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GENERAL NOTICE

Independent Communications Authority of South Africa

General Notice

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GENERAL NOTICE

NOTICE 78 OF 2007



INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA

NOTICE OF INTENTION TO DEFINE RELEVANT WHOLESALe CALL TERMINATION MARKETS IN TERMS OF SECTION 67(4) OF THE ELECTRONIC COMMUNICATIONS ACT 36 OF 2005.

1. The Independent Communications Authority of South Africa (ICASA) hereby gives notice of its intention to define the relevant Wholesale Call Termination Markets in terms of section 67(4) the electronic communications act 36 of 2005.
2. Interested persons or organisations are hereby invited to submit written representations or documentation, including an electronic version in Microsoft Word, on their views in accordance with the provisions of section 4B inquiry by no later than 31 March 2007.

withdraw the representation or documentation in question and the Authority will not take it into consideration when making its findings.

8. In order to provide for a wider basis of representations to be made and documents to be submitted during the inquiry, the Authority has compiled questions pertinent to this issue.

These questions have been incorporated into annexure A hereto entitled **“Wholesale Call Termination Market Definition”**

9. The findings and conclusions or recommendations made by the Authority following the enquiry will be published in a Government Gazette as provided for by section 4C of the ICASA Act.

PARIS MASHILE
CHAIRPERSON

ANNEXURE A : WHOLESALE CALL TERMINATION MARKET DEFINITION

1 OBJECTIVES AND BACKGROUND

- 1.1 The identification of antitrust or competition 'relevant markets' is central in the assessment of the robustness and the degree of the competitive dynamics of markets. Furthermore market definition serves to establish the competitive constraints which entities in the market place upon each other. Therefore, the objective of market definition is to identify those entities which constitute actual or potential competitors which are capable of constraining any other entity's behaviour and effectively preventing them from conducting themselves independently of their competitors and their customers. The identification of such relevant markets then serves to delineate the boundaries within which any effective and meaningful analysis pertaining to the competitive dynamics of the relevant markets may be ascertained.
- 1.2 The dimensions of such relevant markets pertain to the product and geographic dimensions. The product market definition encompasses all such products or services which may be regarded as interchangeable or substitutable by the customer, because of the product's characteristics, their price and their intended use. The geographic market definition comprises of the geographic area within which the conditions of competition are sufficiently homogenous and which may be distinguishable from the neighbouring areas.
- 1.3 Section 67 (4) of the Electronic Communications Act, 36 of 2005 ("EC Act") mandates the Authority to engage in a review of certain markets in which (a) various markets are defined, (b) those entities possessing Significant Market Power ("SMP") are identified, (c) the degree of market competitiveness is evaluated and (d) pro competitive measures are imposed within markets which the Authority finds that there exists ineffective competition¹ (Section 67(4)).

¹ Section 67.4 of the EC Act requires ICASA to define markets where it intends to impose pro-competitive regulations on licensees with Significant Market Power in cases where ineffective competition is found to exist.

- 1.4 This wholesale call termination market review has the objective of:
- Determining the appropriate methodologies and criteria for the identification of relevant markets which may be susceptible to ex ante regulation; and
 - Determining the appropriate methodologies and criteria for conducting market analysis and ascertaining whether or not any entity possesses SMP.
- 1.5 The services considered in this review are for wholesale call termination:² calls that terminate on mobile networks and calls that terminate on fixed line networks.³ Call termination services form a critical part of interconnection between operator networks (for voice services), as they enable customers of one network to call those of another.
- 1.6 This report is set out in four (4) sections, following the legislative mandate described above: first, methodologies for market definition; second, markets are defined; third, SMP and market competitiveness is evaluated and fourthly, pro-competitive regulations which may be imposed on operators with SMP are set out.

2 METHODOLOGY USED

- 2.1 The approach which the Authority proposes to adopt in the delineation of the relevant markets is that which is consistent with that utilised by the Competition Commission of South Africa and the Competition Tribunal of South Africa ("The SA Competition Authorities") Furthermore, the Authority considers that the approach detailed within the Guidelines on market analysis and the assessment of significant market power under the regulatory framework for electronic communications networks and services by the European Commission ("EC") may be of some assistance. The conceptual framework adopted by the SA

² Often referred to as voice termination

³ The review does not aim to identify wholesale SMS termination and other emerging technologies such as fixed-wireless network call termination (but these are considered to the extent that they may be substitute products to mobile and fixed line call termination).

Competition Authorities, the EC and the United States Department of Justice (“DoJ”) and the Federal Trade Commission (“FTC”) in defining relevant markets prescribes the “hypothetical monopolist test” which entails the evaluation of the likely competitive consequences emanating from a hypothetical profit-maximising entity imposing a “small but significant non-transitory” increase in price test (“SSNIP test”).

- 2.2 The SSNIP test entails identifying the narrowest possible market, and considers whether or not it would be profitable for a hypothetical profit maximising entity to impose a small but significant, non-transitory increase in its price. Assuming that consumers are likely to respond to such a price increase by considering alternative substitutes offered by other entities, the analysis entails the identification of such entities which would serve as competitive constraints to the unilateral increase in price by the hypothetical monopolist. If substitution is considered to be viable, such increase in price is likely to be unprofitable and consequently the market boundary must be expanded to include such constraining entities offering substitute products.
- 2.3 The Authority is cognisant that the SSNIP test provides a conceptual framework for conducting a market definition exercise. Furthermore, the Authority is also cognisant that there exist numerous quantitative analytical tools which sustain the conceptual framework of the SNNIP test. Such quantitative analysis include among other things: Critical Loss Analysis, Price Correlation Analysis, Price Elasticity Analysis and Diversion Ratio Analysis.

QUESTION 1: PLEASE COMMENT ON THE VIABILITY OF THE AUTHORITY’S USE OF THE SSNIP TEST AS THE CONCEPTUAL FRAMEWORK FOR UNDERTAKING A MARKET DEFINITION EXERCISE. PLEASE ALSO COMMENT ON THE USE OF QUANTITAVE ANALYSIS.

- 2.4 Market definition will also take into account the existence of common pricing constraints, such as where a firm cannot price one product differently from another even though they are not substitutes, as well as bundling, such as where two products are always sold together in a bundled product.
- 2.5 Where appropriate, subsequent market reviews will consider the impact of regulation (i.e.: its absence or presence) on market definitions and market competitiveness.

3 MARKET DEFINITIONS

WHOLESALE MOBILE CALL TERMINATION

This section considers the market definition for mobile call termination. The main services affected by mobile call termination are fixed-to-mobile calls and off-net mobile-to-mobile calls, both of which are considered.⁴ In summary, we have identified the following markets:

- Call termination on Vodacom's network;
- Call termination on MTN's network; and
- Call termination on Cell C's network.

- 3.1 The identification of each mobile operator's network as constituting a separate market is a common practice across international jurisdictions, including United Kingdom,⁵ France,⁶ Norway,⁷ Finland,⁸ Sweden,⁹ Ireland and the European Commission.¹⁰

⁴ VANS providers who offer VOIP services will also seek interconnection with the mobile operators. These services are still in their infancy. However, in this context, VOIP services offer a cheaper technology through which to originate calls. From a substitution perspective, they do not present any additional dynamics, whether they occur from fixed or non-fixed locations.

⁵ OFCOM, Wholesale Mobile Voice Termination: Statement," 1 June 2004, page 1-4 and OFTEL, Review of Fixed Geographic Call Termination Markets, Final Explanatory Statement and Notification, 28 November 2003, page 4

⁶ Autorite De Regulation Des Telecommunications ("ART") Press Release on ART's conclusion on mobile call termination, December 2004 and ART press release, "ART submits to the Conseil de la concurrence its analysis of the geographic call termination markets on alternative networks," 21 March 2005, available on ART's website, <http://www.art-telecom.fr>

⁷ NPT ("Norwegian Post and Telecommunications Authority"), "Summary Notification Form for market 9: Call Termination on the fixed network" 14 February 2006 and NPT, Analysis of the markets for the termination of voice calls on individual public mobile communication networks, Consultation Document, 3 May 2004 page 3

- 3.2 One of the overarching reasons for these relatively narrow definitions is based on what is called the calling party pays principle ("CPP"). In South Africa, as in many other jurisdictions (notably, excluding the USA),¹¹ it is almost universal practice for mobile operators not to charge customers for incoming calls – instead, a termination fee is levied (a) directly on the operator of the calling party, and (b) this is passed on by that operator, indirectly, on the calling party. Therefore, when customers choose a mobile operator, they are unlikely to take account of call termination charges for incoming calls as these are levied on other parties.
- 3.3 This removes a key competitive pricing constraint on mobile operators in termination charge setting – these charges are faced by parties other than those choosing the mobile operator. Moreover, as will be discussed, calling parties have no adequate substitute to calling the called party on their mobile operator network. Further, if other operators want to provide an off-net or fixed-to-mobile service, they also have no adequate alternative but to purchase mobile call termination.

QUESTION 2: PLEASE COMMENT ON THE AUTHORITY'S WHOLESALE MOBILE CALL TERMINATION MARKET DEFINITIONS.

QUESTION 3: THIS INQUIRY IS BASED ON SECTION 67(4) OF THE EC ACT. PLEASE COMMENT ON ANY OTHER SECTION(S) OF THE ACT RELEVANT FOR DEFINING MARKETS, IF ANY.

- 3.4 The following section considers the reasons for the Authority's market definition in more detail. The relevant product market is considered first, followed by the relevant geographic market.

⁹ Finish Communications Regulatory Authority, "Decision on significant market power regarding voice call termination on individual mobile networks," February 2004

⁹ Post and Telestyrelsen Sweden (PTS), "Summary of PTS's decision concerning call termination on individual public telephone networks provided at a fixed location," 10 May 2004 page 1-5

¹⁰ Commission of the European Communities, "On Relevant Product and Service Markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services," Working Document, 2002, page 16-17 and page 26-28

¹¹ In the United States, the called party will often pay for an incoming call. This makes the US market structurally different to those in which the CPP principle operates, and therefore less relevant for regulatory comparisons: in the US, the party that chooses the network, is also the one that bears some of the cost of call termination, and so responds to price increases in much the same way as they would do to outgoing call prices.

PRODUCT MARKET FOR MOBILE CALL TERMINATION

- 3.5 The most narrow possible product market for wholesale mobile call termination is wholesale mobile call termination for individual customers.

RETAIL DEMAND SIDE SUBSTITUTION

- 3.6 Retail demand-side substitution describes the response by consumers (the called or calling party) to a rise in mobile call termination charges. In conjunction with other regulators such as OFCOM¹² and in Norway,¹³ we are of the view that for retail demand-side substitution to be a sufficient constraint on these charges, all of the following must be fulfilled (i.e. they are all necessary conditions):

- A. the mobile call termination charge must pass through to the outgoing price that calling parties face when making calls to that network;
- B. callers must be sufficiently aware that they are calling a specific mobile network;
- C. callers must be sufficiently aware of the price of calling that particular network; and
- D. adequate demand substitutes must exist such that a sufficient number of consumers could switch to these alternatives.

- 3.7 In order for consumers to be able to react to an increase in call termination charge, it is essential that changes in this charge feed through into changes in prices that those consumer's face, i.e. the retail price of calls to mobiles. If this does not happen to a sufficient extent, it is unlikely that retail demand-side substitution can constrain the price of mobile call termination, even if (in theory) substitute products did exist. Consumers must also be sufficiently aware that they are calling a particular mobile network when they call a particular number, for otherwise they will not know for which calls substitution is required. Similarly, in order for consumers to engage in switching behaviour, they must be

¹² OFCOM, Wholesale Mobile Voice Termination: Statement, 1 June 2004

¹³ NPT, Analysis of the markets for the termination of voice calls on individual public mobile communication networks, Consultation Document, 3 May 2004

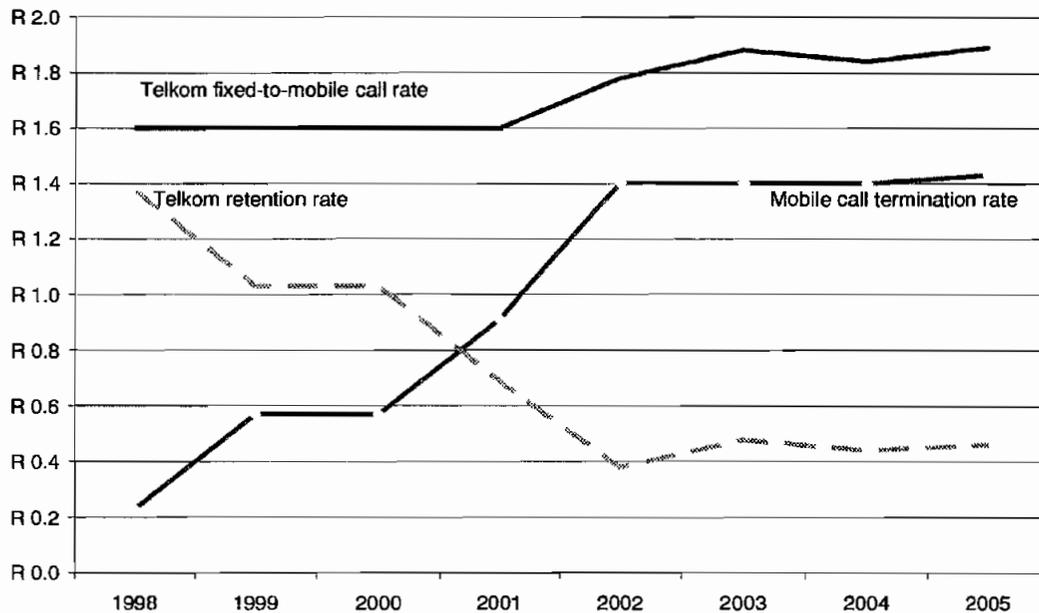
sufficiently aware of the price of calling particular networks relative to the price of using substitute products in order to evaluate the most appropriate method to contact the desired party. Finally, adequate demand substitutes must exist such that consumers would switch to these products to a sufficient extent. In these four conditions the term “sufficient” is with reference to the SSNIP test – that is, the conditions must simultaneously be fulfilled to a sufficient extent in order that a SSNIP is unprofitable for a hypothetical monopolist.

QUESTION 4: PLEASE COMMENT ON THE AUTHORITY’S VIEWS ON RETAIL DEMAND SUBSTITUTABILITY.

Mobile call termination charge pass through to outgoing retail price

- 3.8 If the mobile call termination charge does not feed through to the retail price of calling that network, then retail demand-side substitution cannot act as a constraint to the charge set by the mobile operators (consumers have nothing to react to).
- 3.9 The mobile call termination charge is likely to make up the majority of the marginal cost of calling mobile phones both from fixed lines and other mobile phones. In competitive retail markets and in the absence of all regulation, it is reasonable to assume that the termination charge would be passed through to retail prices (where price tends to reflect cost). However, in less competitive markets, this may not be the case. The graphs below show the retail rate of fixed-to-mobile calls, the mobile call termination charge and the implied retention rate for the period 1998 to 2005.

Table 1. Peak rates for Telkom fixed-to-mobile calls, Mobile call termination and Telkom retention rate, VAT inclusive.
Source: Operator websites, annual reports and other sources



3.10 As shown in the table above, Telkom has not passed through the full increase in the mobile call termination charge it faces. In fact, only about 24% of the dramatic increase on call termination fee was passed on to Telkom customers over the period 1998 to 2005.¹⁴ Though there may be alternative explanations for this trend, it is not apparent from the evidence that, with respect to fixed-to-mobile calls, the first necessary condition for effective retail demand-side substitutability (condition A)¹⁵ is passed.

3.11 Due to the vast array of different mobile tariff plans, the evidence of pass through from mobile call termination to off-net mobile-to-mobile calls is less conclusive. We considered the retention rate of the mobile operators for a range of different tariff plans for off-net mobile calls.

¹⁴ Note that Telkom retail price of fixed-to-mobile was included in a total basket that was subject to a price cap, and this would have constrained the ability for Telkom to pass through the increased call termination rates. Recently, however, only Telkom's retention rate (fixed-to-mobile retail rate minus cost of mobile call termination) is regulated, which removes the constraint.

¹⁵ A mobile call termination charge must pass through to the outgoing price that calling parties face when making calls to that network.

Awareness of called mobile network

3.12 We consider that the relative simplicity of the SA numbering plan renders it likely that consumers are able to identify whether or not one is calling a mobile phone, and even which network one is calling notwithstanding the potential effects of mobile number portability (MNP). For example, it may be common knowledge that 082 numbers belong to Vodacom, 083 numbers to MTN and 084 numbers belong to Cell C. However, low education and literacy levels may serve to counteract this conclusion for certain groups of consumers, especially low income prepaid consumers. Moreover, the general practice of inserting called party numbers into the phones memory and then calling a name as opposed to a number would serve to act as a structural block on awareness of the called network. Further, increased complexities in the numbering system are starting to arise. Moreover, with the introduction of number portability, it will clearly be far more difficult to identify (and remember) which numbers are associated with which networks.

3.13 In conclusion, the current level of consumer awareness of called mobile network is uncertain. What is more certain, however, is that it is likely to become increasingly less in the short to medium term. This analysis challenges the likelihood that second condition for effective retail demand-side substitutability (condition B)¹⁶ will continue to be fulfilled in the short term.

Awareness of price

3.14 For retail demand-side substitution to be effective, consumers must be aware of both the absolute and relative price of making calls. For example, for calls to fixed lines to be a substitute for calls to mobile, consumers should be aware of the relative price of these call types. In the absence of conclusive empirical evidence, there is uncertainty regarding the extent of awareness of South African consumers in this regard and so the fulfilment of condition C¹⁷ is unknown.

¹⁶ Callers must be sufficiently aware that they are calling a specific mobile network

¹⁷ Callers must be sufficiently aware of the price of calling that particular network

Potential substitute products

3.15 The following considers possible alternative services into which consumers might switch in response to a price rise in the price of calling mobile phones (condition D).¹⁸ This analysis will assume for argument sake, that there is sufficient pass through from mobile call termination to fixed-to-mobile and off-net mobile call rates such that responses from consumers can be generated. Even under this assumption it will be shown that retail demand substitution is unlikely to constrain the mobile call termination charge. The following issues are considered:

1. Mobile-to-fixed and fixed-to-fixed calls as a substitute for fixed-to-mobile calls and off-net mobile calls;
2. Mobile calls as a substitute for fixed-to-mobile calls;
3. On-net calls as a substitute for off-net mobile calls;
4. Closed user groups;
5. SMS as a substitute for calls to mobiles;
6. Voice Over Internet Protocol (VOIP) calls as a substitute to call to mobiles;
7. Ad hoc call-back arrangements; and
8. Called parties chooses network to reduce cost of incoming calls

Mobile-to-fixed and fixed-to-fixed calls as a substitute for off-net mobile calls and fixed-to-mobile calls

3.16 In response to a rise in the relative price of off-net mobile calls, it is possible that consumers might switch to calling parties on their fixed lines (mobile-to-fixed or fixed-to-fixed calls). However, we do not consider that this constitutes a sufficiently effective demand-side substitute such that it would constrain mobile call termination charges. There are two primary reasons for this:

¹⁸ Adequate demand substitutes must exist such that a sufficient number of consumers could switch to these alternatives

3.16.1 First, the majority of South Africans do not have fixed lines.¹⁹ The only way to contact these subscribers is by calling them on their mobile phones. This poses an issue for mobile-to-fixed calls and an even bigger constraint on fixed-to-fixed calls.

3.16.2 Second, calling parties on their fixed lines is only an adequate alternative if parties are physically at the same location as their fixed lines, *and* the calling party is aware of this (or is willing to call and see if they are there). The ability to immediately contact a party on their mobile phone wherever they may be, clearly differentiates calls to mobiles from calls to fixed lines, whenever the called party is not at a fixed location. This renders mobile-to-fixed calls and fixed-to-fixed calls as inadequate substitutes for off-net mobile calls and fixed-to-mobile calls.

Mobile calls as substitute for fixed-to-mobile calls

3.17 If the price of fixed-to-mobile calls was to increase, consumers might switch to calling the same mobile number, but from another mobile phone as opposed to a fixed line. There are two types of substitution that may be relevant here: the use of off-net calls and the use of on-net calls.

3.18 *Off-net calls.* According to current interconnection agreements, off-net mobile calls attract the same call termination fee as fixed-to-mobile calls. Given the principles of interconnection regulation as set out in the ECA, non-discrimination of this type will continue to hold going forward²⁰ as both call types remain and will continue to be subject to the same mobile call termination fee, they are not viable substitutes for one another so far as an increase in that fee is concerned.

¹⁹ Overall household penetration of fixed line services has decreased over time from 24% in 2001 to 21% in 2004 (Statistics SA General Household Survey, 2001 and 2004).

²⁰ However, ICASA can release a mobile operator from these interconnection regulations on the finding that that operator does not have market power. But, as the finding of SMP is the ultimate purpose of market definitions, non-discrimination of this type cannot be relied upon to argue against a potential substitute. Nevertheless, if the mobile operator is not found to have market power (for some reason or other), then they would be unable to discriminate between different operators with respect to call termination rates, and hence the non-discriminatory result would resurface. Thus (with or without regulation) as both call types are and will continue to be subject to the same mobile call termination fee, they are not viable substitutes for one another so far as an increase in that fee is concerned. Note also that the proposed market definitions do not make reference to the buying operator, and whether that operator offers fixed or mobile services. That is, the proposed market definition is not mobile call termination on individual operator networks purchased by fixed lines operators and mobile call termination on individual operator networks purchased by other mobile operators. Only if this distinction were proposed would the substitution between off-net mobile and fixed-to-mobile calls be relevant.

3.19 Further, from an underlying cost perspective, fixed-to-mobile calls are considered to be inherently cheaper than the cost of off-net mobile calls, because the origination part of the service is cheaper.²¹ This is reflected even at current prices. Considering a range of over 37 tariff plans for peak times,²² only 9 tariff plans had off-net mobile rates as slightly less than the fixed-to-mobile rate of R1.89. On average, off-net mobile rates were 21% more expensive than the fixed-to-mobile rates.

3.20 *On-net calls.* We now consider whether on-net mobile calls may be a substitute to fixed-to-mobile calls. On-net mobile calls do not attract a call termination fee. However, there are three reasons why on-net calls are unlikely to constitute a sufficiently robust substitute to mobile call termination charges.

3.21 First, as with off-net calls, if prices reflected underlying costs,²³ on-net mobile calls should be priced at higher rates than fixed-to-mobile calls (the origination part of the call is more expensive). At current prices, on-net rates are often cheaper, and are on average 2.2% cheaper. Given the pattern of underlying costs, however, we consider that this may be an example of the cellophane fallacy generated from Telkom's monopoly on fixed-line calls and/or existing high mobile call termination rates which are incurred by Telkom.

3.22 Second, for on-net calls to be a viable substitute to fixed-to-mobile calls, the caller must have a mobile phone, and be on the same mobile network as the caller. Most South Africans do have a mobile phone. However, the probability of being on the same network of the person called is dependent on the subscriber shares of the three mobile operators. Recent market share data²⁴ showed that Vodacom had approximately 59% of the market in 2006, MTN 31% and Cell C 10%, which implies that for a randomly chosen subscriber, the probability of being on the same network as the called party is only 45%,²⁵ and will decrease

²¹ "Oftel's view of market Oftel's views on market definitions for fixed and mobile services," a summary of the April 2002 panel discussion, 23 May 2002, page 4.

²² For off-peak calls, off-net mobile calls are priced more similarly to fixed-to-mobile calls. This is likely to be based on two reasons. Firstly, the fact that network costs are traffic sensitive, and thus lower traffic off-peak times provide greater room for pricing different call types at the similar rates (because of the spare capacity). Secondly, current prices do not necessarily reflect underlying costs due to a lack of competitive constraints in both fixed and mobile retail markets.

²³ According to Oftel, for example, an on-net call is only 8% cheaper than an off-net call. "Oftel's view of market Oftel's views on market definitions for fixed and mobile services," a summary of the April 2002 panel discussion, 23 May 2002, page 4.

²⁴ Operators websites and media statements

²⁵ Assuming the chance of calling any network is dependent only on their market share, in which case, chance of any subscriber being on the

still further with increased competition in the mobile market (i.e.: if Cell C gains more market share).

3.23 Third, the majority of calls from fixed lines, including fixed-to-mobile calls, are generated from business, despite Least Cost Routing ("LCR").²⁶ However employees of business are far less likely to switch from fixed-to-mobile to (even on-net) mobile-to-mobile calls. This is likely because in most businesses, employees are given free access to a fixed line, but not to a mobile phone. Also even in instances in which they have access to both, employees will often have little incentive to try and reduce the cost of phone calls (given they do not pay or in some instances they only pay if they exceed their allowed budgets on calls), and so will generally use whichever option is most convenient. Moreover, the use of LCR is likely to have decisively segmented the market – those who can afford it will not make fixed-to-mobile calls (as their LCR's will route traffic through an on-net call where high usage tariff plans currently offer substantial savings) and therefore mobile operators will not take them into account when setting their call termination fees. They will be able to increase call termination for those customers who cannot afford LCR or who are price insensitive to off-net calls.

On-net calls as a substitute for off-net calls

3.24 There are three routes through which on-net calls can be a substitute for off-net calls, (1) customers must either have two or more SIM cards or phones and somehow switch between them where appropriate, (2) customers must, in response to high off-net fees, switch to the network of the operator that has increased call termination costs, or (3) customers must co-ordinate on the network with the lowest on-net fees in response to high off-net prices.

3.25 There is no evidence to suggest that behaviour implied by option 1 in 3.24 above occurs to a sufficient degree. The second type of substitution could only constrain mobile call termination fees, if the profit earned from having a customer on the operator's own network (and earning fees on all of that

same network as called party is: $59\% \times 59\% + 31\% \times 31\% + 9\% \times 9\% = 45\%$. The potential existence of closed user groups (see below) would serve to increase the odds of calling a party on your own network.

²⁶ Operator's websites.

customers outgoing and incoming calls as well access fees) was less than the profit earned for terminating calls for those customers on the operator's network. We consider this highly unlikely. Indeed, driving customers to choose their own network to avoid having to pay high off-net fees may be a specific market capture strategy on behalf of the mobile operators. This may be attractive to larger networks to the detriment of smaller ones such as Cell C. The third option, sometimes called "closed user groups," describes trends through which consumers that are more likely to call one another than other consumer's co-ordinate on similar networks in order to take advantage of low on-net fees. This particular issue is considered in the next section.

Closed user groups

3.26 In this scenario, the consumer choosing a network takes into account the network that other parties (whom they are likely to call) are on, in order to reduce the cost of outgoing calls faced by those consumers. Consider as an example a situation where all prices are competitive, and the on-net fees are very similar to off-net fees across all networks (as per the OFCOM cost estimation). If one network decided to increase call termination costs, the most likely outcome would be for customers to migrate *to that network* – by so doing, they avoid the higher off-net fees, whereas their calls to other customers remain roughly the same.²⁷

3.27 Further, a large differential between off-net and on-net fees currently exists. From an operator's perspective, the market has thus been segmented between customers on its own network, who may call each other more often (because of the existence of closed user groups), and customers on other networks who are either tied into their own network or are price insensitive to off-net calls. The latter customers constitute a differentiated group to which the operator can raise termination fees.

²⁷ If instead customer switched from the network of the operator who has raised termination fees, those who switched first would still have to pay the high off-net fees to customers who remained with the operator, and sensitive customers on other networks, would have to wait until all the right customers had switched.

SMS as a substitute for calls to mobiles

3.28 We do not consider that an SMS is a viable substitute for a call to a mobile phone. There are various reasons for this. First, the number of characters that can be sent via SMSs are often limited both by the phone settings, as well as by the network themselves.²⁸ Second, an SMS conversation can be more time consuming than voice calls as they are typed as opposed to spoken, and then there is a long pause before one gets a response and can in turn type and send a new SMS. Third, for such a conversation it is not apparent that an SMS interchange will in general be cheaper.

Voice over Internet Protocol (VOIP) calls as a substitute to call to mobiles

3.29 Mobile operators now offer internet origination technologies, such as General Packet Radio Services ("GPRS") and 3G, which can facilitate VOIP services. Instead of calling parties on their mobile phones in the traditional way (which incurs a mobile call termination fee), parties can arrange to contact each other over the internet using, for example, Skype. The key requirements for this type of service to be functional are that (a) both parties are online at the same time, (b) the parties have access to the appropriate technology – both parties must have access to a high-speed (broadband) Internet origination, and the called party must either have a lap-top or mobile phone that can access the Internet and be used to send and receive sound over the Internet. These requirements limit the constraint that VOIP places on mobile call termination charges. Most significantly, only a very small proportion of current mobile users have taken up high-speed internet services, and even a smaller proportion has likely used this for VOIP calls.

3.30 Note that for VOIP services which break-out onto the mobile networks, VOIP providers may (likely) face the same mobile call termination fee as fixed line and other mobile operators. For this reason, they are not a viable substitute for fixed-to-mobile and off-net mobile-to-mobile calls with regard to an increase in mobile call termination fees.

²⁸ For instance, according to Vodacom Customer Care telephone service, customers can send a maximum of 160 character per SMS

Ad hoc call-back arrangements

3.31 In SA, many operators offer limited free “please-call-me” SMS services. This allows one party to ask another to call him/her. Alternative call back methodologies include a normally priced SMS or even a missed call. If one operator raised their call termination fee, parties wishing to contact that operator’s subscribers can, instead of calling them and facing a raised call termination fee, use “call-back” services to get those subscribers to call them back, and by so doing, bear the cost of the call.

3.32 It is likely that consumer use of ad hoc call-back arrangements (free SMS, paid for SMS, missed call) to ask other consumers to call them already occurs between parties who have an established and agreed upon economic relationship (i.e.: you have a higher income, therefore you should be the one to make all the calls). For calls which are made between such customers, the higher income party will usually make the call regardless of the size of the call termination fee. With respect to customers who do not know each other well, or who perceive each other as having an equal economic status, it is not clear that one party will accept a request to call the other, especially on a repeated basis. For these reasons, the Authority does not consider that call back arrangement places a viable constraint on mobile call termination charges.

Called parties choose network to reduce cost of incoming calls

3.33 If consumers cared sufficiently about the cost of incoming calls (that is the price that other consumers would have to pay to call them) they may take this into account when choosing their mobile network, which in turn may act as a constraint when mobile operators set their call termination charge.

3.34 For this to act as a viable constraint however, it is likely that the following would need to hold:

1. parties are sufficiently sensitive to the price of outgoing (off-net and fixed-to-mobile) calls such that they would reduce the amount of calls they make to mobiles if prices increased;
2. the consumers choosing the network are sufficiently concerned about a drop in the number of incoming calls they receive, or the duration of the calls; and
3. condition A to C in paragraph 2.12 above hold (interconnection pass through to retail prices, awareness of network called and awareness of price to that network) and the consumer choosing the network knows that they hold.

3.35 In the OFCOM report for mobile call termination in the UK, the regulator cited overwhelming survey evidence that suggested that most consumers did not consider the price of incoming calls when choosing their contracts, nor did they consider the cost to other people as a significant factor. There appears to be no reason to suggest that SA consumers would exhibit different preferences, nor is there any evidence available to the Authority which points to a contradictory finding.

QUESTION 5: PLEASE COMMENT ON PARAGRAPHS 3.8 TO 3.35.

WHOLESALE DEMAND-SIDE SUBSTITUTION

3.36 At present, operators have no choice but to purchase call termination directly from the mobile operators on whose network the called customer subscribes. This is unlikely to change during the period of this review.

SUPPLY-SIDE SUBSTITUTION

3.37 Supply-side substitution occurs when an alternative supplier offers call termination either directly to customers (retail supply-side substitution) or to the operators on whose networks customers subscribe (wholesale demand-side substitution). At present, no such possibilities exist within the South African market, nor are they likely to arise during the period of this review.

COMMON PRICING CONSTRAINTS AND BUNDLING

3.38 The analysis above indicates that there is no adequate demand-side or supply-side substitutes which, by the hypothetical monopolist test, require inclusion in the narrowly defined market of mobile call termination to individual mobile subscribers (or numbers). However, a common pricing constraint exists across call termination to all of an operator's subscribers – agreements currently cover all subscribers on a network, and there is no obvious reason why this would change in the future. Pressure to reduce price of one group of subscribers would feed through to all subscribers and hence the appropriate product market is call termination on individual mobile operator networks.

3.39 SMS termination is not considered to be in the same market as call termination. At a retail *origination* level, these services are bundled together – that is, when a consumer chooses a mobile network, they are generally sold call and SMS services as a bundle. However, when operators sell their termination services, they take into account the total demand for these services as generated by different consumers using these services at different times. The operator will in turn set termination prices based on the demand conditions for SMSs and calls. For this reason, SMS and call termination are considered as constituting separate markets.

3.40 Furthermore, the analysis does not change in consideration of which technology is used to terminate a call (i.e. whether the terminating operator uses a 2G or 3G technology).

QUESTION 6: PLEASE COMMENT ON THE AUTHORITY'S VIEW OF WHOLESale DEMAND, SUPPLY SIDE SUBSTITUTIONS, COMMON PRICING CONSTRAINTS AND BUNDLING.

GEOGRAPHIC MARKET FOR MOBILE CALL TERMINATION

3.41 We consider the geographical extent of the market to be the entire national network of each operator. Mobile operators do not currently offer different rates for call termination to different subscribers depending on their location in SA and there is no evidence to suggest that this practice will change in the future. The market is thus national in scope

WHOLESALE FIXED LINE CALL TERMINATION

3.42 This section considers market definition for wholesale fixed-line call termination, employing the same methodology used above. At the time of writing, the main retail service affected by fixed line call termination was mobile-to-fixed calls. In the future, the rate will also become relevant for off-net fixed-to-fixed calls (when customers of NEOTEL, the second fixed line network operator, call customers of Telkom).²⁹

QUESTION 7: PLEASE COMMENT ON THE GEOGRAPHICAL MARKET DEFINITION FOR BOTH WHOLESALE MOBILE AND FIXED CALL TERMINATION.

PRODUCT MARKET FOR FIXED LINE CALL TERMINATION**RETAIL DEMAND SIDE SUBSTITUTION**

3.43 First, in order for retail demand-side substitution to be a sufficient constraint in fixed call termination the (symmetric version of) conditions A to D considered in mobile call termination would need to hold:

A. the fixed call termination charge must pass through to the outgoing price that calling parties face when making calls to that network;

²⁹ VANS providers who offer VOIP services will also seek interconnection with the fixed line operators. These services are still in their infancy. However, in this context, VOIP services offer a cheaper technology through which to originate calls. From a substitution perspective, they do not present any additional dynamics, whether they occur from fixed or non-fixed locations.

- B. callers must be sufficiently aware that they are calling a specific fixed line network;
- C. callers must be sufficiently aware of the price of calling that particular network; and
- D. adequate demand substitutes must exist such that a sufficient number of consumers could switch to these alternatives.

3.44 The evidence for condition A³⁰ is inconclusive. First, the fixed call termination charge has only varied by about 10 cents over the period, which is small compared to most mobile-to-fixed fees. Second, different tariff plans yield different trends for the “retention rate” of the mobile operators for mobile-to-fixed calls.³¹ In SA, condition B³² is likely to be fulfilled at present. However as discussed in the previous section, this is increasingly unlikely to hold going forward, especially with the introduction of number portability, as well as the recent entry of NEOTEL and VOIP providers who have been or will be allocated numbers based on geographic location, not operator network. The extent of price awareness is uncertain.

3.45 However, the Call Party Pays (CPP) principle applies here too, and this seriously limits the ability for standard demand-side substitution to constrain fixed line call termination. With regard to condition D,³³ the following potential substitution avenues are considered.

1. *Mobile-to-mobile* calls as substitute for off-net fixed-to-fixed calls;
2. *Mobile-to-mobile* calls as substitute for mobile-to-fixed calls;
3. *Fixed-to-fixed* as a substitute for mobile-to-fixed calls;
4. *(On-net) fixed-to-fixed* calls as a substitute for off-net fixed-to-fixed calls; and
5. Voice over Internet Protocol (VOIP).

³⁰ The fixed call termination charge must pass through to the outgoing price that calling parties face when making calls to that network

³¹ VoIP-to-fixed calls are too new to consider the extent of pass through, and off-net fixed-to-mobile calls are non-existent

³² callers must be sufficiently aware that they are calling a specific fixed line network

³³ adequate demand substitutes must exist such that a sufficient number of customers could switch to these alternatives.

Mobile-to-mobile calls as substitute for off-net fixed-to-fixed calls

3.46 As opposed to calling a party on their fixed line from their own fixed line, consumers may choose to call the party on their mobile phones using their own mobile phones, if the called party has a mobile phone and the calling party knows the number. There are various circumstances in which even these minimal conditions will not hold, for example, when calling businesses or business associates.

3.47 However, as the cost of off-net fixed-to-fixed calls³⁴ are far cheaper than mobile calls, it is unlikely that mobile-to-mobile calls (whether on-net or off-net) could provide a substitute for off-net fixed-to-fixed calls.

Mobile-to-mobile calls as substitute for mobile-to-fixed calls

3.48 We now consider the potential to substitute mobile-to-mobile calls for mobile-to-fixed calls.

3.49 The underlying cost of fixed line termination is cheaper than mobile termination, and this means that (on-net or off-net) mobile-to-mobile calls cannot be a long term viable substitute to mobile-to-fixed calls. Consider the price comparison shown in table 2 below.

³⁴ VoIP-to-fixed calls are likely to reflect the cost of any off-net fixed-to-fixed call. The only example of off-net fixed-to-fixed calls are from isolated fixed-wireless offerings, as with Uninet's Knysna project, and with VOIP solutions offered by VANS. Both of these provide break out onto Telkom's network at very close to the cost of a local Telkom call, which is far cheaper than any mobile call rate (off-net or on-net or to a landline).

Table 2. Ratio of mobile-to-fixed calls to on-net mobile calls and off-net to local calls in mobile operator tariffs
 Source: operator websites and Pamphlets in 2005

	M-F/On-net (peak)	M-F/On-net (off-peak)	Off-net/ M-F (peak)	Off-net / M-F (off-peak)
WEEKENDER + EVERYDAY TARIFF PLAN	Between 17% and 53% more expensive		Equal	Equal
FAMILY TOP UP TARIFF PLAN			2% more expensive	
WEEKEND EVERYDAY S TARIFF PLAN			5 % more expensive	
FAMILY CALL S TARIFF PLAN			Equal	
TALK100S TARIFF PLAN	Equal	Equal	Between 15% and 104% more expensive	Between 6% and 49% more expensive
TALK120 TARIFF PLAN				
TALK200S TARIFF PLAN				
TALK240 TARIFF PLAN				
(BUSINESS CALL)				
(BUSINESS S CALL)				
FREQUENT CALL S TARIFF PLAN				
CORPORATE 500 TARIFF PLAN				
BUSINESS TOP-UP TARIFF PLAN				
FREQUENT CALL TARIFF PLAN				
TALK500S TARIFF PLAN	Between 7% and 31% cheaper			
TALK1000S TARIFF PLAN				
Vodacom Average	1.00	1.00	1.37	1.23
	28% more expensive	Equal	Between 7% and 110% more expensive	Between 9% and 40% more expensive
	2% more expensive			
	Between 6% and 9% cheaper			
	32% cheaper			
MYCALL 100	3% more expensive	Between 0% and 5% more expensive	Between 30% and 90% more expensive	Between 8% and 31% more expensive
PROCALL 120	Equal			
PROCALL 300				
PROCALL 600				
BUSINESS TIME				
MY CHOICE 75				
MY CHOICE 300	32% cheaper			
PROCALL 1000				
MTN C AVERAGE	0.93	1.03	1.47	1.21
Average for 3 mobile operators	1.019	1.008	1.361	1.192

3.50 Mobile-to-mobile off-net call rates are in general far higher than mobile-to-fixed call rates. This reflects the fact that mobile call termination is *priced* at a far higher rate compared to fixed-line call termination. The evidence regarding on-net mobile-to-mobile call prices relative to local call prices is more mixed, with some being higher and others being more expensive. OFCOM maintains that in theory because mobile call termination is more expensive than fixed-line termination, on-net mobile-to-mobile calls (which include call termination costs) cannot be a long term viable substitute for mobile-to-fixed calls. It is also our view, that any pricing similarity that does exist is an example of the cellophane fallacy.

Fixed-to-fixed as a substitute for mobile-to-fixed calls

3.51 We now consider the potential for fixed-to-fixed calls to be a substitute for mobile-to-fixed calls.

3.52 As *off-net* fixed-to-fixed calls are subject to the same termination fee as mobile-to-fixed calls, they are not viable substitutes in so far as an increase in that termination fee is concerned.

3.53 *On-net* fixed-to-fixed calls are not subject to a fixed termination fee. However, they require the caller to (a) have a fixed phone (b) be on the same fixed line network as the called party and c) be at a given location when they want to make the call. As noted, many South Africans do not have a fixed line, but of those that do, almost all belong to the Telkom network. The probability of being on the same network will, however, drop with the increase in competition (the NEOTEL, VOIP providers). Finally, condition (c) implies a substantial decrease in flexibility relative to mobile-to-fixed calls.

3.54 It is likely that when consumers desire to call parties on their fixed lines, they would prefer to use their own fixed line (as on-net fixed-to-fixed call) wherever possible in order to secure the substantial cost savings. In other instances, however, especially when "on the move" or merely for convenience, callers will not find fixed-to-fixed calls a viable substitute to mobile-to-fixed calls. It is therefore likely that the market has been adequately differentiated such that those who can make on-net fixed-to-fixed calls will do so at current and at competitive prices, whereas those who are not price sensitive, or who use mobile-to-fixed calls when on the move, constitute a separate group of consumers to whom prices can profitably be raised.

(On-net) fixed-to-fixed calls as a substitute for off-net fixed-to-fixed calls

3.55 There are two potential ways that on-net fixed-to-fixed call may be used as a substitute for off-net fixed-to-fixed call. The first is if the caller has two fixed lines, provided by the two relevant operators. The second is through the use of

Carrier Pre-Selection ("CPS"). We consider it is highly unlikely that a consumer will have two fixed lines from two different fixed line operators (for example, a fixed line from both Telkom and the NEOTEL). However, CPS is provided for in the ECA.

- 3.56 In many international jurisdictions, CPS itself does not allow for calls to be pre-selected on the basis of which network is being called. In the UK for example, customers could pre-select a carrier for international calls only, for national calls only, for both international and national calls, or for all calls. None of these options differentiate between the networks called.
- 3.57 However, the existence of carrier selection (through pre-dialling a code which selects a given operator) does allow consumers to choose the network based on which network they were calling.³⁵ If consumer uptake of such services were sufficient, this suggests that carrier selection (as opposed to carrier pre-selection) might be an avenue through which the price of on-net fixed-to-fixed calls will constrain the price of off-net fixed-to-fixed calls, and indirectly, the price of fixed line call termination.
- 3.58 The large pressure for CPS to be implemented (as opposed to merely CS) may be indicative of anticipated customer resistance to dialling a number code before making a call, and this in turn limits the potential for CS to provide an appropriate avenue for increased competition. Furthermore, the ability for consumers to use carrier selection in the manner just described is dependent on consumers knowing which network they are calling. The introduction of number portability will likely reduce the awareness of the called network, as will the mere entry of the NEOTEL and other fixed location voice providers, who are allocated numbers not through a network code, but rather according to geographical location. Overall, it is currently very uncertain how CPS will be implemented, whether it will occur within the period of this review, the extent of consumer uptake, and the ultimate impact on competition. Due to these uncertainties, it would be premature to consider that this new product will render on-net fixed-to-fixed calls as a viable and sufficiently robust substitute for off-net fixed-to-fixed calls.

³⁵ Carrier selection may form a part of carrier pre-selection in South Africa.

VOIP

3.59 Instead of calling parties on their fixed line in the traditional way (which incurs a fixed line call termination fee) parties can arrange to contact each other over the Internet using for example, Skype. The key requirements for this type of service to be functional are that (a) both parties are online at the same time, (b) the parties have access to the appropriate technology – both parties must have access to a high-speed (broadband) Internet origination and a computer. These requirements limit the constraint that VOIP places on mobile call termination charges. Most significantly, only a very small proportion of calling and called parties have taken up high-speed internet services, and even smaller proportion have likely used this to facilitate VOIP calls.

3.60 Note that for VOIP services which break-out onto the mobile networks, VOIP providers will (likely) face the same fixed line call termination fee as faced by other fixed line and mobile operators. For this reason, they are not a viable substitute for mobile-to-fixed and off-net fixed-to-fixed calls with regard to an increase in fixed call termination fees.

QUESTION 8: PLEASE COMMENT ON PARAGRAPHS 3.43 TO 3.60.

SUPPLY-SIDE SUBSTITUTION

3.61 Supply-side substitution occurs when an alternative supplier offers call termination either directly to customers (retail supply-side substitution) or to the operators on whose networks customers subscribe (wholesale demand-side substitution). At present, no such possibilities exist within the South African market, nor are they likely to arise during the period of this review.

QUESTION 9: PLEASE PROVIDE ANY COMMENTS ON SUPPLY SIDE SUBSTITUTION.

GEOGRAPHIC MARKET FOR FIXED LINE CALL TERMINATION

3.62 We consider the geographical extent of the market to be the entire national network of each fixed line operator. Fixed line operators do not currently offer different rates for call termination to different subscribers depending on their location in SA and there is no reason to assume that this practice will change in the future. The market is thus national in scope.

QUESTION 10: PLEASE COMMENT ON PARAGRAPH 3.62.

4 SIGNIFICANT MARKET POWER AND MARKET COMPETITIVENESS

ICASA DECLARATION ON SIGNIFICANT MARKET POWER

4 A licensee with Significant Market Power ("SMP") is defined in the ECA as instances where, in a given market, a licensee:

- is dominant, or
- has control of essential facilities, or
- has a vertical relationship that the Authority determines could harm competition in the market or market segments applicable to the particular category of licence.³⁶

4.1 The definitions of the act state that "dominant" has the same meaning as in section 7 of the Competition Act, which in turn implies that a firm is dominant in a market if:

³⁶ Section 67.5 of the ECA

- it has at least 45% of that market;
- it has at least 35%, but less than 45%, of that market, unless it can show that it does not have market power; or
- it has less than 35% of that market, but has market power. (Section 7 of the Competition Act).

4.2 This means that by definition, each operator has SMP in the market for call termination on their respective networks, because each operator has 100% market share which is a dominant share (above 45%).³⁷ The legislation would not appear to allow for any evidence to contradict this assessment, given the high market share.³⁸ We therefore conclude that:

- Vodacom has SMP in the market for call termination on Vodacom's network;
- MTN has SMP in the market for call termination on MTN's network;
- Cell C has SMP in the market for call termination on Cell C's network; and
- Telkom has SMP in the market for call termination on its network.

QUESTION 11: PLEASE COMMENT ON THE VIEW THAT ALL OPERATORS HAVE SMP WITH REGARD TO CALL TERMINATION ON THEIR OWN NETWORKS.

DETERMINING THE EFFECTIVENESS OF COMPETITION

4.3 However, the ECA only mandates the imposition of pro-competitive market conditions in markets where ineffective competition appears to exist (Section 67 (4))³⁹. In order to determine the effectiveness of competition, we first considered the issues as made mandatory by the ECA for this analysis.⁴⁰

³⁷ As a consequence of the narrow market definitions, each operator has 100% market share (whether measured in revenues, volumes or subscriber numbers) of the market which are defined by their respective networks.

³⁸ That is, only if market shares were between 35% and 45% can contradictory evidence be presented (and supporting evidence *must* be presented for an assessment for market power if market share is below 35%). For shares above 45%, however, no such clause allowing for contradictory evidence exists

³⁹ Section 67.4 states: The Authority must prescribe regulations defining the relevant markets and market segments, as applicable, that pro-competitive conditions may be imposed upon licensees having significant market power *where the Authority determines such markets or market segments have ineffective competition.* (own emphasis)

⁴⁰ In this regard, ICASA is required to determine the effectiveness of competition in defined markets taking into account:

4.4 It is our opinion that the two most important considerations for the evaluation of market competitiveness in this context are entry barriers and countervailing power, discussed below.

ENTRY BARRIERS AND POTENTIAL COMPETITION

4.5 Each mobile operator is a complete monopoly in the supply of call termination to its own network. Furthermore, technological obstacles to alternative operators providing call termination for customers who belong to other networks, currently present an absolute barrier to entry, which means that there are no viable potential competitors. This is not likely to change for the period of review.

THE DEGREE OF COUNTERVAILING POWER IN THE MARKET

4.6 Even if a company has a large market share, large buyers of their product/s may wield countervailing power, which serves to counteract and reduce the company's market power. There are various mechanisms through which a company might possess countervailing power. In the context of call termination, we have identified the following four primary mechanisms:

4.6.1 The termination purchaser can ***threaten not to interconnect***:

- Can refuse to purchase interconnection
- Can refuse to sell interconnection
- Can refuse to do both of the above

-
- non-transitory entry barriers (structural, legal and regulatory) and other dynamic characteristics
 - market shares
 - forward looking assessment, over a "reasonable period," of market power of each participant, taking into account
 - actual and potential existence of competitors,
 - the level, trends of concentration, and history of collusion, in the market,
 - the overall size of each of the market participants,
 - control of essential facilities,
 - technological advantages or superiority of a given market participant,
 - the degree of countervailing power in the market,
 - easy or privileged access to capital markets and financial resources,
 - the dynamic characteristics of the market, including growth, innovation, and products and services diversification,
 - economies of scale and scope,
 - the nature and extent of vertical integration,
 - the ease of entry into the market, including market and regulatory barriers to entry.

- 4.6.2 The termination purchaser can threaten to in turn sell termination on their network at a high price, that is, they can ***threaten to retaliate with their own high interconnection fee.***
- 4.6.3 The termination purchaser can ***threaten to raise the retail price of calling seller's network,*** which, if very high, can reduce demand for calls to that network and render that network unattractive to users.⁴¹
- 4.6.4 The termination purchaser can ***threaten to discriminate*** against the seller (when the seller purchases interconnection) such that they are at a disadvantage compared to their competitors.
- 4.7 There are in general, three types of bargaining interactions that need to be considered when evaluating countervailing power: (1) between two large operators, such as MTN and Vodacom; (2) between Telkom and these two mobile operators (where certain demand asymmetries exist), and (3) between small and large operators, such as with Cell C and the larger mobile operators and between the Telkom and the NEOTEL and VANS.
- 4.8 The evidence would suggest that countervailing power has not been able to constrain call termination rates. In just over two years, between May 1999 and October 2001, the mobile termination fee rose from R0.20 to R1.23 (excluding VAT), a total increase of 515%. The rate is currently at R1.25. The fixed line termination fee increased from R0.21 in December 2001, to R0.31 in January 2005, an increase of 47%. No countervailing power was able to prevent these sharp price increases.
- ***Mobile call termination:*** Telkom was unable to persuade the mobile operators not to increase their fee and the mobile operators themselves were unable to exert countervailing power on one another. The entry of Cell C also did little to reverse the sharp increase in interconnection which had occurred immediately prior to their entry.

⁴¹ The argument used in market definition suggested that customers do not take into account the price of incoming calls. However, this was respect to a small but significant increase in price above competitive levels. The threat referred to above is with respect to a very large increase in the retail price.

- **Fixed line call termination:** It may be suggested from the above data that, as Telkom's interconnection fee did not rise as much as the mobile operators, the mobile operators were able to exert countervailing pressure on Telkom. However, first, there is a well accepted principle that mobile termination costs more than fixed line termination and had Telkom's rate increased in alignment with that of the mobile operators, it would have attracted significant regulatory disapproval. Second, Telkom has an upper-bound constraint in its ability to raise its termination fee in the form of the retail price of local call, which constitutes an avenue through which operators can bypass Telkom interconnection rate (break-out). As the price of local call is currently around R0.33 (excluding VAT), it would appear that Telkom has pushed their interconnection rate up to its upper constraint, and hence, has not been constrained by any countervailing power.

4.9 Further evidence for non-competitive SA call termination rate includes simple cost evaluations and international price comparisons. For example, utilising the call termination cost evaluation methodology employed by the Nigerian regulator shows that current mobile interconnection rates are approximately twice that of the derived cost.⁴² International comparisons also show that SA mobile call termination rates are above average relative to other African peer countries. For example, consider the following interconnection rates for other countries where MTN or Vodacom operate:

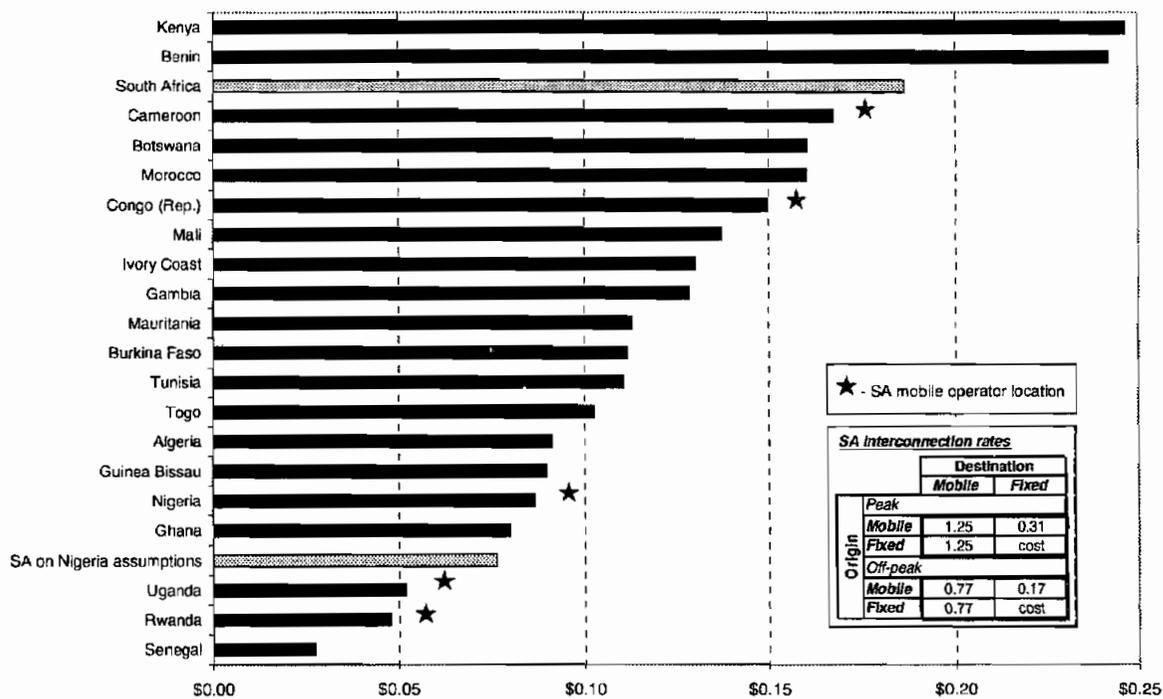
- Tanzania (Vodacom) – \$0.089 (R0.59)
- Nigeria (MTN) – \$0.091 (R0.59)
- Uganda (MTN) – \$0.055 – \$0.088 (R0.36-R0.58)

4.10 An even wider comparison (shown below) shows that SA is at the upper end of the range when compared to a range of other African countries.

⁴² The Nigerian Communications Commission relied on an international price and cost comparison methodology when it lowered its mobile interconnection rates by 36% in 2003. The methodology considers the total CAPEX per subscriber invested by the mobile operators, adjusted using a 25% return amortized over the life of the investment, which was considered 8 years. Operation and maintenance costs are then added, at a rate of 30%. The total is then divided by the average minutes initiated per subscriber per year. Then common costs are added, at 10%. Finally, termination is considered to account for 71% of the cost of the originating and terminating parts of the call. Using data available in Vodacom's annual report suggests that the cost of interconnection is 70%.

Fixed to mobile interconnect rates in Africa in USD

Source: Jerome Bezzina, World Bank, June 2005; Genesis calculations



4.11 There are various reasons why countervailing power may be ineffective. We consider four potential reasons which might explain the above evidence, and the demonstrable lack of countervailing power, though others may also exist. First, countervailing mechanism 1 and 4 above (threaten not to interconnect, and threaten to discriminate) are effectively removed by existing and past legislative and regulatory principles, which specifically require all operators to interconnect upon request and prohibit discrimination between operators.⁴³ Second, operators are partially constrained in their ability to raise the retail price of off-net calls by price cap regulation. This serves to limit the effectiveness of countervailing mechanism number 3 (see above) which considers using the threat of raising retail off-net calls to a given network as a device to secure lower termination fees from that network.

⁴³ It is clear that existing regulation serves to reduce the countervailing power of operators by removing mechanisms 1 and 4 (this after all, is its purpose). This raises the question of whether countervailing power might not arise (and thereby reduce SMP) in the absence of those regulations. However, we consider that the consequences of relaxing these regulations for any of the largest operators (Telkom, MTN and Vodacom) would be highly anti-competitive. This is because the ability to discriminate against (or not to interconnect with) an operator would give two of these three large operators the ability to form a closed network from which the third operator would be excluded, and this would create significant pressure for customers of the excluded operator to switch to one of the included operator networks. For this reason, existing interconnection regulation as applied to large operators is a necessary for competition and therefore it is appropriate to consider it as fixed in the context of evaluating countervailing power of the larger operators.

- 4.12 Third, MTN and Vodacom have a mutual incentive to frustrate the entry of Cell C into the market and raising termination fees is a key mechanism through which this can occur. Economic theory suggests that faced with a threat of entry, incumbent operators would seek to raise interconnection fees above costs, and thereby push off-net prices above those of on-net. This is because a new entrant's ability to attract new customers (as well as cause switching from the incumbent operators) is heavily dependent on the off-net prices that they can charge.⁴⁴ This provides some rationale for the price rise observed from around 1999.
- 4.13 Finally, Telkom has joint ownership of Vodacom and this reduces their incentive to exercise any countervailing power that they may have (from mechanism 2 and mechanism 3). Economic theory suggests that equilibrium competitive behaviour in the context of cross ownership can often approximate monopoly outcomes.⁴⁵ Telkom for example had a dynamic strategic incentive to protect the market position of its subsidiary (from Cell C entry) via high termination rates, even at some direct cost to themselves.
- 4.14 This analysis suggests that (a) Telkom does not exert sufficient countervailing power on the mobile operators; (b) the mobile operators do not exert sufficient countervailing power on Telkom; and (c) the large mobile operators do not exert sufficient countervailing power on each other. The final question is whether the large operators exert sufficient countervailing power on smaller operators like Cell C.
- 4.15 With approximately 10% of the subscriber market, it is clear that Cell C is more dependent on interconnection with Vodacom and MTN than the other way round. Thus, in the absence of any regulation, both operators might choose not to interconnect with Cell C, or to interconnect at very high rates, and perhaps even force Cell C to offer them low rates. However, in the presence of existing

44 Consider a market with a high interconnection fee and two established incumbents earning high profits. The incumbents offer a similar on-net, off-net and access price. A new entrant offering those same prices would look considerably worse from the consumer's perspective (off-net fees). To start looking competitive, the new entrant would have to drop its off-net fee to below the on-net fee of the other operators, or drop the access fee by a large amount (equal to the difference between on-net and off-net fees multiplied by the number of on-net calls the customer currently makes). Thus, even if there is fat in the market, a new entrant would have to drop the retail offering significantly below the incumbents before they could even begin to encourage switching or attract new customers, on the basis of price.

45 See O'Brien and Salop for their seminal work on how ownership structure influences behaviour in economic games. "O'Brien, D and Salop, S "Competitive effects of partial ownership financial interest and corporate control" *Anti Trust Law Journal*, Vol 67 pp 559-614

regulations, Cell C has managed to resist any pressure to force it to offer the larger mobile operators a lower fee than they offer it.⁴⁶ Current regulations would therefore appear to remove the countervailing power of the larger operators.⁴⁷ Given this, it is clear that were further regulation to be placed on the larger operators, but not on Cell C, the countervailing power of the larger mobile operators would remain absent, and accordingly, Cell C would continue to be able to exercise SMP.

LOOKING FORWARD

4.16 In general, the communications industry is undergoing significant technological development. It will be important to re-consider these findings at the next review. However, ICASA does not consider it likely that any technological development, product innovation or market dynamic would change sufficiently so as to constrain the price of call termination over the next two years.

QUESTION 12: PLEASE COMMENT ON PARAGRAPHS 4.3 TO 4.17.

5 PRO-COMPETITIVE CONDITIONS

BASIC REMEDIES

- 5 The finding of SMP automatically implies that the regulatory principles specified in the ECA cannot be set aside. This provides that the following three regulatory remedies will apply to SMP operators:
- i. **obligation to interconnect** upon reasonable request by another licensee or by a service provider operating under a license exemption (37(1));
 - ii. **obligation not to discriminate** between the buyers of their call termination services (37(6));

⁴⁶ Cell C may have been forced to offer lower fees simply to prevent the mobile operators from raising costs still higher and therefore having a still greater negative impact on Cell C's attempt to enter the market.

⁴⁷ Cell C's ability to charge equally high termination rates may be based, in part, on non-specific regulatory observance – it would be very difficult for the mobile operators to explain why their agreements were asymmetric (even if each operator practiced non-discrimination).

- iii. **price transparency**, which is achieved by the requirement for interconnection agreements to be filed at the Authority, which the regulator can use to provide copies of the agreement to any person (39(1) and 39(3)).

PRICE CONTROLS AND ACCOUNTING SYSTEMS

5.1 The ECA also mandates that the Authority to set out further remedies which may include but are not limited to:

- iv. **price controls** (67(7)(h));
- v. an obligation to maintain **separate accounting systems**⁴⁸ using specified accounting methods, which are available for inspection by the Authority (67(7)(f) and 67(7)(g) and 67(7)(j));
- vi. obligations concerning matters relating to the **recovery of costs** and cost orientation (67(7)(i)).

5.2 The primary question that needs to be asked is whether the conditions (i) to (iii) are sufficient for limiting the negative impact of SMP in call termination markets, or whether the additional controls (iv-vi) should be imposed?

5.3 The Authority has considered the various options and is of the view that prima facie, the full list of remedies, (i) to (vi) needs to be imposed on Telkom, Vodacom and MTN. With respect to Cell C, NEOTEL and other operator networks, only the standard remedies (i) to (iii) should be applied.

5.4 The large operators with SMP (Telkom, Vodacom, MTN) would have an incentive to raise the price of call termination on their network. First, this raises additional revenues, and second, it raises the cost of rivals. For smaller operators this can serve to effectively block their ability to gain market share in retail markets, which seriously limits competition within those markets. Furthermore, high interconnection fees distort the price of off-net calls, which

⁴⁸ For example, between matters relating to 1) access, 2) interconnection and 3) facilities leasing; the provision of 4) electronic communications network services, 5) electronic communications services or 6) any other service offered by the licensee applicable to the relevant market or market segments at issue; and 7) retail and 8) wholesale prices;

renders the overall pattern of consumer demand economically inefficient. We therefore consider that the ability and incentive for the large operators to raise price creates significant competitive harm and that conditions (i) to (vi) are proportional remedies. The appropriate price control to be applied, given that large economies of scale and scope characterise the industry, is long run incremental cost ("LRIC"), calculated on the basis of relevant forward looking economic costs of an efficient operator, including a reasonable cost of capital.⁴⁹ The need to maintain separate accounting systems follows directly from price control regulation. Without such systems, the regulator would be unable to check that prices do actually reflect LRIC.

- 5.5 With respect to the smaller operators (who nevertheless have SMP) we do not consider that the exercise of their SMP creates significant competitive harm. Their ability to raise the cost of their rivals is significantly limited by their small market share, as is the incentive for customers to switch to these small operators in order to avoid paying high off-net fees (if these operators choose to set high termination rates). Moreover, even if customers did switch to these operators on the basis of avoiding high off-net fees, it is not apparent that this would be anti-competitive. The regulator is furthermore concerned that placing accounting system regulation on smaller operators would be overly burdensome for both those operators and the regulator with little associated competitive benefit.
- 5.6 These pro-competitive conditions will be revised as is appropriate in the next review of call termination by the Authority, or sooner if required.

QUESTION 13: PLEASE COMMENT ON THE CONCLUSIONS REACHED BY THE AUTHORITY WITH REGARD TO PRO COMPETITIVE CONDITIONS.

⁴⁹The adoption of LRIC as a regulatory costing technique is used widely for example by other NRAs in Europe, and by the FCC in the US. It has also been identified as the most appropriate methodology to use for setting interconnection charges by the European Commission in its 1998 Recommendation on Interconnection Recommendation 98/195/EC 8 January 1998." Quoted from an OFCOM report on mobile call termination. May 2003.