. This principle has been moved to principle 4, however, which concerns aggregation level and stipulates that the margin squeeze test must take place at portfolio level.

2.6 Principles 4 and 5

Nkom's notification of a decision

Nkom has notified that flagship products must be tested as a single group (portfolio). Nkom has also notified that if retail prices (list prices) are discounted or reduced temporarily in promotion campaigns, these discounts and promotions must be taken into account in the calculation of revenue.

Consultation remarks

GlobalConnect believes that the flagship products for the private and business markets should be tested separately. It makes little sense to assess the revenue from triple-play services in the private market and the revenue from standalone fibre accesses in the business market on a combined basis. Experience from the use of portfolio-based margin squeeze tests in the mobile market furthermore shows that this gives Telenor wide room for manoeuvre in setting uniform prices that exclude competitors from strategically important market segments.

With regard to Principle 5 concerning price elements and discounts, GlobalConnect points out that there is normally no uniform list price or discounts for broadband access in the contracts which providers enter into with medium-sized and large business customers through procurement processes. The margin squeeze test must take into account that the services are priced on the specific basis of the procurement framework.

RiksTV[2] believes that greater consideration must be made of the current competition picture in the fibre market and that Telenor's overall portfolio must be taken into account to a lesser extent. In the event of greater deviation between customer portfolios exposed to competition and Telenor's overall customer portfolio, the retail prices that are exposed to competition should be given greater weight. Telenor has incentives for high indicative prices, but also for significant promotion and winback offers in areas where they encounter competition. RiksTV proposes the

[2] RiksTV refer to Principles 5 and 6 in their consultation response, but Nkom assumes that the remark applies to Principles 4 and 5.

measure of restrictions to the use of winback or holdback activities, i.e. regulation equivalent to the mobile market.

Nkom's assessment

In the market analysis for Markets 3a and 3b, Nkom has concluded that standardised broadband access marketed towards the private and business segments, respectively, belongs to the same product market. Nkom believes this to indicate that relevant retail products in the private and business segment should be tested collectively. We also refer to Nkom's assessment under Principle 2.

The choice of margin squeeze regulation and related principles are based on the existing market analyses, the competition problems identified and the choice of regulation principle for Market 3a. The investment incentive consideration is central to the regulation of VULA fibre, cf. Chapter 7.5.3.2 of the Market 3a Decision. Nkom believes this to indicate that the margin squeeze test for VULA fibre should take place at portfolio level, equivalent to what has been done so far for VUA fibre, cf. Chapter 3.4 of Appendix 3 to the Market 3b Decision.

With regard to GlobalConnect's submission that there are no uniform list prices or discounts in contracts entered into with medium-sized and large business customers under procurement processes, Nkom assumes that this will apply mainly to products included in the retail market for high-quality access products and which thereby will not be included in the margin squeeze test. Telenor reports list prices and associated discounts for the products included in the margin squeeze test.

Nkom believes that RiksTV's submission that Nkom should impose restrictions on Telenor's use of winback or holdback activities does not constitute relevant input to this consultation concerning the principles for the margin squeeze model. Nkom also points out that the prices in the margin squeeze model are actual list prices, adjusted for discounts granted to certain customer groups in some areas.

2.7 Principle 11

Nkom's notification of a decision

Nkom has notified that the highest discount that access seekers have achieved during the last 12 months will be applied in the margin squeeze test.

Consultation remarks

GlobalConnect points out that the current VULA agreement does not allow for volume discounts, so that it seems strange to take such discounts into account in the model. If Telenor were to reintroduce a volume discount, GlobalConnect has little faith that any access seeker will be in a position to achieve any such discount, since the volumes are small. GlobalConnect assumes that Nkom will make a critical assessment of whether any discounts are real.

Nkom's assessment

Even though the current VULA agreement does not provide for volume discounts, Nkom deems it appropriate to include a principle that determines how any volume discount should be considered, if Telenor chooses to introduce this. If such a discount becomes relevant, Nkom will review the premises for it and how it should be taken into account in the margin squeeze test.

2.8 Documentation requirement of passing the margin squeeze test

Nkom's notification of a decision

Nkom has notified that prior to price increases for one or more flagship products, Telenor must show that financial replicability is safeguarded. Nkom furthermore notified that prior to price changes for one or more standalone fibre products that are not included in the portfolio of flagship products, or on the launch of new fibre products in the retail market, Telenor must provide Nkom with documentation of passing a gross margin test.

Consultation remarks

GlobalConnect believes that Nkom is choosing a less efficient and more complicated solution than required by ESA. In practice, Nkom is making it possible for Telenor to continue to freely raise or lower the retail prices in the flagship portfolio without prior margin squeeze testing. Furthermore, Nkom does not require the test to be passed, but solely documentation of financial replicability or a passed gross margin test. GlobalConnect encourages Nkom to prohibit the current price changes before Telenor can prove that the margin squeeze test has been passed.

RiksTV believes that the margin squeeze tests should be performed before the products are offered to retail customers, in order to avoid time delays where the access prices have an incorrect price level for an extended period of time. It is necessary for Nkom to comply with ESA's guidelines so that Telenor cannot change the retail prices before the margin squeeze test has been passed.

Telenor points out that ESA has encouraged Nkom to consider changing the margin squeeze test from an ex-post to an ex-ante test. Ex-ante control of Telenor's retail prices, in addition to an ex-post test, is a far more invasive obligation than under current regulation. De facto regulation of Telenor's retail prices requires a thorough analysis and identification of which competition problems the obligation would remedy. Nkom must also explain why an ex-post margin squeeze test is not sufficient and investigate the consequences of advance control of Telenor's retail prices for Telenor and the market as such. The content of the obligation must be stated clearly, including how the approval by Nkom will take place. Telenor believes that the obligation limits the flexibility for rapid innovation, adaption to changes in the retail market and introduction of new products.

Nkom's assessment

Nkom points out that Telenor is already subject to a margin squeeze prohibition and that the obligation is ongoing. The margin squeeze prohibition is thereby not limited to applying at the times that tests are performed. Nkom therefore cannot see that an obligation to document to Nkom that the last completed margin squeeze test, with updated prices and subscription figures, gives a result that is not negative in the event of price changes in one or more flagship products, should be disproportionately intrusive towards Telenor.

Nor does Nkom see any need for a new analysis and identification of the competition problems to be remedied by the obligation, as Telenor claims. Nkom therefore refers to the assessments already stated in the Market 3 Decisions. The latest margin squeeze test can be easily updated solely by entering new prices and subscription figures, and Nkom proposes that the retail prices can be adjusted at the same time as Telenor presents an accepted margin squeeze test. This is therefore not a matter of imposing an obligation on Telenor that leads to a significant time delay.

With regard to any price increases for Telenor's wholesale products, Nkom believes that there is still a need for Nkom to approve such price increases in accordance with section 592 of the Market 3a Decision. In such cases, Telenor will nevertheless be subject to a requirement for a two-month notification period before the changes can be implemented, cf. section 877 of the Market 3a Decision, and the consideration that Telenor must be innovative and able to quickly address changes in the retail market therefore does not apply to any such changes.

With regard to the remarks from GlobalConnect and RiksTV, Nkom believes that the obligation which is imposed addresses the considerations that ESA expressed in its remark. The changes will ensure that Telenor cannot make changes to its retail offering without documentation of passing the margin squeeze test and/or gross margin test. This will prevent access seekers from being subject to margin squeeze as a consequence of Telenor's changes, avoiding a potential margin squeeze that, at worst, might persist until the next ordinary margin squeeze test.

Nkom has specified in the decision that Telenor may adjust the retail price at the same time as a fulfilled margin squeeze test is presented to Nkom.

2.9 Gross margin requirement

Nkom's notification of a decision

Nkom notified that Telenor must fulfil a requirement that the gross margin for all standardised standalone fibre products must be at least 25%.

Consultation remarks

GlobalConnect agrees that there are grounds to tighten the minimum requirement concerning the pricing of standardised fibre products by requiring a positive gross margin. If the tightening is to have any value, the requirement must be further adjusted, however. Since VULA fibre will be one of several replacement products for copper-based LLUB, the gross margin requirement must at any rate be set so high that the access seeker has the opportunity to achieve at least as high a margin as for resale today. The gross margin on copper-based LLUB is a far more accurate benchmark than 25%.

NextGenTel believes that a gross margin requirement of at least 25% is insufficient to have any real function. If it is to be possible to compete on VULA fibre as a separate product, the gross margin must be 50%, or higher. Nkom should also consider the margins used in the LLUB regulation.

RiksTV believes that a gross margin requirement of 25% is too low and entails little or no real tightening of wholesale prices. This appears to be a level at which profitability is unlikely to be achieved for wholesalers. RiksTV believes that a gross margin equivalent to that for copper (LLUB) should be applied as a starting point, and the gross margin requirement should therefore be at least 50%.

Telenor believes that a gross margin requirement of at least 25% for all standalone broadband products will have the consequence that Telenor's pricing flexibility in the private market is limited, without the requirement being appropriate to resolve the alleged competition problem in the business market. Nkom should not introduce a new and stricter margin test without Nkom conducting a thorough analysis and identification of which competition problems the new obligation is to remedy. Since all products in the business market had a positive gross margin exceeding 25% in the last margin squeeze test, the proposed requirement is of no significance to the margin picture in the business market. The requirement thereby also appears to be disproportionate.

Nkom's assessment

Nkom notified a requirement that the gross margin for all standardised standalone fibre products must be at least 25%. Nkom's concern was directed mainly at the business segment, but the notified order was proposed to apply to all standardised standalone fibre products.

Nkom agrees with Telenor that the proposed requirement is not appropriate to resolve the competition problems in the business segment, and that this may lead to limitations to the pricing flexibility in the private segment.

Nkom has made a new assessment of the requirement that the gross margin for all standardised standalone fibre products must be at least 25%, and agrees with Telenor that this requirement should not be applied to standalone fibre products in the private segment. In this respect Nkom refers to Principle 3, where it is stated that the flagship products comprise the retail products that are the commercially most attractive in overall terms (at least 70% of the total revenue during the relevant period of time), and that Nkom may also define other products as flag carrier products if they are expected to become important to the competition. Since the volume of private products significantly exceeds the volume of business products, the flagship products will normally exclusively comprise private products. Nkom also refers to Principle 4, in which Nkom has introduced a new requirement that at least one standalone fibre product must

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be included in the portfolio of flagship products. This will normally also be a product in the private segment. In the context of Principle 3 and Principle 4, Nkom believes that a portfolio requirement in the margin squeeze model, in combination with the requirement of a positive gross margin, is sufficient to ensure financial replicability in the private segment.

Nkom also agrees with Telenor that the requirement for the gross margin for all standardised standalone fibre products to be at least 25% will not be of significance to the margin picture in the business segment. Nkom also refers to the input from GlobalConnect, NextGenTel and Riks TV, which believe that the requirement must be further tightened to at least 50% in order to have an effect, among other things because VULA fibre is a substitute for copper-based LLUB.

The portfolio test will not normally cover products in the business segment. Nkom, considers it important that financial replicability for business products is possible for efficient alternative access seekers. In Nkom's view, the gross margin requirement for business products should therefore be further tightened. Nkom has considered the results from previous gross margin tests and believes that it should be possible to achieve financial replicability by setting the requirement at 40%. The test performed in the autumn of 2020 revealed gross margins for Telenor's business products of between 44% and 64%. A requirement of at least 40% will prevent Telenor from pricing selected products particularly low. A requirement of at least 40% will furthermore not have a disproportionately limiting impact on Telenor's pricing of products for businesses.

On this basis, Nkom waives the requirement that the gross margin for standalone fibre products in the private segment must be 25%, but maintains the requirement for these products to have a positive gross margin. Nkom furthermore tightens the requirement for standardised standalone fibre products in the business segment, so that these products must have a gross margin of at least 40%.

2.10 Design of the non-discrimination requirement

Consultation remarks

NextGenTel requests that the regulatory requirements concerning non-discrimination be changed from the "Equivalence of Output" (EoO) to the "Equivalence of Input" (EoI) principle.

Nkom's assessment

The design of the non-discrimination requirement in Markets 3a and 3b is not subject to this consultation. Nkom refers to how the choice of non-discrimination principle was assessed in Nkom's notification of 20 December 2019 of changes in the decisions in Markets 3a and 3b. Nkom is still working on this issue and has not yet reached a conclusion.

3 Margin squeeze tests and gross margin tests for VULA fibre

Section 579 of the Market 3a Decision states that Nkom will conduct margin squeeze tests and gross margin tests for VULA fibre.

With regard to margin squeeze tests for VULA fibre, it is stated that Nkom will make its own decision on the specific design of the test and that, as far as possible, Nkom will apply the same method and principles as have been used for VUA fibre in Market 3b. Nkom has reviewed the relevant principles and made some updates. The principles to be applied in the margin squeeze test for VULA fibre are essentially the same as for VUA fibre. The margin squeeze principles for VULA fibre are presented in a new Appendix 9 to the Market 3a Decision.

Section 579 of the Market 3a Decision furthermore states that Nkom will conduct gross margin tests according to the same method as described in Chapter 7.3.4.3 of the Market 3b Decision. Nkom believes that gross margin tests for VULA fibre in Market 3a can take place according to the same method as for VUA fibre in Market 3b. However, Nkom has seen a need to assess whether the requirement concerning the size of the gross margin should be changed.

In the light of Telenor's signalling that to a greater extent it will build PON networks that also provide coverage for businesses, and that more businesses will gain PON-based fibre as a replacement for copper, Nkom considers it necessary to assess whether the replicability of standardised fibre products aimed at the business market is safeguarded adequately. These products account for significantly less volume than fibre-based products in the private market and have therefore never been included in the portfolio of flagship products that were tested in the margin squeeze test in Market 3b.

It is stated in section 588 of the Market 3a Decision and Chapter 7.3.4.3 of the Market 3b Decision that the gross margin test of standalone fibre products in the retail market (both private and business) will not have been passed if the result is below zero. Telenor has always fulfilled the positive gross margin requirement for these products.

Section 906 of the Market 3a Decision and section 711 of the Market 3b Decision furthermore show that Telenor is obliged to prepare accounting separation for VULA fibre and VUA fibre, respectively. This will give Nkom a basis to check compliance with the prohibition of price discrimination in relation to external access seekers. Section 908 of the Market 3a Decision and section 712 of the Market 3b Decision state that all items of the accounting separation must be distributed between the private and business segments on the basis of relevant statistics concerning the technology provided. The accounting separation for VUA fibre in Market 3b showed a negative result for the business segment in 2019. On this basis, Nkom finds grounds to tighten the minimum requirement of a positive gross margin for standardised fibre products aimed at the business market, in order to ensure that the replicability of these products is safeguarded.

On determining the minimum gross margin requirement, it is appropriate to take Nkom's completed margin and gross margin tests as the starting point. The weighted average gross margin for the flagship products has ranged from 54% to 57% in the last four margin squeeze tests. The standalone fibre products included in these margin squeeze tests have had a gross margin of between 31% and 38%.

In the last four gross margin tests conducted by Nkom for the standardised standalone fibre products offered by Telenor in the private and business market outside the portfolio of flagship products, the result has varied between 11% and 130%, with an average of around 50%. In the last margin squeeze test conducted in the autumn of 2020, the results showed a gross margin of between 44% and 64% for business products.

On this basis, Nkom deems it appropriate to set the requirement of a gross margin of at least 40% for all standardised standalone fibre products in the business segment. This will ensure access seekers a reasonable gross margin that makes it possible to replicate the products in question in the business segment, and prevents Telenor from setting very low prices for selected products. At the same time, the gross margin level will not have a disproportionately limiting effect for Telenor, and the company will still be assured a degree of flexibility in its pricing of retail products for businesses.

When it comes to products in the private segment, the portfolio of flagship products includes the retail products that are the commercially most attractive in overall terms (at least 70% of the total revenue during the relevant period of time). These will normally be products in the private segment. Nkom can also define other products in the portfolio, if they are expected to be important to competition. Nkom has also introduced a new requirement that at least one standalone fibre product must be included in the portfolio of flagship products. This will normally also be a product in the private segment. Nkom believes that the portfolio requirement in the margin squeeze model, in combination with the requirement of a positive gross margin for standalone fibre products in the private segment, is sufficient to ensure financial replicability in this part of the market.

On this basis, Nkom will amend section 579 of the Market 3a Decision and add a new Chapter 7.3.5.3 with the same content as Chapter 7.3.4.3 of the Market 3b Decision. In addition, the necessary amendments will be made to section 588 and section 661. All of the amendments are presented in Chapter 6 below.

4 Change to the Market 3a Decision on the basis of remarks from ESA

ESA's remarks on 23 July 2020 concerning Nkom's draft copper decision state that:

> *"Following the new technical specifications of the VULA fibre service, the Authority invites Nkom to consider whether it is appropriate to move from an ex post to an ex ante margin squeeze test for this wholesale access service. This would result in an obligation to test any changes in the prices of existing retail offers or the prices of new*

retail offers launched by Telenor using the VULA fibre wholesale inputs, prior to them being offered to retail customers, in order to ensure that they do not result in a margin squeeze. Telenor's announcement in January 2019 is likely to increase the scope for competition in fibre and for this reason the Authority believes that Nkom should ensure that the migration to fibre does not result in a foreclosure of competition from access seekers."

Nkom agrees with ESA that Telenor's announcement in January 2019 will increase the competition for fibre-based products and that it is therefore important to ensure that migration to fibre does not exclude access seekers from competition. Nkom has assessed ESA's remark and believes that this can be taken into account appropriately by combining the current ex-post margin squeeze test with an ex-ante margin squeeze test that is based on the current ex-post margin squeeze test. This ex-ante margin squeeze test would make it possible to test price changes for existing retail offerings and prices for new retail offerings prior to their launch. Telenor is subject to a prohibition on subjecting access seekers to margin squeeze. This prohibition applies at all times, and an ex-ante test will ensure better compliance with the requirement in the period between the ordinary margin squeeze tests, if Telenor makes changes to its retail offering.

The ex-ante test will entail that if Telenor is to make price increases or other changes to one or more flagship products, Telenor must document to Nkom that financial replicability will be safeguarded. The calculations will be made by applying the last completed margin squeeze test, with updated prices and subscription figures, and Telenor must prove to Nkom that the portfolio does not show a negative result.

If Telenor is to implement price increases or other changes to one or more standalone fibre products in the retail market that are not included in the portfolio of flagship products, or on launching new individual fibre products in the retail market, such as new speeds, Telenor must submit documentation to Nkom that it has passed the gross margin test.

To ensure that Telenor can implement price changes in the retail market quickly and efficiently, Nkom proposes that the retail prices can be adjusted at the same time as Telenor proves to Nkom that it has passed the margin squeeze and/or gross margin tests.

On this basis, Nkom will make the necessary additions in a new Chapter 7.3.5.3. The changes are presented in Chapter 6 below.

5 Proportionality

The changes of principles made in connection with the transition from Market 3b to Market 3a are mainly related to the reduction of the threshold for entering new areas for new and existing access seekers, as a consequence of new ODP prices. The new ODP prices also enable the migration of end-customers from copper to fibre for wholesale customers with a limited number of end-customers. To make the margin squeeze model as realistic as possible, Nkom has

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altered the assumption in the margin squeeze model that ODPs with 1,000 connected subscriptions or more must be modelled, to the assumption that ODPs with 100 connected subscriptions are modelled. Furthermore, the market share for an efficient alternative provider has been reduced from 20% to 15%. In addition, Nkom has upheld that, for the portfolio to be more robust, there must be at least one standalone fibre product in the portfolio of flagship products.

Based on the results from the last margin squeeze test, Nkom has calculated the effect of the changes in the margin squeeze principles. A change from modelling ODPs with 1,000 connections or more to modelling ODPs with 100 connections or more will change the margin from 0.04% to -2.12%. By reducing the market share from 20% to 15%, the margin is further reduced to -4.09%. Reduced ODP prices also entail an improvement in the margin. At today's ODP prices and with changed assumptions in the margin squeeze model, the model gives a margin of -1.62%.

In Nkom's view, the changes of principle are necessary in order for the margin squeeze model to be realistic and thereby contribute to fulfilling the objective of the regulation. Nkom also believes that the burden on Telenor from having to reduce the wholesale prices is limited.

With regard to the other changes of principles, in Nkom's view these will entail minimal practical consequences. For example, there has always been at least one standalone fibre product in the portfolio of flagship products. In Nkom's view, stipulation in the principles that this will also apply in the future will not be particularly intrusive for Telenor.

Nkom also believes that the changes to the Market 3a Decision concerning requirements for the documentation of passed margin squeeze tests before price changes are implemented, or on the launch of new fibre products in the retail market, are necessary to ensure that the changes do not lead to access seekers being subject to margin squeeze. Nkom also believes that the burden on Telenor in terms of documenting that price changes for fibre products do not lead to margin squeeze is very limited since Telenor is already well acquainted with the use of the margin squeeze model.

With regard to the change which entails a requirement of a positive gross margin of 40% for standalone fibre products aimed at businesses, Nkom believes this is necessary to ensure that financial replicability is adequately safeguarded in this segment. Nkom also believes that such a requirement is not disproportionately intrusive for Telenor, since the gross margin for standalone fibre products in the business segment normally appears to exceed the new minimum requirement.

On this basis, Nkom believes that the price regulation imposed for VULA fibre is proportionate.

6 Draft decision

Pursuant to Section 4-9 of the Norwegian Electronic Communications Act, Nkom stipulates that principles as a consequence of a new Appendix 9 will provide the basis for the margin squeeze test for VULA fibre in Market 3a. Nkom furthermore stipulates that the gross margin for standalone fibre products in the business market must be at least 40%.

The decision entails the replacement of sections 579 and 588 of the Market 3a Decision with the following:

"579. To ensure that the margin squeeze prohibition for local, virtual access to fibre-based access networks in Market 3a is complied with, Nkom will therefore perform margin squeeze tests and gross margin tests; see Chapter 7.3.5.3 below."

"588. If the margin squeeze and/or gross margin tests are not passed, pursuant to Section 10.6 of the Norwegian Electronic Communications Act Nkom will normally require Telenor to correct the company's wholesale prices for access in this market to a level that Nkom considers to ensure financial replicability, based on the margin squeeze tests. In a rectification decision, Nkom will inform Telenor of by how much the wholesale cost must be reduced."

The decision furthermore entails that a new Chapter 7.3.5.3 with the following text is added to the Marked 3a Decision:

"7.3.5.3 Further details of the implementation of margin squeeze tests and gross margin tests

594b. The principles for margin squeeze tests are set out in Appendix 9. As a general rule, Nkom will perform margin squeeze tests twice a year. However, Nkom will also be able to perform margin squeeze tests at its own initiative where appropriate; for example if new wholesale products for VULA fibre are introduced in Market 3b. The prohibition on offering access prices that subject the access seeker to margin squeeze will be an ongoing requirement, however, and will thus not be limited to the times when the margin squeeze tests are performed.

594c. In connection with the margin squeeze tests, Nkom will obtain relevant information from Telenor and relevant alternative providers. Reference is made to Section 10-3 of the Norwegian Electronic Communications Act concerning the disclosure obligation. Nkom will normally set a deadline of two months for the submission of the requested information.

594d. The margin squeeze test will be performed as soon as possible after the requested information has been received, and normally within 30 days. Nkom will consider the result of a margin squeeze test without undue delay. The general principles for case consideration will be applied. Nkom assumes that the assessment of the results arising from the margin squeeze test might normally be completed within the time frames stipulated in Section 11-2 of the Norwegian Electronic Communications Act.

594e. The margin squeeze test will ensure that an efficient, alternative provider can replicate a portfolio with Telenor's commercially most attractive fibre-based retail products. The portfolio approach gives Telenor flexibility in determining the prices for retail and wholesale products. This entails that, ultimately, Telenor will be able to set individual wholesale prices so that the access seekers' wholesale costs are not covered. This will apply especially to the fibre-based retail products that are not included in the margin squeeze test, but a portfolio approach entails that this might also be the case for fibre-based retail products included in the margin squeeze test.

594f. To ensure that access seekers are not excluded from parts of the retail market, Nkom believes that it is necessary to set requirements of a positive gross margin for all of Telenor's standalone fibre products that are sold in the retail market. For standalone fibre products for the private segment, the gross margin must be greater than or equal to zero. That entails that Telenor's total monthly income associated with each standalone fibre product in the retail market must at any time be greater than or equivalent to the equivalent total monthly wholesale costs. For standalone fibre products for the business segment, the gross margin must be greater than or equivalent to 40%. Telenor must pass a gross margin test for all standalone fibre products in the retail market. Standalone fibre products are all of Telenor's retail products where the customer only buys broadband; in other words not products that include TV or broadband telephony.

594g. Nkom will ask Telenor to document that the gross margin test is passed in connection with data retrieval for the margin squeeze test, i.e. normally twice a year. On performing the gross margin tests, Telenor will calculate the income for each standalone fibre product in the same way as the income is calculated for the flagship products in the margin squeeze test. Monthly subscription income, as well as a share of one-off income, must be included. Furthermore, promotion campaigns and discounts must be taken into account in the same way as in the margin squeeze test. On calculating the wholesale costs for each standalone fibre product, Telenor will apply the same method as in the margin squeeze test. This means that both monthly wholesale costs and a share of the one-off costs must be included. Telenor must also assume the same volume discount as for the previous margin squeeze test.

594h. The gross margin test must also include ODP-related wholesale costs. These costs will depend on the price per ODP, speed per ODP, and the number of ODPs. In the gross margin tests, Telenor must add a percentage mark-up on the remaining wholesale costs, in order to take account of ODP-related costs. The percentage mark-up will be calculated on the basis of ODP-related wholesale costs as a ratio of the total wholesale costs in the previous margin squeeze test.

594i. Prior to price increases or other changes to one or more flagship products, Telenor will document to Nkom that financial replicability will be safeguarded. The calculations will be made by applying the last completed margin squeeze test, with updated prices and subscription figures, and Telenor must prove to Nkom that the portfolio does not show a negative result. Prior to price increases or other changes to one or more standalone fibre products in the retail *market that are not included in the portfolio of flagship products, or on launching new standalone fibre products in the retail market, such as new speeds, Telenor must submit documentation to Nkom that it has passed the gross margin test. Telenor may implement the price changes when the necessary documentation of passing margin squeeze tests and/or gross margin tests has been submitted to Nkom.*

594j. Infringement of the margin squeeze prohibition by Telenor possibly failing to pass the margin squeeze test or gross margin test might, in Nkom's view, be an indication that the adopted regulation is not sufficiently efficient for its purpose. Any such outcome will thereby make it relevant to change the regulation and possibly impose a requirement of cost-oriented prices on Telenor."

The decision furthermore entails the replacement of section 661 of the Market 3a Decision with the following:

"661. Pursuant to Section 4-9 of the Norwegian Electronic Communications Act, Nkom stipulates that Telenor must offer access to VULA fibre at prices which entail that the access seeker is not subject to margin squeeze, in line with Chapter 7.3.5. Telenor must pass a portfolio-based margin squeeze test of fibre-based retail products. The test is passed if the result shows a margin of at least zero. The principles for margin squeeze tests are set out in Appendix 9. Furthermore, Telenor must pass a gross margin test of standalone fibre-based retail products. The test is passed if the result shows a gross margin of at least zero for all products tested in the private segment and at least 40% for all products tested in the business segment."

7 Entry into force

This Decision enters into force ...

8 Right of appeal and deadline for initiating legal proceedings concerning individual decisions

The Decision may be appealed, cf. Section 11-6 of the Norwegian Electronic Communications Act, and Section 28 of the Norwegian Public Administration Act. The deadline for appealing decisions is normally three weeks, cf. Section 29(1), of the Public Administration Act. Any appeal must be addressed to the Norwegian Ministry of Local Government and Modernisation and sent to Nkom, cf. Sections 28 and 32 of the Public Administration Act.

It follows from Section 11-8(1) of the Norwegian Electronic Communications Act that lawsuits concerning individual decisions made under or pursuant to this Act must be brought within six

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months after the decision was made. The time limit for legal action is interrupted by an appeal against the decision and does not run as long as the appeal is being processed, cf. Section 11-8 of the Norwegian Electronic Communications Act, second paragraph.

With kind regards,

The document is approved electronically and dispatched without signature