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Joint dominance on the Dutch retail market for internet access?

A response to ACM's draft market analysis decision on unbundled access

RBB Economics, 11 December 2014

1. Introduction

On 31 October 2014, ACM published its draft market analysis decision on unbundled access for consultation (the "draft decision"). The draft decision includes *inter alia* an assessment of the retail market for internet access and concludes that, in the absence of access obligations, the market would risk evolving into a structure where KPN and Ziggo would be jointly dominant. To prevent such market structure from emerging, ACM considers that it is necessary to impose access obligations on KPN, allowing third parties to continue to use wholesale inputs from KPN to provide services in the retail market.

This report, prepared at the request of KPN, is not a response to the full 348 page draft decision of ACM, but focuses on two issues that are critical to ACM's preliminary view that access measures would be required and can be imposed on the basis of the applicable regulatory regime.

The first issue is whether ACM has sufficiently established in its draft decision that KPN would cease to provide access to its network to third parties in the absence of obligations imposed by ACM to do so. This is a critical step in ACM's assessment: if, in the absence of access obligations, KPN is highly likely to provide voluntary access to its network, third parties should be able to continue to compete with KPN and Ziggo in the retail market and would prevent a risk of joint dominance emerging.

The second issue is whether ACM has sufficiently established in its draft decision whether, in the absence of mandatory third party access to KPN's network, the market risks tending to a structure in which KPN and Ziggo should be considered jointly dominant. This is also critical as ACM can only impose obligations on parties that are deemed to be (jointly) dominant and have Significant Market Power (SMP).

Our assessment builds on an earlier report which was completed prior to ACM publishing its draft decision ("the RBB report").[1] This report focuses on responding to ACM's assessment, where relevant we will refer to the RBB report, which is annexed to this response.

[1] "It takes two to tango, Is there a risk of joint dominance in the Dutch broadband market?, RBB Economics, 24 October 2014

2. Does KPN have an incentive to provide voluntary access to its network?

2.1. General comments

In Section B.3.1 of the draft decision, ACM discusses the market situation in the absence of regulation. ACM considers it unlikely that KPN would provide voluntary access in the absence of regulation and therefore that is has to abstract from the presence of third parties that are dependent upon access to KPN's network.

The assessment of ACM that KPN would not provide voluntary access is, considering the relevance of the issue for the whole draft decision, extremely brief.

ACM dismisses in the draft decision the proposed Open Wholesale Model of KPN because it is conditional upon ACM not imposing regulatory access obligations. In particular ACM notes that such condition signals that KPN has submitted this proposal only to avoid regulation, and it considers that in the absence of a threat of regulation it is unlikely that KPN would offer access terms that would allow third parties to compete in the retail market.

In addition, ACM cites third parties in the context of ACM's market enquiry for the purposes of the draft decision who complain that they will not be able to compete effectively if they would use KPN's Open Wholesale Model.

Finally, ACM mentions that increased profits that would result from joint dominance would be a further reason for KPN not to provide voluntary access.

The reasoning of ACM in the draft decision is not convincing and does not in any way provide a sufficient basis for a conclusion that KPN would not provide voluntary access in the absence of regulated access.

First, it is not surprising that KPN would withdraw its voluntary access offer in case ACM imposes regulation. The offer, as we understand it, is meant to provide third parties with access options in the absence of regulation. If ACM would however impose access measures, the voluntary access offer would be obsolete. We will discuss further below whether or not the commitment to offer voluntary access is credible, as this in essence depends on the (economic) question whether KPN would have the incentive to offer access to third parties.

Second, it is equally unsurprising that third parties that currently use KPN's wholesale inputs have a preference for regulated access above voluntary access. This allows those third parties, through ACM, to exert influence on the nature and pricing of regulated access. This does not however provide any evidence of KPN not having the incentive to offer access in the absence of regulation. Obviously, if KPN would have the economic incentive to offer access, it would ensure that it will offer such access on terms that would allow third parties to compete in the retail market and hence offer terms that are acceptable to third parties. If the incentive to offer access exists, then naturally KPN would want such third parties to also buy wholesale inputs.

Third, and most importantly, ACM's draft decision does not even seek to answer the economic question whether or not KPN has the incentive to offer voluntary wholesale access in the absence of regulation.

As indicated in the RBB report, the likelihood of KPN not providing voluntary access to its network is dependent on the incentive that KPN would have to foreclose third parties from access to its network, and the market (input foreclosure). This is akin to the assessment of vertical mergers in which competition authorities typically investigate whether post-merger incentives would exist to foreclose downstream rivals of critical inputs.

Strangely, ACM does not assess this question in its draft decision (which should be considered a material shortcoming). It also does not in its draft decision refer to the approval of the KPN/Reggefiber merger which was issued by ACM on the same day as the draft decision. As the KPN/Reggefiber decision *does* include an assessment of input foreclosure, we will discuss that assessment of ACM instead.

This is not such a big step, as the KPN/Reggefiber decision is closely related to the draft decision that this report responds to: the KPN/Reggefiber transaction is in essence approved by ACM because of the access measures put forward in the draft decision that will be imposed on KPN and will address potential competition issues related to the transaction.[2]

2.2. The assessment of input foreclosure in the KPN/Reggefiber decision and its implications for the draft decision

As correctly noted by ACM in the KPN/Reggefiber decision, KPN's incentive to foreclose rivals from wholesale inputs (i.e. the incentive not to provide access to its network) is dependent on whether such input foreclosure is a profitable strategy.

If KPN would not provide wholesale access, it would lose the associated wholesale revenues and margins. At the same time, foreclosure would result in the market exit of those third parties that rely on KPN's wholesale inputs and would provide KPN with the opportunity to gain customers of those third parties. The incentive is hence dependent on the balance of the margin KPN loses as a result of not providing wholesale access, and the margin it gains as a result of increased retail sales. The assessment of margins should include any impact on costs resulting from a shift of business from wholesale to retail, i.e. it is not sufficient to base the assessment on the current wholesale and retail margins achieved by KPN in the absence of a foreclosure strategy.

In its input foreclosure assessment ACM takes a two-step approach. First it assesses whether KPN would have an incentive to foreclose third parties of unbundled local loop (ULL) access, which is a wholesale product upstream from Wholesale Broadband Access (WBA). And in a second step it assesses whether KPN would have an incentive to foreclose third parties of both unbundled local loop access and WBA (in the absence of regulation).

[2] KPN/Reggefiber, decision of ACM of 31 October 2014, paragraphs 56-57.

For the purposes of the draft decision, and ACM's general conclusion that KPN will not provide voluntary access, the second step is much more relevant than the first step. In the second step ACM assesses the more principal issue whether or not KPN has an incentive to offer access on a voluntary basis to third parties and not the more narrow question whether it would offer ULL voluntarily.

In order to assess KPN's incentive to deny access to third parties, ACM seeks to compare the critical diversion ratio and the actual diversion ratio. The critical diversion ratio is the proportion of retail customers of the foreclosed third parties that would need to switch to KPN to render an input foreclosure strategy profitable. The "actual" diversion ratio is the estimated proportion that would actually switch to KPN in case it would implement an input foreclosure strategy.

On the basis of an assessment of volumes, costs, prices and margins ACM concludes in the Reggefiber decision that the critical diversion ratio is higher than 20-30% (in the first phase decision ACM concluded that the critical diversion ration was between 20% and 30%, in the phase II decision discussed here ACM concludes, on the basis of additional information, that the true critical diversion ratio is higher).

The "actual" diversion ratio used by ACM in its decision is based on a consumer survey of Blauw Research. In this online survey, Blauw asked retail customers of Tele2, Vodafone, Solcon and Online (i.e. providers that use KPN's wholesale inputs) to which provider they would switch if their current provider would no longer be able to offer services. Respondents are offered a choice between the KPN brands (KPN, XS4ALL and Telfort), the "local cable operator" and moving away from a fixed line subscription: 52% of the respondents indicated that they would switch to one of the KPN brands.[3]

ACM's decision shows that KPN questioned the results of the survey based on actual churn in the client base of the wholesale customers of KPN. According to KPN the actual churn figures would indicate that the estimated diversion ratio would likely be lower, and that a smaller proportion of customers would switch to one of the KPN brands (i.e. lower than 52%). ACM however considers the results of the survey more reliable, but notes that it cannot exclude that the actual diversion would indeed be lower than 52%.

Importantly, ACM states, on the basis of a comparison of the critical and estimated actual diversion ratios, that it cannot draw a firm conclusion on the question whether KPN would have an incentive to foreclose:

> *"Op basis van bovenstaande analyse kan géén duidelijke conclusie getrokken worden over de prikkel van KPN om al dan niet alternatieve*

[3] In our view there are some questions in relation to the reliability of the results of the survey. By offering the three different brands of KPN as separate options, the presentation of the options available to respondents appears unbalanced. In addition by not explicitly referring to the (brand) name of the local cable operator, that option may have appeared less attractive to respondents. The results may have been different if the question was asked whether respondents would switch to (a) one of the KPN brands (KPN, XS4ALL or Telfort), (b) Ziggo (or UPC if the respondent is based in an area covered by the UPC network) (c) cancel fixed line network). It should also be noted that Blauw does not provide a confidence interval for this result, based on Annex 2 of their report, the confidence interval for a result of 50% would be between 44.34% and 55.66%.

> *aanbieders van haar netwerk te weren door zowel ontbundelde toegang als WBT (effectief) te weigeren."*[4]

After this preliminary conclusion, ACM continues by referring to the draft decision and the risk that absent access regulation, the market risks converging to joint dominance and hence SMP of both KPN and Ziggo.

ACM then makes a big leap in its reasoning by stating that because of this risk it is likely that KPN would have an incentive to foreclose, because by refusing access it would maximise its profits. If, according to ACM, KPN would provide access, part of its profits would be lost to the parties to which it provides access.

> *"Om in staat te zijn hier wél een duidelijke conclusie te trekken is de situatie op de onderliggende retailmarkten relevant die kan ontstaan indien KPN geen toegang verleent aan alternatieve aanbieders via ontbundelde toegang en WBT. Op basis van het onderzoek in de marktanalyse ontbundelde toegang 2014 is ACM tot de conclusie gekomen dat er in afwezigheid van sectorspecifieke regulering een risico is op AMM van KPN op de onderliggende retailmarkten.[...] ACM acht het gelet op dit risico aannemelijk dat KPN een prikkel heeft om de concurrentie van alternatieve aanbieders via ontbundelde toegang en WBT significant te belemmeren. Immers, door middel van het weigeren van (effectieve) toegang maximaliseert KPN haar winsten. Indien KPN wel (effectieve) toegang zou verlenen dan zou een deel van zijn winst op de retailmarkten verloren gaan aan alternatieve aanbieders."*[5]

We are a bit at a loss to fully understand ACM's reasoning here. First ACM considers that it cannot draw a conclusion on the presence of an incentive for KPN to foreclose, based on a comparison of actual and critical diversion ratio's, and then it concludes that KPN would maximise its profits by foreclosing access because of the lost profits resulting from actual diversion.

What remains implicit in ACM's assessment is the apparent assumption that KPN's retail margins would increase (relative to current margins) as a result of the joint dominance of KPN and Ziggo that would be the consequence of a foreclosure strategy.

But this means that if ACM would have been serious in its assessment of KPN's incentive to foreclose in the context of the KPN/Reggefiber transaction, it should have estimated the likely increase in the retail margin that KPN would be able to achieve post-merger in the absence of access measures. Based on such margin increase it could recalculate the critical diversion ratio and then reassess whether the estimated actual diversion ratio would be higher than the critical diversion ratio.

It is a fact that ACM has not undertaken this assessment in the context of the KPN/Reggefiber transaction. Perhaps this was considered not necessary as ACM assumes, based on the

[4] Paragraph 96 of the KPN/Reggefiber decision.

[5] Ibid.

preliminary conclusions in the draft decision that KPN will continue to be subjected to access regulation in any event.

However, ACM does also not however discuss or assess KPN's incentive to foreclose in the draft decision. ACM just states (rather clumsily) that in the absence of voluntary access, KPN and UPC/Ziggo possibly could come to a coordinated outcome, which makes it more likely that voluntary access would be denied:[6]

> *"Bovendien blijkt uit het vervolg van de analyse dat KPN en UPC/Ziggo in een situatie dat geen vrijwillige toegang wordt geleverd, mogelijk kunnen komen tot een gecoördineerde uitkomst waarmee ze hun winsten kunnen verhogen (zie paragraaf B.3.3). Dit maakt het des te aannemelijker dat geen toegang wordt verleend, aangezien een gecoördineerde uitkomst door alternatieve aanbieders zou kunnen worden doorbroken.*

But this crucial part of the decision is without any substance.

First, the KPN/Reggefiber decision was published on the same day as the draft decision. From KPN/Reggefiber it should be concluded that ACM does not know, and has not assessed properly whether KPN would have an incentive to foreclose in the absence of regulation.

Second, the draft decision does not provide any assessment of KPN's incentive to foreclosure. As indicated, ACM may refer to the implicit assumption in the KPN/Reggefiber decision that, if the risk of joint dominance would materialise in the absence of regulation, KPN's margins may increase. But this issue, and its potential implications for the critical diversion ratios is not assessed in the draft decision.[7]

The only possible conclusion from this is that ACM still does not know whether in the absence of regulation KPN would offer voluntary access or not.

A further point to note, which underlines the problem with the lack of any analysis in the draft decision, is that, for the purposes of the draft decision, ACM should also have investigated the incentive to foreclose in a scenario in which KPN provides only WBA (and no ULL) access on a voluntary basis.

This scenario was not included in the KPN/Reggefiber decision as it only includes critical diversion ratios calculated with respect to ULL and ULL and WBA in combination based on current wholesale margins. However, providing WBA access only is of course a relevant option for KPN in an unregulated context.

To the extent margins on WBA are higher than margins on ULL, assessing voluntary WBA only may result in a different outcome as, relative to not providing access at all, forgone upstream wholesale revenues would increase, and the case for providing voluntary access would become more likely (and vice versa the case for not providing any wholesale access would be less likely).

[6] Draft decision, par. 609: emphasis by RBB.

[7] We will discuss this in-depth in Section 3 below.

The lack of analysis is the more serious because theoretical insights regarding incentives for access show that in the context of investment decisions, voluntary access with two infrastructures is a likely competitive outcome.[8]

2.3. Conclusions

The assessment of ACM as regards the question whether KPN would provide wholesale access in the absence of regulation is seriously flawed and extremely brief:

- ACM dismisses KPN's Open Wholesale Model because voluntary access would only have been offered by KPN to avoid regulation. We do not think this is a very convincing reason to dismiss a serious offer; ACM in essence argues that the Open Wholesale Model is a lie, and hence that KPN would be lying. At the same time it takes comments by third parties very seriously. That does not qualify as an impartial judgement based on facts (or insights from economic theory).

- ACM's assessment is largely based on third party opinions made in the context of ACM's inquiry for the purposes of the draft decision. These third parties have a clear interest in regulated access, and their opinions should be taken with a grain of salt (see also above).

- Most importantly, the draft decision does not provide any economic evidence or assessment showing that KPN would have the incentive to foreclose in the absence of regulation. It is not true, let alone evident, that foreclosure is always the best alternative to a firm. Whether or not this is the case, needs a thorough analysis, based on the context of the firm(s) concerned.

- As discussed above, ACM concludes on the basis of its economic assessment in the related KPN/Reggefiber merger case that it does not know whether KPN has the incentive to foreclose. The incentive would, according to ACM exist however as a result of joint dominance resulting from not providing access. This cannot however be simply inferred from a reference to the risk of joint dominance in the draft decision, even if the existence of such risk would be accepted. As indicated above, it would have required a thorough assessment of the likely existence and impact of joint dominance on KPN's retail margins and its implications for the critical diversion ratio. Neither the KPN/Reggefiber decision nor the draft decision includes such an in-depth assessment.

[8] ACM Working Paper 2014.3, by Michael Hellwig, "The effects of access regulation on investment and the implications for an optimal access pricing policy", p. 6 (https://www.acm.nl/nl/publicaties/publicatie/13501/Studie-naar-effecten-toegangsregulering-op-investeringen-in-telecommarkt/): "In light of the new regulatory style of the ACM, which places the effects of interventions at the centre of the strategic approach, there is a need for better understanding the impact of access regulation on market developments in the telecommunications sector." On p. 60: "Moreover, without access regulation, the incumbent would deliberately grant access to the entrant. As the investment also increases the number of the entrant's customers, the incumbent would use the entrant as his affiliate to attract consumers away from the competing cable operator."

ACM's conclusion that KPN would not provide wholesale access and would foreclose third parties in the absence of regulation is, for the above reasons, not based on an economic assessment of the incentives that KPN would have to follow such a strategy. ACM has hence failed to substantiate a critical part of its assessment in the draft decision.

3. Joint dominance

3.1. Introduction

Based on current market shares and projected market shares in the absence of regulation, ACM concludes in paragraph 649 that there are no indications of single SMP as KPN and Ziggo would have similar market shares of 49-51% each and are also comparable in (most) other respects. As we broadly agree with ACM's conclusion we will not discuss ACM's assessment on this point in any further detail.[9] The remainder of the discussion on SMP on the retail market for internet access focusses on ACM's finding of joint SMP.

Below we will discuss ACM's joint dominance assessment. Our comments do not pretend to be complete and do not address all aspects of ACM's assessment. This does not mean that we agree with ACM on the issues not discussed below.

As a first preliminary comment we note that ACM in its draft decision refers a couple of times to a chapter on coordinated effects that is part of the recent decision of the European Commission clearing the acquisition of Ziggo by Liberty Global (which result in a merger of the businesses of UPC and Ziggo). These references should be ignored as the Commission deemed it not necessary to draw any conclusions on the degree to which the market should be considered conducive to coordination for the purposes of assessing the merger. The Commission does not hence assess in its decision in a systematic way whether or not the conditions for tacit collusion (and hence joint dominance) are fulfilled or not.[10]

A second preliminary comment is that we discuss below the assessment of joint dominance by ACM. In our view this should be clearly separated from the *policy* question on what the preferred market structure would look like. A finding of joint dominance is required for a finding of SMP, nothing more and nothing less. Thoughts on for example the optimal number of players in the market are hence irrelevant for the assessment of joint dominance.[11]

[9] The projected market shares are based on the Blauw survey discussed above and a report by Dialogic for ACM, which includes market share predictions for the period 2015-2018. We will not discuss ACM's conclusions and these reports in the context of the finding of absence of single SMP. Regardless of the exact market share predictions, a market share of, for example 60% should not be considered a strong indication of single SMP in the presence of a second fixed line infrastructure with a share of 40%. In addition, it is clear that KPN and Ziggo currently compete in the market and are unlikely to behave independently of each other.

[10] Case M.7000 – Liberty Global / Ziggo, decision of the European Commission of 10 October 2014. We have been provided with a non-confidential version of the part of the decision that discusses coordinated effects. See in particular paragraph 513.

[11] A report for Tele2 by Ecorys ("Two is not enough, De noodzaak voor gereguleerde toegang tot telecomnetwerken", September 2013") for example seeks to present a case for access regulation and for more than two players being required. This report does not however address the question whether in the absence of more players tacit collusion is likely. As an aside, the study appears to suggest that if competition in a market does not drive down prices to marginal cost and that when market characteristics are not 100% in line with the conditions required for pure Bertrand competition, competition would necessarily not be effective. This cannot however in and of itself trigger regulation and/or result in a presumption of joint dominance to exist. If such benchmarks would be applied most real world markets would be deemed not effectively competitive.

3.2. Standard of proof

In paragraph 653 of the draft decision, ACM specifies what it considers to be the standard of proof its assessment should be held against.

ACM notes that the draft decision assesses the question of joint dominance *in a prospective sense* and that it assesses whether it is *reasonably plausible* that there is a 'risk of' joint SMP in the absence of regulation. According to ACM, it would not need to show that it is plausible that joint SMP 'will' emerge or be strengthened.

> *"ACM merkt op dat bij de toepassing van het hiervoor geschetste kader van belang is dat in onderhavig marktanalyse besluit* in prospectieve zin *wordt beoordeeld of het redelijkerwijs aannemelijk is dat er sprake is van een 'risico op' gezamenlijke AMM in afwezigheid van regulering. Niet hoeft te worden aangetoond dat het aannemelijk is dat gezamenlijke AMM 'zal' ontstaan of wordt versterkt."*[12]

ACM does not refer in its decision to any guidelines or jurisprudence that would provide a justification for lowering the standard from 'showing that the emergence of joint SMP is reasonably plausible' to 'showing that a risk of joint SMP is reasonably plausible'.

The standard of proof applied by ACM appears to suggest that even if ACM could show that it is reasonably plausible that there would be a 0.01% (one in ten thousand) chance of joint SMP to emerge, this would be sufficient for ACM to conclude that a risk of joint dominance exists and hence sufficient to conclude that it may regulate on that basis.

In our view, it is evident from this paragraph that ACM sets a standard of proof for a finding of joint SMP which is too low, without providing any justification for it.

On the same page and in the preceding paragraph of the draft decision, ACM refers to the Commission guidelines for the assessment of horizontal mergers as one of the reference points for the assessment of joint dominance (and hence joint SMP). Mergers equally require a prospective assessment and are in that sense not different from the type of market assessment that ACM presents in its draft decision. In a merger context however, the Commission (and national competition authorities) should base its competitive assessment of mergers on convincing evidence. Naturally, what is meant here is convincing evidence of (the absence of) anti-competitive effects arising from a merger, not convincing evidence of 'a risk' or the absence of any risks.

It is of course true that in a prospective assessment it cannot be demanded from authorities to be able to predict the future with certainty. A prospective assessment inherently includes weighing of probabilities based on the evidence available. However, even in an assessment of probabilities one would expect authorities to draw conclusions on the basis of weighing probabilities and on the basis of what the authorities consider most likely to happen (or at the minimum have a significant risk of happening).

[12] Paragraph 653 of the draft decision.

The appropriate standard of proof should in our view hence be that ACM should demonstrate why joint dominance is more likely than not to emerge in the absence of regulation, or at least why there would be a significant risk of joint dominance emerging in the absence of regulation.

What is problematic in ACM's assessment is that it first sets a low standard of proof and then provides an assessment with a conclusion in paragraph 703 which clearly links to its own low standard. In that paragraph ACM concludes that "there is a risk of joint dominance". It does not provide any indication however how big this risk is. In theory, and as indicated, ACM would satisfy its own standard of proof if this conclusion would be based on the likelihood of a presence of a risk of 0.01%. Put differently, ACM does not in its draft decision conclude that joint dominance is likely to emerge in the absence of regulation, or that there would be a significant risk of joint dominance emerging.

ACM's low standard has bearings on the value that can be attached to ACM's assessment of the risk of joint dominance. Because the standard is so low, ACM may argue that the sole purpose of its assessment is to show the existence of a risk, and should not be considered as an assessment on the basis of which ACM considers such risks likely to materialise in practice. The draft decision hence does not show whether ACM considers that its own assessment should be considered as more than just proving that some hypothetical risk exists, or should be interpreted as a serious attempt to demonstrate the likelihood of joint dominance emerging.

To the extent therefore that the standard of proof required from ACM is set too low by ACM itself, the assessment of joint dominance in the decision should be rejected in its entirety as the assessment can only be considered to meet this low standard of proof and not more.

In the remainder of this note we will assess the evidence presented by ACM against a higher standard, namely whether or not the assessment of ACM shows that join dominance is more likely than not to emerge in the absence of regulation.

3.3. Framework for the assessment of joint dominance

In paragraph 654 ACM sketches the framework for the assessment of joint dominance, with reference to the Commission's guidelines on the assessment of horizontal mergers. A fuller description of this framework is provided in Section 3.3 of the RBB report. Although implicit in ACM's description of the framework, it is important to note that the conditions for joint dominance are cumulative: all conditions for tacit collusion need to be fulfilled. It is not sufficient to list a number of characteristics that would render the market more conducive to tacit collusion.

3.4. Symmetry - market shares

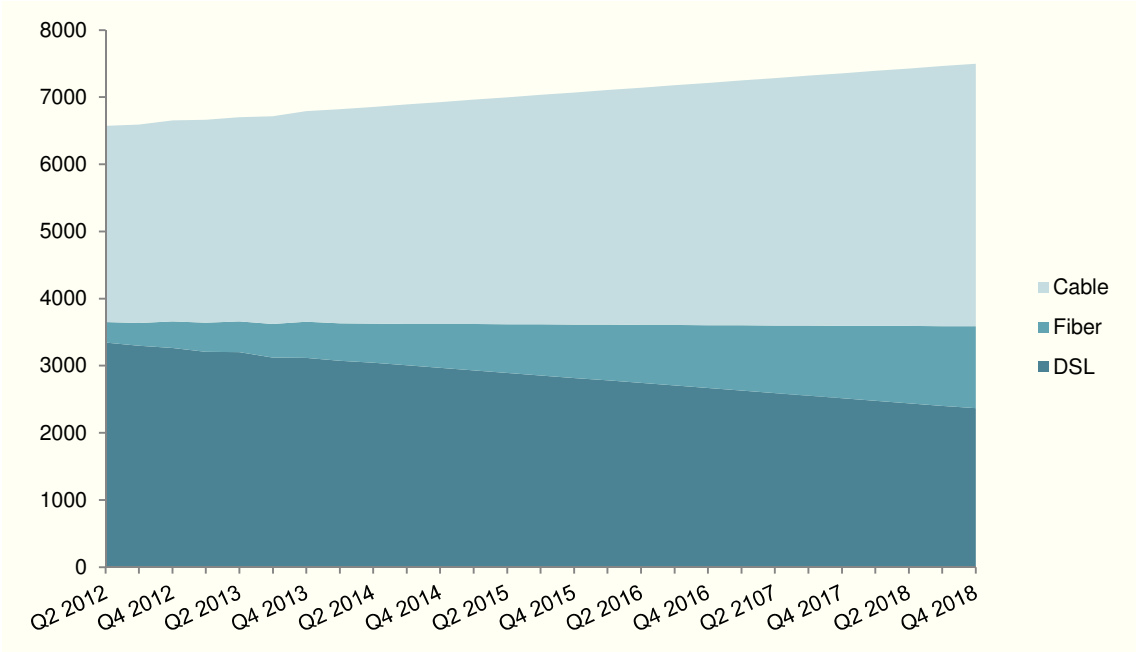
ACM estimates in paragraph 658 of the draft decision that the market shares of Ziggo and KPN would be equal at around 50% in the absence of regulation. This conclusion is based on a

report by Dialogic[13] which predicts market shares for 2015-2018 with regulation, and the attribution by ACM of market shares of third parties, that use KPN's network, to KPN and Ziggo.

The Dialogic report in essence bases its projection on (1) the extrapolation of trends in the market, and (2) a number of deviations from those trends. The main trends in the market are the on-going decrease in the number of DSL connections and the increase in the number of cable and fiber connections.

If, based on the data from ACM's monitor, we do a straightforward extrapolation of the trends in the market, the following picture emerges as regards the development of the number of connections for DSL, cable and fiber.

Figure 1: Extrapolation of number of retail connections by infrastructure (up to Q2 2014 based on actual data)



Source: ACM Monitor, RBB

As the extrapolation shows, the total number of connections is still expected to grow in this chart up to almost 7.5 million at the end of 2018. Dialogic expects a slower growth and predicts almost 7.25 million broadband connections at the end of 2018. It should be noted however that their estimated number of broadband connections at the end of 2014 is 6.71 million, whereas the monitor of ACM shows this number to be already 6.85 million at the end of the second quarter of 2014.

In our simple extrapolation, DSL's share in the total number of connections decreases from 44% in Q2 2014 to 32% at the end of 2018, whilst cable grows from 47 to 52% and fiber doubles from 8% to 16%.

[13] Dialogic, Prospectief onderzoek naar de marktaandeelontwikkeling op de telecommunicatiemarkten voor internettoegang, vaste telefonie en zakelijke netwerkdiensten.

Dialogic notes a number of deviations from the trend that would, in addition to a lower number of broadband households, result in changes to the above prediction (we assume that our extrapolation is very similar to Dialogic's, but this is difficult to check as Dialogic does not provide the underlying numbers).

In particular, Dialogic considers that:

- The roll-out of fiber and the decline in DSL would slow down as a result of a change in KPN's strategy with less focus on fiber roll-out and more focus on DSL upgrading;
- Increased penetration of fiber where it is rolled out;
- Switch by smaller cable networks to fiber resulting in a reduction in the number of cable connections, and growth of fiber in rural areas through local initiatives, resulting in a reduction in DSL connections.
- A competitive advantage for KPN as a result of a strong position in mobile and the ability to offer quadruple play services.

Obviously, some of these deviations from the trend work in opposite directions. Another point to note is that some of these deviations are relevant in particular for those areas not covered by Ziggo (or other cable networks).

As the underlying data and calculations are not provided, it is difficult to judge what the impact is on the (symmetry of the) market shares of Ziggo and KPN in the geographic area in which they compete directly, i.e. the market shares most relevant to the assessment of joint dominance.

In any event, we do have some doubts as regards the deviations from the trends as incorporated by Dialogic. In particular since the deviations mentioned by Dialogic do not appear to be clear breaks from the past that would allow for changing an extrapolation of ongoing trends. For example:

- The deployment of fiber, also by the smaller cable operators, is an ongoing process which has not, as far as we can see, resulted in the market share increase of cable decreasing over time;
- KPN is on a continuous path to upgrade its DSL network, but this has not resulted in a reduced decline in DSL's share of the market.
- Increased fiber deployment, and gradual increases in penetration rates have been the drivers of the growth of fiber. As there is no obvious change in these factors, it is difficult to see why the growth in the past cannot be simply extrapolated and why deviations from the trend should be accounted for.
- Dialogic does not factor in the roll-out of DOCSIS 3.1 in the coming years, even though Ziggo expects to start offering services based on this upgrade as early as 2016.[14]

[14] http://nlkabel.nl/docsis-3-1-in-recordtempo-ontwikkeld/

Overall, it appears as if the deviations from the trends taken account of by Dialogic in particular reduce the upward trend in cable connections that would result from a straightforward extrapolation of historic data. Based on the above, we would question these adjustments, as there are, in our view, no convincing reasons to assume that the gradual growth of cable would slow down.

It would have been helpful if ACM would have provided more detail as regards its projected market shares for KPN and Ziggo in the absence of regulation. As indicated, Dialogic does not provide a detailed breakdown of its market share predictions, which makes it impossible to calculate exactly what the impact would be of not taking into account some of the deviations from the trend considered by Dialogic.

Also relevant is that ACM's market share calculations do not take account of the regional differences in shares across the Netherlands. One should distinguish here between:

- The geographic area where the networks of Ziggo and KPN overlap.
- The geographic areas where the networks of Ziggo and KPN do not overlap (such as the areas covered by Caiway and Delta.

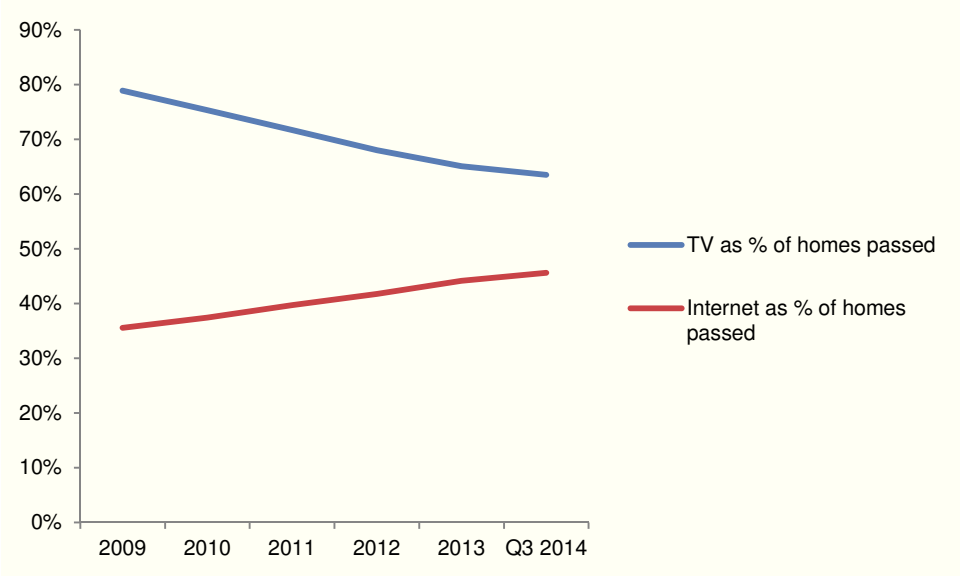
Obviously for the assessment of joint dominance, the focus of ACM should be on the geographic area where there is in fact overlap between Ziggo and KPN. In addition, it may well be relevant for KPN's incentives to assess how important the area is in which its network competes with other operators than Ziggo, as this may be relevant for the assessment of KPN's overall incentives to compete and invest.

In addition, it would be relevant in both areas to distinguish between those areas where KPN provides services over its DSL network (where its share is likely to decline) and those areas where KPN provides services over fiber networks, which is expected to grow in importance (but where penetration is currently around 33%[15]).

The potential for cable operators to grow their share of the broadband market by upselling dual or triple play bundles with internet to TV customers (and likewise KPN's ability to grow its TV market share by upselling dual and triple play bundles to its telephony and internet subscribers) is still big. The graph below shows the development of Ziggo's share of the TV and internet markets calculated on the basis of the number homes passed by Ziggo's own network (i.e. disregarding those areas where Ziggo provides services on third party's networks).

[15] NERA, Unbundled Access to the Fibre-to-the-Home Networks of Reggefiber, Public version – Prepared for the Netherlands Authority for Consumers and Markets, May 2014

Figure 2: Ziggo share of TV and internet as % of homes passed by Ziggo's own network



Source: Ziggo Q3 2014 results

Between 2009 and the 3rd quarter of 2014, Ziggo's share of the internet customers, calculated as a percentage of homes passed by its own network increased with 10%, whilst its share of TV customers decreased by 15%. If we would extrapolate these trends, Ziggo's share in its own footprint would be around 52-53% of homes passed in its own network for both TV and internet by the end of 2018.

An obvious break, or deviation from the trend, would result from KPN no longer providing access to third parties as this would force customers of Tele2 and others to switch provider (see also the previous chapter). This has not been modelled by Dialogic but is likely to result in an increase of cable operators' joint market share with a couple of percentage points.

This could likely increase Ziggo's share of homes passed in its own footprint to between 55 and 60% all else equal (ACM appears to assume that third parties account for around 10% market share, of which around half would go to cable operators in the absence of regulation, without KPN providing voluntary access).

Taking account of, for example a 95% penetration rate of broadband by the end of 2018 (Dialogic assumes 92%), this would mean that Ziggo's market share in its footprint would, on the basis of simple extrapolation be between 58% and 63%.

It is hence fairly easy to arrive, on the basis of a straightforward extrapolation of actual market data, at quite different market share predictions than ACM, with different potential implications for a finding of joint dominance.

A statement that, on a national level, Ziggo and KPN should be considered equal with symmetric market shares is hence too simplistic and not supported by the facts.

3.5. Symmetry – capacities

ACM correctly notes in paragraph 661 that both KPN and Ziggo have near unlimited capacity and could in principle connect all homes passed by their networks. As most costs are fixed both parties should be able to expand the number of connections relatively easily without incurring large incremental costs.

ACM considers this an element adding to the symmetry of the parties. Curiously, ACM notes here that KPN and Ziggo would not have different interests. We agree that KPN's and Ziggo's interests are similar, we do not agree however if ACM's comment would imply that both parties' interests are aligned. In our view the lack of capacity restrictions for both parties, results in an incentive for both parties to connect as many homes as possible in order to make optimal use of the available capacity as each additional subscriber adds margin due to the fixed cost nature of both networks. If anything, this means that KPN and Ziggo have the same, but conflicting interests – they have an incentive to compete for the same subscribers.

In addition it should be noted that in order to remain profitable a minimum capacity utilisation (or penetration rate) is required in order to earn back and make a return on fixed network investments and to pay for network upgrades.

This should be particularly relevant for KPN in the context of rolling out fiber that replaces the copper based DSL network. ACM does not investigate the penetration rate required for fiber roll-outs, but this is likely to be around 30-40%.

As indicated above on market shares, all else equal, and assuming that KPN will not provide voluntary access to third parties, its market share may reach such critical levels if the growth of cable is not stopped or at least significantly slowed down. This means that in order for KPN to be able to roll-out fiber profitably, and for there to be a business case to roll-out fiber, KPN will need to compete fiercely to make sure it reaches critical penetration rates.

3.6. Symmetry – technology

ACM's assessment of symmetry as regards technology is bewildering. In paragraph 663 ACM concludes that there are asymmetries between cable operators (including Ziggo) and KPN, and that these asymmetries play out differently depending on the question whether KPN has switched from its copper based DSL network to fiber or not.

This should be clear enough as a conclusion on technology and is more or less in line with our assessment in the RBB report.

ACM continues however with an assessment on how these asymmetries would play out in the market. On the basis of very strong assumptions without any factual support, ACM concludes that both KPN and Ziggo would not have incentives to use local advantages in their networks because this would lead to spiral in which both parties have to invest to continuously upgrade their networks.

In other words, ACM assumes that technological differences that provide a competitive advantage to either of the parties in different regions would not be used to compete, and that KPN and Ziggo would tacitly agree not to invest in upgrading their networks.

There is absolutely no basis for such line of reasoning and it is completely at odds with market reality where both parties are continuously investing in their networks and in upgrading their networks. ACM does also not explain why not investing and not using new technologies that become available would be a sustainable outcome of tacit collusion.

As ACM itself notes, the current coverage of fiber is around 25%. If we follow ACM's reasoning, KPN would have a competitive advantage in these areas relative to cable, and Ziggo would have a competitive advantage in the remainder of KPN's footprint where its internet services are based on the copper loop DSL network.

- Does ACM really consider it a stable outcome if KPN ends up with a 25% market share and Ziggo with 75% market share and that the market would converge to regional fiber and cable monopolies as both tacitly agree not to invest?
- Or does ACM consider it a stable outcome that KPN and Ziggo tacitly agree not to use their quality advantage over the other in competing with each other? It is a mystery to us how that would work in practice.

The 'theory' that ACM discusses here is highly hypothetical, lacks any factual basis and is hence not tested. ACM fails to establish here what the focal point of the agreement between Ziggo and KPN would be here.

Even more striking is that ACM uses its reasoning to conclude in paragraph 668 that, despite the differences between the areas with and without fiber on the national market, the parties are (also) symmetric in terms of technological capabilities. This is simply factually incorrect as ACM itself notes a few paragraphs earlier: KPN and Ziggo are not symmetric in terms of technological capabilities.

3.7. Stable duopoly?

In paragraph 673 ACM concludes that the market would be stable and that KPN and Ziggo would have a 'stable' duopoly which would contribute to the ability and incentive to coordinate. In our view the current market share trends as well as the technological developments do in fact not indicate the presence of a stable duopoly in the absence of regulation.

It is in our view more likely than not that, everything else equal, Ziggo will in the coming years continue to gradually increase its market share. In our view this is more likely than not to put pressure on KPN to respond competitively as the corresponding gradual market share decrease it faces, will put pressure on its penetration rate and hence its margin. Whilst technological developments may be predictable, they can still be disruptive. The introduction of DOCSIS 3.1 for example will allow cable operators to improve the quality of their offer significantly, without a need for investments of the scale that would be necessary for KPN to do the same.

What is striking in the draft decision is that it lacks any detailed assessment of such technological developments and its potential impact on the ability and incentive to coordinate. If one of the players in this supposedly stable duopoly can make significant improvements to the quality of its offer that would also improve its competitive position, we do not understand why the predictability of such investment would contribute to the alleged stability of the duopoly. In our view such developments should have been assessed carefully by ACM as they can result in instability and the need for a competitive response.

ACM does not mention this explicitly in its decision but it is apparently of the view that KPN will no longer invest in fiber and Ziggo is unlikely to invest in DOCSIS 3.1 as a result of tacit collusion (otherwise we do not understand ACM's statements on the 'investment spiral' in paragraphs 664-666). This however has not been assessed by ACM, nor has it assessed in any level of detail what the consequences would be for (the absence of) investments for the alleged stability of the duopoly it would see developing in the absence of regulation.

3.8. Time horizon

ACM is right to say that both KPN and Ziggo make significant investments and have high sunk fixed costs that need to be earned back over a long period of time. Both parties can hence be expected to remain in the market for a long period of time, in which period they will continuously interact/compete in the market. ACM notes that deviation from tacit collusion to increase short term profits at the expense of long term profits is in such scenario not an optimal strategy.

This may be right in theory but we do not fully subscribe to the conclusion that ACM draws from this, namely that it would contribute to the incentive and ability to reach an agreement, if such agreement is possible in the first place, which we will discuss further below.

3.9. Coordination mechanism

In paragraph 677, ACM states that the purpose of coordination would be to sustain prices above the competitive level, whilst the distribution of market shares would remain the same. In ACM's view, an unequal distribution of market shares would not be acceptable to the smaller player and would provoke a competitive response from the smaller party to gain market share, for example through a decrease in price or a quality improvement.

ACM continues by stating in paragraph 678 that the parties are able to influence the distribution of market shares by determining the price and quality of their own products. If as ACM states, one of the parties would see its market share increase, it could increase its price to restore the respective market positions and be back in (joint dominance) equilibrium.

In paragraph 679 ACM explains that it considers such coordination mechanism likely for the following reasons:

- Transparency of market shares and prices;
- Market share would be a focal point for coordination;

- The current market share split of 50% and 50% (in the absence of regulation) would be a good starting point for coordination.

These reasons are unconvincing and do not in our view explain how ACM's coordination mechanism would work.

First, and as explained above, there are asymmetries in technology with regional differences depending on whether KPN has rolled out fiber. It is unclear how ACM thinks its coordination mechanism would work in these circumstances. Would Ziggo start applying different prices depending on whether KPN has rolled out fiber or not in a particular area? How would this work in practice and is this likely considering the fact that it would be more logical for Ziggo to apply similar prices in its footprint?

ACM does also not explain or demonstrate how the parties would be able to change the quality of their products in order to restore the competitive balance. Further improvements in quality would be possible only with network upgrades – but these would be inconsistent with ACM's theory of tacit collusion. This would imply that Ziggo or KPN would consciously degrade the quality of their products to restore the balance in market shares. Does ACM consider it credible that either Ziggo or KPN would deliberately give up its competitive advantage and reduce the quality of their products in those areas where they gain market share that would disrupt tacit collusion? We fail to see how this would be a credible mechanism.

Second, market shares cannot be expected to be or remain at 50/50 in the absence of regulation but are more likely to gradually develop in the direction of around 60% for Ziggo and 40% for KPN. ACM does not explain, assess or demonstrate why it thinks that it is more likely that Ziggo or KPN would increase its price in order not to increase its market share above 50% than that either of the parties would seek to improve the quality of its network and/or seek to compete on price.

ACM also does not in its assessment factor in future technological developments and their potential impact on the quality of KPN's and Ziggo's respective offerings and what, in ACM's view, KPN and Ziggo would need to do to restore the balance also in the longer term in light of this.

Third, ACM also does not factor in the inherent incentive that both parties have to achieve a high penetration rate of their networks, given their capacity to expand. ACM does not explain or demonstrate that it would be more profitable for Ziggo to increase prices to reduce its market share, rather than to see its penetration rate increase at current prices. The same applies to future network upgrades.

As indicated, ACM does not explain or demonstrate that KPN and Ziggo would refrain from investments in upgrades in their networks in order not to gain a competitive advantage. Quite striking is that in describing the coordination mechanism for tacit collusion, ACM focuses on market shares and price. ACM does not explain however, in this part of the draft decision, how coordination on network investments would work. Tacit coordination on investments was however, as shown above, the reason for ACM to conclude that technological differences do not amount to asymmetry. This means that the discussion on coordination mechanism is not

complete, or that ACM does not consider coordination on investments to be likely, which would contradict its own conclusions on (a)symmetry.

The reasons on the basis of which ACM considers a coordination mechanism with market shares as a focal point to be likely, do not explain how such coordination would look like in practice, do not provide any evidence as to why such coordination is practically possible and do not show why such type of coordination is more likely than competition.

A more general note on this point: why would, in the face of different investment incentives and existing difference in competitive position (esp. regarding internet and bundles), Ziggo stop trying to win market share? Ziggo increases its market share steadily and has no incentive to stop that now, because that would also entail stopping with investments in upgrades (which would give KPN a future advantage). One cannot separate an analysis of focal points from dynamic considerations.[16]

ACM thus puts forward in its draft decision a hypothetical coordination mechanism as part of its theory of harm, without thinking through how this could work in practice considering the features of the market in which the tacit collusion should take place, and without any evidence showing the likelihood of such coordination to work in practice.

3.10. Punishment mechanism

In the RBB report we have addressed a number of the other factors that are discussed in ACM's draft decision, such as the absence of a credible punishment mechanism. In paragraph 690 ACM considers such punishment mechanism on price to be likely: in response to deviations Ziggo and KPN are considered to be able to respond with temporary price reductions targeted at winning over customers from the other party. The threat of such temporary price reductions would result in a return to the collusive outcome.

Introduction offers are however already a feature of the market and one of the typical ways to compete. Apparently this is also profitable as it allows parties in the market to increase their market share and recoup the customer acquisition costs over time. As long as this is profitable, Ziggo and KPN will continue to do this. It is therefore not really clear from ACM's draft decision how, considering the characteristics of the market, this type of response could be seen as a credible punishment mechanism.

Let us assume that KPN introduces a low price product in order to win market share and Ziggo responds by also introducing a low price product as a competitive response to avoid losing market share. How is this different from normal competition that we currently observe in the market? And how would Ziggo credibly punish KPN for this to force KPN to retreat and return to the collusive equilibrium?

Again, ACM's draft decision is highly hypothetical and lacks any assessment as to how retaliation would work in practice. The quote below from a study for the European Commission

[16] See also Tirole, The Theory of Industrial Organization, par. 6.3.4.3: "[…] the game may be asymmetric or it may become asymmetric when a richer context is studied (e.g. when firms make investment decisions)."

sets a clear threshold that needs to be met in order for punishment mechanisms to work in punishing and preventing deviations from the collusive outcome:

> *"The multiplicity of retaliation and collusive mechanisms creates a potential for collusion in many industries. The main issue is how large is this potential, that is, how credible are the collusive mechanisms and to what extent is collusion likely to emerge. While economic theory provides many insights on the nature of tacitly collusive conducts, it says little on how a particular industry will or will not coordinate on a collusive equilibrium, and on which one. The common feature of retaliation mechanisms is however that they must be effective in preventing firms from deviating, which implies two conditions:*
>
> *i) The profit loss imposed on a deviant firm by retaliation must be sufficiently large to prevent deviations;*
>
> *ii) It must be in the best interest of the firms to carry on the retaliation once a deviation has occurred.*
>
> *The second condition can be difficult to assess, because retaliation is itself an equilibrium phenomenon. For example, the possibility always exists, as in the above selfsustaining scenario, to simply revert to "normal" competition; however, such retaliation may not be sufficiently effective, that is, the "punishment" it inflicts may not be sufficient to deter deviations. Effective retaliation must then involve actions that are costly for the firms, in the sense that they are not in the firms' short-term interest; there must however be a long-term rationale for these actions."*[17]

ACM in our view fails to explain how likely it is that if KPN or Ziggo would deviate from the collusive outcome, the other party will retaliate with actions that cause a sufficiently large profit loss to prevent deviation in future and result in a return to the collusive outcome.

3.11. Conclusion

In the draft decision, ACM seeks to tick all boxes of the necessary conditions for tacit collusion to emerge in the Dutch broadband market in the absence of regulation.

As we have shown in this chapter however, the draft decision lacks a clear and coherent theory of harm and fails to demonstrate in any level of detail how its theory of harm is supposed to work in practice in the relevant market. ACM's draft decision, which crucially depends on a finding of joint dominance, does not contain any assessment that is capable of demonstrating the likelihood of tacit collusion to arise in practice.

ACM's theory of harm is a theory only, not even capable of demonstrating 'a risk' of collective dominance to arise in the absence of regulation.

[17] The Economics of Tacit Collusion, Marc Ivaldi, Bruno Jullien, Patrick Rey, Paul Seabright, Jean Tirole, IDEI, Toulouse, March 2003, Final Report for DG Competition, European Commission