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AKOS

Metodologija za izvedbo predhodnega preskusa gospodarske ponovljivosti (osnutek)

(Economic Replicability Test - ERT)

Maj 2016

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1 Uvod

Predhodni preskus gospodarske ponovljivosti je predstavljen v Priporočilu Komisije z dne 11. 9. 2013 o doslednih obveznostih nediskriminacije ter metodologijah za izračun stroškov za spodbujanje konkurence in izboljšanje okolja za naložbe v širokopasovne povezave (2013/466/EU) , v katerem je tudi navedeno, da bi moral regulator, pri izvedbi preskusa slediti določenim parametrom v skladu s smernicami iz Priloge II citiranega Priporočila.

Priloženi dokument predstavlja osnutek metodologije za izvedbo predhodnega preskusa gospodarske ponovljivosti, ki se bo operaterjem s pomembno tržno močjo na upoštevni trgih dostopa do širokopasovnega omrežja 3a »Veleprodajni lokalni dostop na fiksni lokaciji«, 3b »Veleprodajni osrednji dostop na fiksni lokaciji za izdelke za množični trg« in 4 "Veleprodajni visokokakovostni dostop na fiksni lokaciji" naložila kot regulatorno obveznost. V dokumentu je opisan proces izvedbe predhodnega preskusa gospodarske ponovljivosti in stališče agencije v zvezi s posameznimi parametri. Dokument je pripravljen pred izgradnjo orodja (modela) za predhodni preskus gospodarske ponovljivosti in bo zato predmet ponovnega pregleda, ko bo orodje dokončano.

Dokument je posvetovalne narave, pri čemer morajo biti pripombe zainteresirane javnosti podane na podlagi jasnih argumentov, ki bodo agenciji služile za morebitne spremembe v metodologiji, pri čemer se agencija ne zavezuje, da bo upoštevala vse prejete pripombe in komentarje. Z navedenim dokumentom agencija nadaljuje s pravočasnim vključevanjem deležnikov na trgu pri regulaciji citiranih upoštevni trgov in vključevanjem njihovih pripomb in mnenj.

Agencija je dokument pripravila skupaj z zunanjimi svetovalci (družba BWCS Ltd).

Dokument, ki opredeljuje metodologijo predhodnega preskusa gospodarske ponovljivosti, bo predstavljal del analize navedenih upoštevni trgov in posledično tudi ponovnega postopka javnega posvetovanja.

Smernice vključujejo naslednja poglavja:

- Uvod;
- Preskus gospodarske ponovljivosti;
- Hipotetični konkurenčni operater;
- Delovanje modela ERT Agencije;
- Povzetek.

Te smernice so bile pripravljene pred razvojem dejanskega modela ERT Agencije in niso priročnik z navodili za uporabo modela. Priročnik z navodili bo izdan skupaj s samim modelom.

2 The Economic Replicability Test (ERT)

2.1 Brief Background

In 2013, the European Commission released a recommendation (the Recommendation¹) regarding consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment. This recommendation represented a significant shift in thinking by the Commission. In particular:

- It recognised that greater flexibility was necessary to encourage investment, particularly by operators with significant market power (SMP), in Next Generation Access (NGA) network infrastructure.
- It concluded that under certain conditions SMP operators should not have to offer cost-oriented wholesale NGA products and services, but would instead have to pass an ex ante Economic Replicability Test.

In December 2014, BEREC released specific guidance (the Guidance²) on the regulatory accounting approach to the Economic Replicability Test (ERT). This Guidance recognised that the ERT is in reality a particular form of an ex ante sector-specific margin squeeze test with the purpose of safeguarding/promoting competition, and was especially designed for situations where no cost-oriented wholesale access price obligation is imposed on NGA related products. “Safeguarding/promoting competition”, in this regard, would mean ensuring that alternative operators could compete in the downstream market on an equal basis.

The ex ante economic replicability test described in this document and to be performed under points 48(c) and 49(c) of the Recommendation is different from and without prejudice to margin squeeze tests that may be conducted ex post pursuant to competition law.

2.2 What is an ERT?

For an alternative operator to be able to compete effectively with an operator that enjoys significant market power, the alternative operator must be able to replicate the offering available from the SMP operator both from a technical perspective and from an economic perspective.

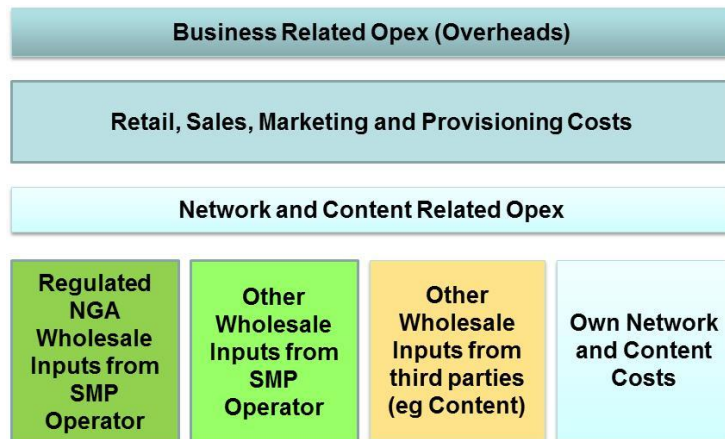
In many cases, alternative operators will utilise wholesale services provided by the SMP operator. They will then add additional facilities, either provided via their own network infrastructure and/or purchased from other third parties, in order to be able to *technically* replicate the SMP operator’s own retail offer.

Assuming that the alternative operators are able to technically replicate the SMP operator’s own retail services, they then also need to be in a position to do so profitably taking into account the retail prices charged by the SMP operator. They thus need to be able to *economically* replicate the SMP operator’s

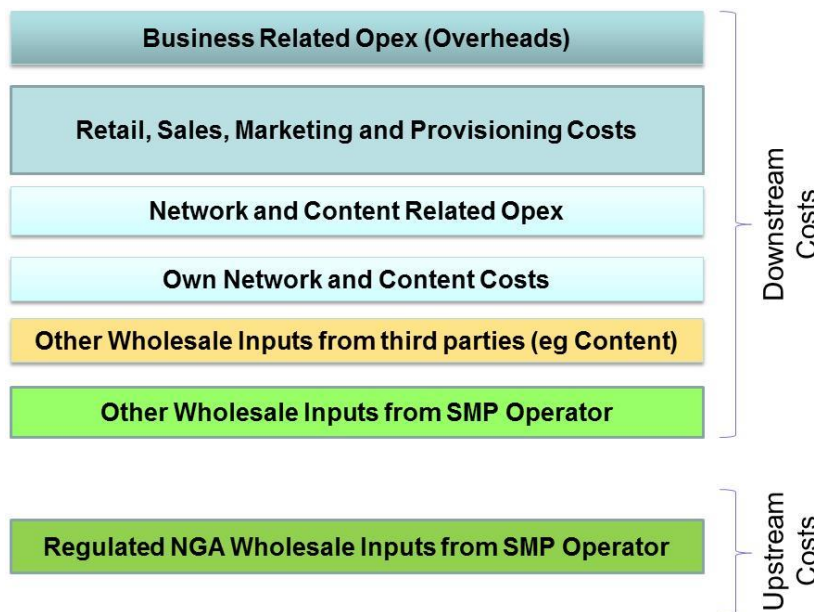
¹ Commission recommendation on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment , 11.9.2013

² BEREC Guidance on the regulatory accounting approach to the economic replicability test (i.e. ex-ante/sector specific margin squeeze tests), 5.12.2014

own retail offer. The diagram below illustrates the various cost blocks that will need to be taken into account.



Recital 64 of the Recommendation specifies that the economic replicability test “should ensure that the margin between the retail price of the SMP operator and the price of the NGA wholesale input covers the incremental downstream costs and a reasonable proportion of common costs.” This is illustrated in the next diagram which shows the cost blocks rearranged into a cost stack.



The ERT then compares the total of the Upstream Costs and the Downstream Costs with the retail price charged by the SMP operator for the same product (or product bundle). If the costs are less than or equal to the SMP operator’s retail price, then the test is passed, otherwise the test is failed.

Recital 64 further states that a lack of economic replicability can be demonstrated by “showing that the SMP operator’s own downstream retail arm could not trade profitably on the basis of the upstream price charged to its competitors by the upstream operating arm of the SMP operator.” This specific check on economic replicability is then termed the “equally efficient operator” (EEO) test.

The Recommendation further recognises that the EEO test will not always be sufficient – “such as when market entry or expansion has been frustrated in the past” [Recital 65]. In such cases, the NRA is able to make adjustments for scale to the costs of the SMP operator so as to help ensure that there is a realistic prospect of economic replicability being achieved. However, a caveat is placed on this in that any adjustment to scale should not go beyond what is deemed necessary to ensure effective competition.

2.3 Key ERT Parameters

Annex II of the Recommendation identifies a number of key parameters of an Economic Replicability Test that need to be specified by the relevant NRA:

- Relevant downstream costs.
- Relevant cost standard.
- Relevant regulated wholesale inputs and the relevant reference prices.
- Relevant retail products.
- Relevant time period.

These are presented in turn below, along with the related issue of technical replicability.

Relevant Downstream Costs

The Recommendation states that downstream costs should take as a starting point the downstream costs of the SMP operator (the so-called Equally Efficient Operator, or EEO, test). However, NRAs are able to make adjustments for scale to the SMP operator’s downstream costs in order to ensure that economic replicability “is a realistic prospect”.

AKOS has taken the view that to ensure that economic replicability is and/or remains a realistic prospect, the downstream costs should be adjusted to reflect an operator with a market share as specified in section 3.1.

Relevant Cost Standard

The Recommendation states that the appropriate cost standard for relevant downstream costs is the incremental cost of providing the downstream service. More specifically, the Recommendation states that LRIC+ should be used as the relevant cost standard, allowing for pure incremental costs to be marked-up to cover a reasonable proportion of common costs also related to the downstream activities.

AKOS has also taken the view that the LRIC+ cost standard is the most appropriate standard to use. AKOS notes that the use of the LRIC+ cost standard, in this regard, does not imply that all costs must be forward looking. Instead the underlying cost base will reflect the historical costs of the SMP operator.

Relevant Regulated Wholesale Inputs and the Relevant Reference Prices

In broad terms, the Recommendation states that the relevant regulated wholesale inputs will be those that are based on Next Generation Access (NGA) technologies, that is those that enable residential and small business end users to enjoy broadband access speeds covered by the EU Digital Agenda. These wholesale inputs might be either passive or active in nature.

AKOS has taken the view that, with respect to Slovenia, the relevant regulated wholesale inputs could include (depending on AKOS market analysis):

- Unbundled fibre to the home.
- Bitstream utilising VDSL technology.
- Bitstream utilising fibre technology.
- Bitstream utilising DOCSIS technology.
- Bitstream utilising Fixed Wireless Access technology (such as LTE).

For each relevant retail product, the Recommendation states that an ERT should be carried out based on the most relevant regulated input(s) used or expected to be used by access seekers, taking into account the timeframe of the current market review period. Relevance in this respect should take due account of the rollout plans of the SMP operator, the network topologies it has deployed, and the take-up of wholesale offers by alternative operators.

The Recommendation further states that an ERT should also be carried out where a relevant retail product is launched based on a different regulated input to the one(s) used in tests covered by the paragraph above, and/or when there is a substantial demand for access based on a different NGA-based wholesale layer.

AKOS has taken the view that the network characteristics of the SMP operator, and/or the demand for wholesale inputs, varies significantly across Slovenia and that it is thus likely that the ERT will also need to account for this since the most relevant NGA-based regulated wholesale input is likely to differ from one geographic area to another.

Finally, the Recommendation states that for each relevant NGA-based regulated wholesale input, the ERT will need to take account of the relevant reference wholesale price. This is the price that the SMP operator effectively charges third-party access seekers, and must also (under Equivalence of Input, EoI, rules) be equivalent to the price that the SMP operator charges to its own retail arm. Where the relevant reference wholesale price is a combination of one-off and recurring charges, then all relevant charges must be included within the ERT.

AKOS also takes the view that the ERT will need to take account of the relevant reference wholesale price corresponding to the relevant regulated wholesale input.

Relevant Retail Products

The Recommendation states that NRAs should assess the most relevant retail products offered by the SMP operator on the basis of the identified NGA-based wholesale access layer, taking into account current and forward-looking market observations. These are referred to in the Recommendation as “flagship products”.

AKOS has taken the view that the relevant retail products are all of those offered by the SMP operator that utilise one or more of the relevant NGA-based regulated wholesale inputs identified above. Where a relevant retail product is contained within a product bundle (for example, double or triple play products), then the ERT must be carried out separately on both the relevant retail product sold in isolation and also with it sold as part of each applicable bundle.

Relevant Time Period

The Recommendation states that the relevant time period for the ERT is the estimated average customer lifetime, which may differ across relevant retail products. Furthermore, the estimate of the average customer lifetime should take due account of differing characteristics and competitive conditions that could exist when comparing the provision of retail services over NGA networks compared to legacy networks.

During the relevant time period, the end user will provide revenues that contribute to the recovery of the various costs (one off and recurring) incurred in supplying the service to the end user. These costs will include:

- Upstream costs related to the relevant NGA-based regulated wholesale input.
- Annualised downstream costs, where the method of annualisation is appropriate to the asset(s) utilised and their economic lifetime(s).
- Non-annualised downstream costs, such as subscriber acquisition costs and on-going operating costs.

The Recommendation further states that the profitability of the relevant retail products should be assessed on the basis of a dynamic multi-period analysis using a discounted cash flow (DCF) approach.

AKOS agrees with the above points contained within the Recommendation. So as to accommodate relevant time periods that do not equate to whole numbers of years, AKOS has taken the view that the DCF assessment should be based on months and not years. AKOS has also taken the view that the relevant WACC, to be used both for asset annualisation and for the DCF assessment, will be the WACC applicable to the SMP operator, as determined from time to time by AKOS.

Technical Replicability

The Recommendation includes two important pre-requisites that need to be in place in order for an *ex ante* economic replicability test to be an appropriate non-discrimination tool. The first of these is the Equivalence of Inputs obligation that requires the SMP operator provides regulated wholesale inputs to access seekers using exactly the same set of regulated wholesale products, at the same prices and using the same transactional processes as it does to its own retail arm. The second pre-requisite is technical replicability – whether or not the access seeker can *technically* replicate retail offers of the downstream retail arm of the SMP operator. The Recommendation notes that the technical replicability test could be carried out either by the SMP operator or the NRA.

AKOS has taken the view that the SMP operator should undertake the necessary technical replicability tests. As such, the SMP operator will have to provide the results of the technical replicability tests to the NRA including all information necessary to demonstrate that technical replicability is fully ensured.

2.4 Who will Carry Out the “Official” Tests?

AKOS is developing an Excel model that will be used to conduct the *ex ante* economic replicability tests (the ERT model). As stated in the previous section, AKOS is requiring the SMP operator to undertake the pre-requisite technical replicability test. Therefore, in order to streamline the process, and thus to the extent practical remove uncertainty in the market, AKOS has taken the view that the SMP

Operator should also be responsible for populating the AKOS ERT model for each required economic replicability test and then forward the populated model and the associated documentation to AKOS for verification.

SMP Operator

AKOS thus requires that, for each relevant retail product offered by that operator, the SMP operator populates the ERT model developed by AKOS with inputs specific to that retail product.

Once the ERT model has been populated, the SMP operator will then forward a copy of the populated model to AKOS, along with associated documentation. The reporting structure used shall comply with that detailed in section 2.7 below.

Non-SMP Operators

AKOS will make available a “public” version of the ERT model to all operators. This will enable non-SMP operators to undertake their own assessments of the economic replicability of the relevant retail products offered by the SMP operator. This in turn will allow non-SMP operators to gather and provide evidence to AKOS of situations where they are of the opinion that an existing ERT is incorrect in its result. Non-SMP operators should note that where they choose to make an official complaint of a margin squeeze related to one or more of the relevant retail products offered by the SMP operator, then they will need to forward their own run of the AKOS ERT model as supporting evidence of that complaint.

AKOS

In addition to the above, AKOS could carry out further formal economic replicability tests from time to time, both on its own initiative and in response to submissions made by operators. Where AKOS decides to carry out tests, it will require the relevant operator(s) to supply it with necessary input data.

2.5 When will an ERT need to be carried out?

As stated in section 2.4, each SMP operator is required to populate the AKOS ERT model and forward the results to AKOS for verification. As soon as AKOS has given an obligation to the SMP operator to conduct ERT assessments, that operator will have to undertake an initial set of ERT assessments for all relevant retail products and promotions.

In addition to the initial set of assessments specified above, the SMP operators are required to undertake further ERT assessments on a relevant retail product whenever one of the following intended trigger events is being planned by the SMP operator:

- The intended launch of a new relevant retail product.
- An intended adjustment downwards to the retail price of a relevant retail product.
- An intended adjustment upwards to the wholesale price of a corresponding regulated NGA wholesale input to a relevant retail product.
- The intended launch of a promotion involving a relevant retail product or a change to an existing promotion.
- Intended additions or amendments to any of the product components included in the relevant retail product already on the market (this also covers additions to or

- amendments of and products within a product bundle).
- Intended modification to the quality of a product/service component included in the relevant retail offer.

These further ERT assessments must be concluded, and results forwarded to AKOS for verification, prior to the actual trigger event being implemented.

2.6 How will an ERT be carried out?

Once a relevant trigger event has been identified, then the Economic Replicability Test should be undertaken using the following steps:

1. SMP operator to characterise and document the retail product or product bundle under test.
 - a. What the product is.
 - b. What the component products are (for a product bundle).
 - c. The specific characteristics of the product (components), such as access speed, monthly allowance, included telephony minutes etc.
 - d. What the calculated (for existing products) or assumed (for new products) average usage patterns for the product (components) will be, such as Gigabytes per month, telephony minutes, content consumed etc.
 - e. What the retail price(s) will be, both within bundle and out of bundle, and what promotional discounts etc. will apply
2. SMP operator to assess and document the technical replicability of the retail product or product bundle under test.
3. SMP operator to assess and document the most relevant regulated NGA wholesale input(s) and the relevant reference price(s).
4. SMP operator to populate the AKOS ERT model with specific inputs related to the previous steps.
5. SMP operator to produce documentation in accordance with section 2.7.
6. SMP operator to forward the documentation to AKOS for verification along with a copy of the AKOS ERT model populated in the same manner as used to generate those results.

Assuming that the SMP operator believes that the product, or product bundle, passes the ERT and the documentation has been forwarded to AKOS for verification, then they may implement the trigger event once seven days has elapsed assuming that AKOS has not raised an initial objection. For the avoidance of doubt, AKOS retains the right to raise objections after the seven working days has elapsed. Also for the avoidance of doubt, any changes to wholesale Reference Offers must respect the rules in force for notice periods prior to such changes taking force.

2.7 Reporting Structure

Each time the SMP operator populates the AKOS ERT model they should notify the results to AKOS for verification using the following broad reporting structure:

- Summary page identifying:
 - Name of SMP operator.

- Unique identifier relevant to this particular assessment.
- Date the assessment was undertaken.
- Retail product or product bundle under test.
- Relevant regulated NGA wholesale input(s).
- Margin reported by the AKOS ERT model.
- Retail product, or product bundle, characteristics.
- Assessment of technical replicability.
- Assessment of relevant regulated NGA wholesale inputs and reference prices.
- AKOS ERT model output sheet(s).

It is the view of AKOS that the documentation above will not contain any information or data that is confidential to the SMP operator.

In addition to the above documentation, the SMP operator should attach a copy of the AKOS ERT model that is populated with the inputs used to conduct the assessment. It is the view of AKOS that this copy of the AKOS ERT model will contain information or data that is confidential to the SMP operator.

3 The Hypothetical Competing Operator

3.1 Size and Scope

The size of the Hypothetical Competing Operator will be set at the level of an operator with a 25 percent retail market share. The scope of the Hypothetical Competing Operator will be that of an operator offering the range of retail products covered by section 3.2, and potentially using the wholesale products covered by section 3.3.

For the avoidance of doubt, the above retail market share should apply equally to all of the retail products covered by section 3.2.

AKOS has taken the view that, in the context of the Slovenian market, the above retail market share will mean that the competing operator either also owns an MNO or at least has access to a suitable MVNO arrangement. In this regard, rather than modelling the cost structure of a mobile operator within the AKOS ERT model, AKOS intends to utilise the current MTR Excel model as the basis for the costs.

Although each run of the ERT model will concentrate the analysis on a single product, or product bundle, the model will be “populated” in network traffic terms to account for all of the retail and wholesale products covered by sections 3.2 and 3.3. In addition, the model will allow for additional network traffic to be assumed to be carried across the core network of the competing operator due to other retail products and services that the competing operator would be expected to offer.

3.2 Retail Products Offered by the Hypothetical Competing Operator

The model shall be populated with a full set of the retail products, and product bundles, currently offered by the SMP operator to provide broadband services. For each of these, the model will have the demand for that product, or product bundle, set at the level relevant to the SMP operator for the most recent reporting period, adjusted for the retail market share specified in section 3.1. Thus the customer mix will reflect that of the SMP operator.

The model shall also be populated with traffic uplifts to reflect use of the core network of the competing operator for other retail purposes, such as the provision of leased lines to business customers. AKOS has taken the view that the amount of additional traffic, in percentage terms compared to broadband traffic, will broadly be equivalent to the levels contained within the current FTR Excel model – thus reflecting the overall traffic mix of the SMP operator, but adjusted for market share.

The intention of the above is that the model should reflect the aggregate network demand that would be experienced by a Hypothetical Competing Operator with the specified retail market share.

3.3 Wholesale Products of the SMP Operator used by the Hypothetical Competing Operator

The model shall be populated with a full set of the fixed network wholesale products currently offered by the SMP operator that are used by at least one of the retail products, and/or product bundles,

covered by the first paragraph of section 3.2. For each of these, the model will also be populated with the relevant reference price(s).

For the avoidance of doubt, the wholesale products will contain not only the relevant NGA wholesale inputs, but also all other wholesale products used to supply the retail products, and/or product bundles, covered by the first paragraph of section 3.2.

3.4 Wholesale Inputs not sourced from the SMP Operator

The model shall also be populated with additional wholesale inputs that would typically not be sourced from the SMP operator, but would nonetheless be required by the Hypothetical Competing Operator in order to achieve technical replicability. Examples of such wholesale inputs might be television content rights, and Internet transit fees, and potentially the costs of providing a mobile service as part of a product bundle. For each of these additional wholesale inputs, the model will also be populated with the relevant reference price(s) that the Hypothetical Competing Operator would be expected to pay based on the retail market share specified in section 3.1.

The cost inputs for these additional wholesale inputs will either be located on the Control Panel, or within a specific input worksheet.

3.5 Average Customer Lifetime

AKOS believes that an average customer lifetime of 36 months should be the default selection for the lifetime to be used within an ERT. The basis for this is that the usual customer contract length is 24 months, and, since only a portion of the customer base will actually churn at the end of the minimum period, a longer average duration is appropriate.

3.6 Product to be Tested

The product, or product bundle, to be tested will be selectable from a dropdown menu in the Control Panel of the ERT model. The relevant NGA regulated wholesale input will also be selectable in a similar manner.

The Control Panel will also contain inputs to be populated to specify the average revenue that would be generated by an end user utilising retail product, or product bundle under assessment.

In order to facilitate new retail products, or product bundles, there will always be a “Custom” product selectable from the dropdown menu.

Alongside the selection of the product, it will also be possible to specify certain typical promotions. These could be used to account for specific promotional campaigns, but could also be used as a means of assessing the impact of point-of-sale discounts that are offered on a case-by-case basis. The model will allow for:

- Free, or discounted, “installation” costs that typically cover one-off setup fees etc.
- Free hardware, such as a WiFi router or TV set top box.
- Discounts to monthly fees for a specified number of months, such as 50% off the monthly fee for the first six months of a new contract.

- Voucher for a specified number of Euros that can then be spent with the SMP operator.

3.7 Own Network Infrastructure

The ERT model will be pre-populated to reflect the expected own network infrastructure of a Hypothetical Competing Operator with a retail market share equal to that specified in section 3.1. The “own network infrastructure” is that necessary to provide technical replicability based on the regulated NGA wholesale inputs and would typically relate to the need to provide a backhaul connection from the NGA wholesale input point-of-interconnect to the Hypothetical Competing Operator’s main Internet peering or transit points. The infrastructure will not only address the necessary physical routes, but also the equipment (such as routers and servers) that will need to be sited at various node locations.

The costs contained in the ERT model will address own network operating costs as well as annualised capital costs. To the extent practical, these costs will be estimated based on the costs of the SMP operator’s own downstream business (using the SMP operator’s audited downstream costs provided that they are available and sufficiently disaggregated), but adjusted for the retail market share specified in section 3.1. Asset annualisation, where this needs to be calculated within the ERT model itself, will be calculated on the basis of the price-tilted annuity formula.

3.8 Retail Costs and Business Related Operating Costs (Overheads)

The ERT model will be also pre-populated to reflect the expected retail costs and business related operating costs (overheads) of a Hypothetical Competing Operator with a retail market share equal to that specified in section 3.1. These costs will, as far as is practical, concentrate on the anticipated retail costs and business overheads relating to the specific retail product, or product bundle, under assessment. As with the previous section, to the extent practical, these costs will be estimated based on the costs of the SMP operator’s own downstream business (using the SMP operator’s audited downstream costs provided that they are available and sufficiently disaggregated), but adjusted for the retail market share specified in section 3.1. Asset annualisation, where this needs to be calculated within the ERT model itself, will be calculated on the basis of the price-tilted annuity formula.

The diagram below illustrates how these costs are likely to be addressed within the ERT model (based on a previous margin squeeze model developed by BWCS).

8 Retail and Business Support Costs			
8.1 Customer Acquisition			
		Per Customer Aquired	
		EUR	
Contribution to Marketing Campaigns		-	
Sales and Sales Commission		-	
Customer Activation		-	
Initial Customer Care		-	
	Total:		-
8.2 Customer Management and Customer Retention			
		Per Customer per Month	
		EUR	
Invoicing/Billing		-	
Revenue Collection and Bad Debt Management		-	
On-going Customer Care		-	
Contribution to Marketing Campaigns	% of Revenue	0.00%	-
	Total:		-
8.3 Contribution to Central Overheads			
		Per Customer per Month	
		EUR	
Licence Fee	% of Revenue	0.00%	-
Corporate Overheads	% Mark-Up on All Costs Excluding Central Overheads	0.00%	-
	Total:		-

Default values for the various inputs will be provided by AKOS in the initial release of the ERT model, based on information provided by the SMP operator, other operators, and adjusted for the retail market share specified in section 3.1. An SMP operator is permitted to populate the model with different values to these inputs, but must provide valid justification for this in the documentation submitted to AKOS for verification once the assessment has been carried out.

4 Operation of the AKOS ERT Model

4.1 Introduction

Once the ERT model has been developed, a separate model Operating Manual will be released to accompany each official release of the model. This section of the guidelines therefore limits itself to some general characteristics of the model that are felt unlikely to change between model releases.

4.2 Control Panel

The model will contain a Control Panel worksheet. This will allow the model operator to select/specify the product under assessment, the associated NGA regulated wholesale input, average per end user revenues, certain associated parameters such as free installation, and, potentially, certain inputs (such as overriding the default average customer lifetime).

The control panel will also highlight the result of the ERT. This will be presented as a simple Pass/Fail indicator, alongside the assessed available margin (which will be a positive percentage for a Pass and a negative one for a Fail).

4.3 Types of Inputs

In addition to the Control Panel worksheet there will be a number of other worksheets containing inputs. These worksheets will all have a worksheet name that starts with “I_”.

At the top of each input worksheet there will be a brief description of the contents of that worksheet. This description will also highlight the inputs which AKOS requires the operator not to change, which inputs can be changed as long as there is valid justification, and which inputs AKOS expects the SMP operator to input relevant values.

All input cells will be identified via shading.

General inputs will be shaded light yellow, as illustrated below:

2.3 LTE		Capex	per
Active Equipment			
Common	Totally New	15000	
	Upgrade Existing	10000	
Subscriber Related			
NTE (including installation)		300	
CPE		200	
		0	
Fibre Loop			17835 km
	trench	14835	
	fibre	3000	
	Backhaul per site after first	500 m	

Selection inputs will be shaded Aqua, as illustrated below:

Include passive cabinet? Param_CP_include_passive_cab

Include active cabinet? Param_CP_include_active_cab

A special input worksheet, I_Lists, will contain various lists used within the model via named ranges. These will also be shaded Aqua, as illustrated below:

Range Name: *Li_Trench_Classes*

asphalt / tarmac - road
 asphalt / tarmac - pavement
 large stones, eg slabs
 small stones
 verge, earth or grass - ducted
 verge, earth or grass - ploughed cable
 poles over earth / grass
 poles over hard surfaces
 cable laid in river, lake or sea
 [spare]
 end

4.4 Inputting Data to the Model

It is very important that the person populating and running the ERT model, for the assessment of a specific retail product, respects the different types of inputs. **It is also crucial that the model operator does not alter any of the formulae used within the model.** If errors (or suspected errors) in the calculations are identified, then these must be reported back to AKOS as soon as practical. AKOS will then undertake an assessment of the feedback and, if necessary, correct the model and release an updated version.

4.5 Assessing the Presence (or not) of a Margin Squeeze

The Control Panel will contain a simple indication of whether or not a margin squeeze has been identified, and thus whether or not the retail product under assessment has passed the Economic Replicability Test.

In addition to the Control Panel, there will be an output worksheet, O_Summary, which will show a detailed cost stack for the retail product under assessment. This worksheet will allow the SMP operator, and indeed AKOS, to understand the relative importance of the various cost items in the margin squeeze assessment. An example of such a cost stack is shown in the diagram below, taken from another margin squeeze model developed by BWCS.

Cost Stack - Customer Lifetime, Case Selected: Complaint				
	Customer Lifetime:	24	months	
	Promotional Lifetime (out of total):	18	months	ok
Selected Product	Units:	Amount EUR	Remaining Margin	
			Amount	% of Price
Price Charged to End User				
	One Off	49.00		
	During Promotion	323.82		
	During non-Promotion	137.94		
	Total	510.76		
Regulated Wholesale Inputs from SMP Operator				
	One Off	15.72		
	During Promotion	248.40		
	During non-Promotion	82.80		
	Total	346.92	163.84	32.1%
Other (non-regulated) Wholesale Inputs from SMP Operator				
	One Off	-		
	During Promotion	12.66		
	During non-Promotion	8.44		
	Total	21.10	142.74	27.9%
Other Wholesale Inputs				
	One Off	-		
	During Promotion	0.66		
	During non-Promotion	0.44		
	Total	1.10	141.64	27.7%
Own Network and Equipment Costs				
	One Off	-		
	During Promotion	4.94		
	During non-Promotion	2.49		
	Total	7.43	134.21	26.3%
Retail, Sales, Marketing and Provisioning Costs				
	One Off	23.00		
	During Promotion	-		
	During non-Promotion	-		
	Total	23.00	111.21	21.8%
Business Related Opex (Overheads)				
	One Off	-		
	During Promotion	-		
	During non-Promotion	-		
	Total	-	111.21	21.8%
	Total Cost:	399.55		
	Final Margin:		111.21	21.8%

5 Summary

Objective

The primary objectives of the ex ante Economic Replicability Test, as stated in the Recommendation, are:

“to establish whether alternative access seekers can economically replicate a downstream offer provided by the SMP operator with the regulated wholesale input available, in cases where wholesale price regulation should not be imposed” [Recital 61]

“to ensure, in combination with the other competitive safeguards introduced such as EoI, the technical replicability test, and a demonstrable retail price constraint resulting from a copper anchor or alternative infrastructures, that SMP operators do not abuse this pricing flexibility in order to exclude (potential) competitors from the market.” [Recital 62]

Definition

The definition of the ex ante Economic Replicability Test, as stated in the Recommendation, is:

“whether the margin between the retail price of the relevant retail products and the price of the relevant NGA-based regulated wholesale access inputs covers the incremental downstream costs and a reasonable percentage of common costs.” [Annex II]

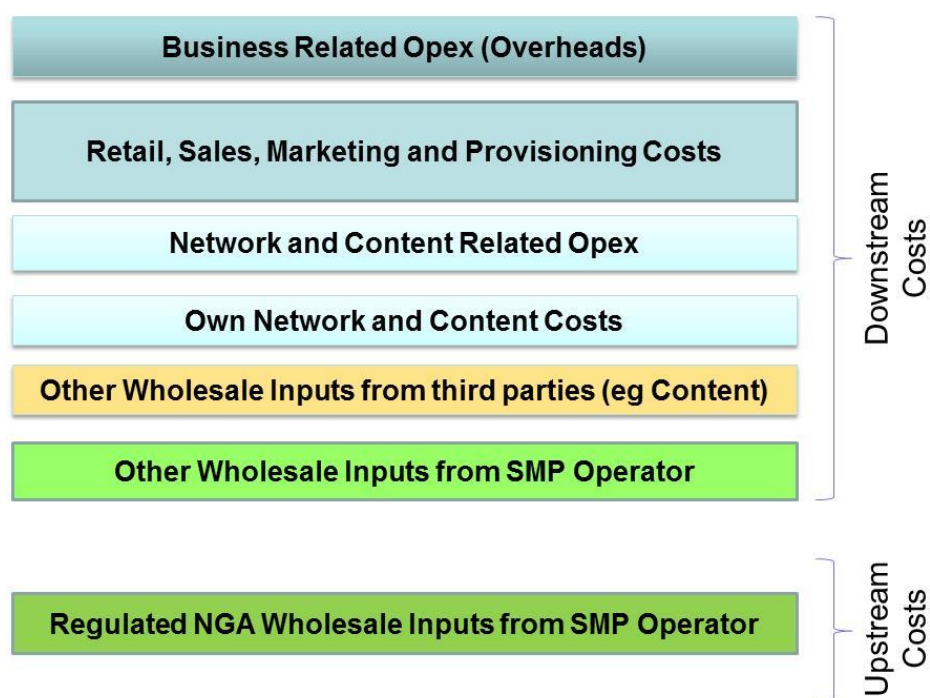
Characteristics

Various characteristics of the ex ante Economic Replicability Test, as stated in the Recommendation and/or specified by AKOS, are summarised in the table below. The list of characteristics broadly follows the structure of section 4 of the BEREC Guidance document.

Characteristic	AKOS Position
Level of efficiency of the operator	REO/adjusted EEO based on a retail market share of 25%
Relevant cost standard	LRIC+
Depreciation method	Price-tilted annuity for assets annualised within the ERT model.
Reasonable profit	A non-negative margin resulting from a dynamic multi-period DCF analysis.
Breakdown of retail costs	To extent practical, estimated based on SMP operator’s downstream costs adjusted for retail market share of 25%. To be grouped under three main headings: <ul style="list-style-type: none"> • Customer acquisition <ul style="list-style-type: none"> ○ Marketing ○ Sales ○ Activation

	<ul style="list-style-type: none"> ○ Initial support ● Customer management and retention <ul style="list-style-type: none"> ○ Invoicing/Billing ○ Revenue collection ○ On-going customer care ○ Marketing ● Contribution to central overheads <ul style="list-style-type: none"> ○ Licence fees ○ Central overheads
Average user	Usage profile of an average customer of the relevant retail product, and thus the average revenues
Relevant wholesale inputs and relevant reference prices	Each ERT on the most relevant regulated NGA wholesale input, and associated reference price. Separate ERTs run for different regulated NGA wholesale inputs where necessary, such as where relevance changes with geography or geotype.
Regulated wholesale costs	Based on SMP operator's reference offers
Non-regulated input costs (incl own network costs)	To extent practical, estimated based on SMP operator's downstream costs adjusted for retail market share of 25%
Time Period	36 months

Illustrative Cost Stack Examples



Downstream Cost Type	Examples
Business Related Opex (Overheads)	Executive Directors, Human Resources, Accounts
Retail, Sales, Marketing and Provisioning Costs	Marketing Campaigns, Sales Commissions, Customer Activation, Initial Customer Care, Ongoing Customer Care
Network and Content Related Opex	Technical Staff Costs, Site Rentals, Power and Air-conditioning Costs
Own Network and Content Costs	Own Duct and Fibre Assets, Network Equipment such as MSANs, Routers, Servers
Other Wholesale Inputs from third parties (eg Content)	TV Content, Internet Peering and Transit Fees, Mobile Termination Fees, Dark Fibre
Other Wholesale Inputs from SMP Operator	Regional and/or National Backhaul, Dark Fibre, Co-location Costs