- non-discrimination
- accounting separation
- price controls and cost accounting obligations
- timely compliance with licence terms and pro-competitive conditions.

This legal framework informs the proposals contained in this document on the imposition of pro-competitive measures on SMP Licensees in the relevant fixed and mobile markets.

3.3 Potential competition problems

3.3.1 Assessment of the effectiveness of competition and the nature of potential competition problems

The Authority's assessment of the effectiveness of competition in the call termination markets found that all licensees have significant market power on call termination on their own networks. It found further that there are at present no effective supply or demand side substitutes in the call termination market due to the absence of competitive alternatives to wholesale call termination on each licensee's network. In addition, the current method of charging for call termination (Calling Party Pays or CPP) perpetuates the fact that consumer demand for voice call termination is inelastic, further insulating individual licensees from price competition.

In light of these findings, the Authority believes that there are a range of potential detriments that can occur. These competition problems can broadly be divided into:

- Problems relating to inefficient pricing, in that the Authority believes that there are insufficient incentives on licensees to reduce their wholesale call termination charges to an efficient level; and
- Problems relating to non-pricing issues and countervailing buying power (CBP), mainly aimed at delaying market entry and raising a rivals costs.

The two types of potential problems arising for the Authority's SMP findings are discussed in this chapter.

3.3.2 Inefficient pricing problems and effects

The absence of incentives on licensees to lower their call termination charges results in inefficient pricing which can have a negative impact at both the wholesale and retail levels. Inefficient wholesale call termination pricing can adversely affect the:

- ability of new entrants and smaller players to compete with more established firms; and
- level of retail prices for F2F, F2M, M2F and M2M off net rates faced by end users.

These scenarios are described below.

3.3.2.1 Excessive retail charges for off net calls

While licensees have an incentive to keep retail rates low in order to attract and retain subscribers, they do not have a similar incentive with regard to voice calls originating on a competitors' network. Above-cost call termination leads to distortions to the relative prices of fixed and mobile services, such that the relative prices do not reflect underlying resource costs (which is the economic outcome expected in competitive markets). High termination rates can lead to high off-net retail rates given the positive relationship between wholesale and retail charges.

Analysis of operator data submitted to the Authority through the questionnaire identifies substantial differences between the on-net and off-net weighted average retail charge.

3.3.2.2 On-net/off-net price differentials as a potential barrier for new entrants

Above cost wholesale call termination rates are likely to lead to higher off-net retail prices. High off-net retail prices can make it harder for new entrants to compete with more established players. For example, firms with high subscriber bases can potentially gain competitive advantage over less established firms by keeping wholesale call termination rates high and creating large on-net/off-net pricing differentials. The greater the differential between on-net and off-net retail rates, the more attractive to customers are networks that have relatively more on-net calling opportunities (i.e. larger networks).

In particular, a large network's subscribers can be expected to make proportionately more on-net calls than the subscribers of a smaller network. As such, high on-net/off-net price differentials that more established licensees can create and control through charging higher off-net rates can reduce the attractiveness of smaller networks, putting them at a competitive disadvantage. By the same token, this behaviour will result in higher prices for calls made to the smaller network by subscribers of the larger network, which again reduces the attractiveness of the smaller network.

According to economic literature, in the presence of call externalities, larger networks have strong incentives to implement on-net/off-net price differentials due to[54]:

- high termination charges which exceed marginal cost; and
- strategic incentives to reduce the number of calls that subscribers on rival networks receive, reducing the attractiveness of rival networks, and hence their ability to compete.

It has been argued that on-net/off-net pricing strategies can constitute a barrier to entry for new entrants since they have to set off-net rates that compete with the larger licensees on-net rates. In the presence of above cost wholesale termination rates and on-net/off-net retail price differentials, this has the potential to result in margin squeeze for less established firms.

Additionally, research on on-net/off-net differentials has indicated that:

> *"High (i.e. above marginal cost) termination rates can lead to permanent "access deficits" for smaller networks, because even with a "balanced calling pattern[55]" traffic between networks will not be in balance. Call externalities reinforce this effect, since when large networks set high off-net prices, subscribers of a smaller network will also receive relatively few calls;"[56]*

Thus the effects of on-net/off-net differentials could on one hand lead to a margin squeeze, or on the other a reduction in the attractiveness of the smaller network. The latter is the most likely scenario in South Africa.

Smaller service providers such as ECS and ECNS licensees providing VoIP, Neotel and Cell C have the ability to compete strongly on on-net pricing, as they have relatively fewer customers than their more established rivals. This is because they can discount on-net prices with a relatively lower impact on overall profits when compared to equivalent on-net price reductions by more established firms. Based on information submitted to the Authority through the questionnaire, it appears that the smallest of the mobile licensees has set on-net rates that are lower than those of the larger established licensees. This evidence is consistent with the competitive advantage that smaller licensees have in setting discounted on-net retail prices in comparison to larger licensees.

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[54] Harbord and Pagnozzi, (2008), *On-Net/Off-Net Price Discrimination and 'Bill-and-Keep' vs. 'Cost-Based' Regulation of Mobile Termination Rates*, page 5.

[55] Where in the absence of tariff differentials, each subscriber calls every other subscriber with the same probability.

[56] Harbord and Pagnozzi, (2008), *On-Net/Off-Net Price Discrimination and 'Bill-and-Keep' vs. 'Cost-Based' Regulation of Mobile Termination Rates*, January

However, notwithstanding these innate advantages, for the reasons described above smaller firms may struggle to grow their customer base in the presence of above cost call termination rates.

3.3.2.3 Cross subsidisation to own subscribers in retail markets

This involves two separate markets and the ability of an SMP operator to use its SMP in one market to subsidise the cost of a product in another (competitive) market and hence leverage its SMP into that (second) market.

Cross subsidisation does not represent ineffective competition in itself. However, if one price is excessive and the other price is predatory, it can be used by a SMP operator to leverage market power and foreclose a related, potentially competitive market. In the case of call termination, if termination rates are high and a vertically integrated SMP operator is able to charge low or predatory prices in the retail market, cross subsidisation will result in a price squeeze.

It has been argued that high termination rates promote universal service and access in that such rates allow licensees to cross subsidise services to their own subscribers in retail markets. The argument in South Africa has been raised in response to the previous 2007 Consultation and in the Parliamentary hearings with respect to the subsidisation of mobile handsets. It is argued that voice call termination revenue has been historically used to subsidise handsets. It is thus unlikely that returns in the wholesale market are competed away in the retail market.

3.3.3 Non-Pricing Competition Problems and Effects

To a large extent the Interconnection Regulations (Government Gazette No. 33101) required under the ECA address the potential 'non-pricing' competition problems that may arise from the dominant position of all licensees providing call termination. These regulations contain specific provisions addressing matters of transparency and non-discrimination as well as enforce the obligation for all licensees to interconnect (Section 37 of the ECA). As such, the potential non-pricing problems that can arise in light of the Authority SMP findings are partially addressed.

3.3.3.1 Refusal to deal/denial to interconnect

An operator that has SMP in a wholesale market may attempt to leverage its market power by denying access to or refusing to deal with competitors operating downstream that are competing with the incumbent's retail affiliate. In the termination market scenario, this problem can occur in the mobile to mobile as well as in the fixed to fixed or fixed to mobile situations, both when entering into or renegotiating an interconnection agreement.

A refusal to deal restricts the sales of rivals and, through that, can lead to foreclosure in the case of call termination which is a necessary input for the provision of voice services off net. Given that foreclosure is likely to substantially lessen competition, it is likely to be detrimental to overall welfare.

The ECA mandates access for interconnection thus eliminating the problem of refusal to deal.

3.3.3.2 Raising Rivals' Costs: Delaying tactics

Although access is mandated by the ECA, delaying interconnection which is a necessary input can have the effect of delaying the entry of a new entrant. The longer the delay, the longer the operator can protect its monopoly rents in the retail market. Additionally, a delay may provide an opportunity for the interconnection provider or its affiliate to build up a first mover advantage which in turn has the potential to increase the new entrant's costs relative to the first mover (interconnection provider) and may also restrict its sales.

Delaying tactics may come in various forms, such as lengthy negotiations or fabricated technical problems or requirements. Timeframes stipulated in the Authority's Interconnection Regulations curb this potential, but do not completely eliminate it.

3.3.3.3 Raising Rivals' Costs: Undue requirements

Terms and conditions in interconnection agreements that require a particular behaviour of the interconnection seeker, which is unnecessary for the provision of the termination services, can have the effect of raising rivals' costs or restricting rivals' sales. Such undue requirements may include:

- The stipulation of a particular technology
- Bank guarantee and price floor requirements
- Information requirements beyond what is strictly necessary.

Remedies imposed by the Authority must seek to prevent the above problems from arising.

3.3.3.4 Raising Rivals' Costs: Tying and Bundling

Tying refers to the practice of only allowing the sale of one product if a related product is also purchased. Bundling is when two (or more) products are sold in fixed proportions (typically to end-users in the downstream retail market).

Bundling the sale of termination services with other services or tying it to the sale of other products or services *which are not needed* for wholesale call termination can raise the costs to an interconnection seeker.

The Interconnection and Facilities Leasing regulations aim to limit this behaviour by requiring interconnection and facilities leasing providers to sufficiently unbundle any charges so that a seeker does not have to pay for anything it does not require.

3.3.4 Addressing competition concerns

The Authority has considered the above potential competition problems that could arise as a result of SMP in the wholesale call termination market in South Africa. The potential effects of such problems include:

- negative welfare effects as a result of inefficient pricing,
- first mover advantage,
- raising rivals' costs,
- margin squeeze, and
- foreclosure.

The Authority has decided that *ex ante regulation* is needed to prevent these problems. The imposition of pro-competitive remedies in a targeted manner to address competition problems and their effects are thus warranted and necessary.

3.4 Imposing pro-competitive measures

3.4.1 Objective of imposing pro-competitive measures

The imposition of ex ante obligations does not depend on the abuse of a dominant position. It seeks to prevent such abuse. Therefore the Authority proposes the imposition of non-pricing remedies to ensure access, transparency and non-discrimination to enable all licensees to compete. In addition, the Authority seeks to introduce the pro-competitive remedies to remove the competitive distortions that occur as a result of allocatively inefficient pricing as discussed above. The Authority seeks to ensure that prices and margins are reduced to a level that covers the cost of efficiently incurred capital, as would be the case in a competitive market.

The remedies are furthermore aimed at providing certainty to the market with respect to the treatment of wholesale call termination charges and terms and conditions in the period under review. This legal and policy certainty is critical in the interests of investors and consumers alike.

3.4.1.1 Previous obligations

Under the previous legislative framework (i.e. the Telecommunications Act No. 103 of 1996, as amended) the following obligations were placed on MTN, Vodacom and Telkom:

- Submission of regulatory accounting under the Chart of Accounts and Cost Allocation Manual("COA/CAM") regulations; and
- Price control obligations in the form of price cap regulation.

These obligations lapsed with the coming into force of the ECA.

Furthermore, in terms of Sections 37 - 40 of the ECA and the Interconnection Regulations, the following obligations are in place and apply to all licensees:

- Obligation to interconnect, which is an access obligation;
- Transparency obligations; and
- Non-discrimination obligations with respect to terms and conditions relating to service and quality.

In addition, the Authority may expand upon these obligations or impose additional obligations further to a Market Review in terms of Chapter 10 of the ECA.

3.4.2 Principles to be applied in deciding upon remedies

Regulatory action is warranted when SMP is found in a properly defined market. In terms of Section 67(4)(c), the Authority is required to select from the pro-competitive remedies set out in Section 67 (7), amongst others. The Authority is furthermore required to promote competition within the ICT sector (Section 2(f)) and refrain from undue interference in the commercial activities of licensees while taking into account the electronic communications needs of the public (Section 2(y); and promote stability in the ICT sector (Section 2(z)).

As such, the specific obligations imposed must be based on the nature of the problem identified, and must be proportionate and justified. Proportionality refers to the Authority undertaking the minimum intervention required, to achieve the objective set out.[57] This approach is central to the proper application of ex ante obligations and will ensure that regulation, when it is applied, is specifically targeted at addressing market failure in the call termination market.

The Authority believes that it would be disproportionate to assume that identical remedies should be applied to all licensees designated with SMP in respect of a given market. The Authority believes that an approach where the same remedies are applied across the board will have damaging consequences for infrastructure competition, innovation and the interests of consumers, in the medium to longer term. It would furthermore place an undue regulatory burden on small players, i.e. those that are unlikely to harm the market, and affect their ability to compete.

In addition to being proportionate, a remedy should be justified and related to solving a potential competition problem identified in the market. As such, each remedy proposed by the Authority seeks to address one of the problems of cross subsidization, excessive pricing and inefficiency; or non-pricing problems of refusal to deal, delay, tying and bundling, as discussed in Section 3.3 and prevent its effects. Finally, the Authority recognises that all the remedies it proposes must be analysed in a forward looking manner, and has included this in its evaluation.

[57] ERG (2006), *Revised ERG Common Position on the approach to appropriate remedies in the ECNS framework*, p. 62. See http://www.erg.eu.int/doc/meeting/erg_06_33_remedies_common_position_june_06.pdf

3.4.3 Pro-Competitive measures for SMP

The provisions of Section 67(4) and Section 67(7) of the ECA and the principles for the imposition of remedies set out above, namely that remedies should be proportionate, justifiable, flexible and forward looking guide the Authority. As a guiding principle, the Authority will impose the minimum remedy necessary to address any competition problem.

3.4.3.1 Decision on imposition of structural remedies

Regulators have considered requiring structural as opposed to behavioural changes to address the competition problems arising from the monopoly over call termination on licensees' networks. Two main structural changes have been considered by other regulators and by the Authority:

- a requirement to move from a CPP to a Receiving Party Pays (RPP) billing arrangement[58]; and
- technical intervention to enable more than one network to terminate calls to a given network.[59]

The Authority believes that as a first step ex ante regulation should be used to impose behavioural remedies which will serve to enhance efficient competition. A structural remedy in the form of a required move to RPP would not be the minimum remedy necessary to address any competition problem, nor would it be in the best interests of South African consumers who are accustomed to the prevailing CPP charging structure. It is also not proven that the net benefits of such a change will outweigh the costs.

With respect to technical intervention, the Authority is not aware of any practical form of regulatory intervention to encourage the licensees to implement technological solutions that might either lead to supply-side substitution or increased competitive pressure.

In light of the above, the Authority intends to impose behavioural remedies as set out in the remainder of this document.

3.4.3.2 Decision on imposition of behavioural remedies

In an approach which is consistent with that taken in other African countries such as Namibia, Uganda, Tanzania and Nigeria, and in the EU, the Authority will impose behavioural remedies to address the potential competition problems arising from all licensees' SMP positions in call termination markets.

The Authority believes that the behavioural remedies that are most appropriate to apply in this market are:

- Access obligation;
- Transparency obligation, and specifically obligation to publish a Reference Interconnection Offer (RIO);
- Non-discrimination obligation, including non-discrimination on pricing; and
- Wholesale price control obligation, where termination rates must be fair and reasonable, but specific cost-oriented rates are set for established licensees.

Supporting obligations will have to be imposed on established licensees to ensure that the cost-orientation obligation is met. These supporting obligations are:

- Accounting separation obligations; and
- Cost accounting obligations.

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[58] Historically, RPP for mobile calls in the US was adopted as a complement to flat-rate charges for local fixed calls as the caller cannot identify whether the number being called is a mobile or fixed-line (Marcus, 2004).
[59] Ofcom (2007), Mobile Call Termination, Statement, p. 86. See http://www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/statement.pdf

Each proposed obligation is discussed in turn below.

3.4.3.2.1 Access obligations

Economic theory suggests that in the absence of an access obligation:

> *"a vertically integrated operator with market power on the wholesale market will... deny access to its wholesale product whenever retail entry would – in the short or in the long run – erode its market power on the wholesale market. By denying access, the dominant undertaking can preserve its market power and charge an excessive price on the retail market. In this way it can leverage its market power from the wholesale market into the potentially competitive retail market. The welfare effects of such behaviour are clearly negative.[60]"*

In South Africa, the requirement to provide access is one that applies to all parties providing interconnection as a general obligation in terms of Section 37(1) of the ECA. All licensees must meet reasonable requests for interconnection (i.e. those that are technically and financially feasible and which promotes the efficient use electronic communications networks and services) and must make information available to interconnection seekers with respect to terms and conditions, including prices. Section 37 of the ECA and the Interconnection Regulations made in terms of that section impose a broad range of obligations for access in the wholesale call termination markets, including the obligation to:

- give access to specific network elements or facilities;
- negotiate in good faith;
- maintain supply;
- specify technical requirements;
- provide any-to-any interconnection and interoperability requirements;
- abide by fairness conditions;
- abide by reasonableness conditions (technical and financial feasibility); and
- meet designated timelines.

There is evidence from a number of new ECNS and ECS licensees in South Africa that despite the access obligation in the ECA, established SMP licensees have created unnecessarily onerous or unreasonable conditions in negotiating interconnection agreements and have thus managed to delay considerably the reaching of agreement on the terms of interconnection.

Use of access obligations is one of the ways to address the impact of demand side network effects that tend to give larger networks competitive advantages over smaller ones. Access obligations are covered in terms of the Interconnection Regulations. However, the Authority believes it is appropriate to reinforce these obligations through the imposition of pro-competitive remedies. Access obligations are not sufficient on their own to address the competition problems identified in Section 3.3 above which affect the fixed and mobile call termination markets.

3.4.3.2.1.1 Impact of an access obligation

Section 38(5) of the ECA provides that the Authority may exempt licensees from the obligation to interconnect as set out in Section 37(1) of the ECA further to a finding in terms of Chapter 10.[61] In light of the Authority's findings that all licensees have SMP over call termination on their own network, this exemption will not be used.

No additional monitoring will be required by the Authority with respect to this obligation to interconnect, save for the adjudication of disputes regarding denial of access, or its pricing.

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[60] ERG (2006), *Revised ERG Common Position on the approach to appropriate remedies in the ECNS framework*, p. 81. See http://www.erg.eu.int/doc/meeting/erg_06_33_remedies_common_position_june_06.pdf

[61] See section 37(5) of ECA

3.4.3.2.1.2 Alignment with principles

The Authority is of the view that in light of the information obtained through the questionnaire and anecdotal evidence presented to the Authority, the timeframes for provision of access and the finalisation of agreements remain challenging for new entrants.

3.4.3.2.2 Non-discrimination obligations

A non-discrimination obligation as provided for in Section 67(7)(c) of the ECA forces an SMP Operator to apply equivalent conditions in equivalent circumstances to rivals that provide equivalent services, and provides services and information to others under the same conditions and of the same quality as it provides for its own services, or those of its subsidiaries, partners or affiliates. A non-discrimination obligation requires that third party access seekers are treated no less favourably than the licensees' internal divisions.

With respect to interconnection, Section 37(6) of the ECA provides that:

> *The interconnection agreement....must, unless otherwise requested by the party seeking interconnection, be non-discriminatory as among comparable types of interconnection and not be of a lower technical standard and quality than the technical standard or quality provided by such licensee to itself or an affiliate"*

The non-discrimination obligations arising from this market review process provide further detail and additional obligations for Licensees with SMP, and they also include non-discrimination with regard to pricing which is not addressed in terms of the existing framework.

The fact that termination rates are not set at the efficient level gives rise to discrimination concerns. SMP Licensees can discriminate traffic in a manner that leads to a lack of effective competition on the basis of the origin of such traffic. For example SMP Licensees can discriminate:

- against traffic originating on other networks;
- on traffic of own (vertically integrated) network versus traffic originating on other networks;
- on-net calls;
- between fixed and mobile calls

While the Authority recognises the need to prohibit discrimination, it notes that pro-competitive practices such as the provision of "bulk discounts" based on volume are not prohibited in terms of this non-discrimination obligation. Such volume discounts must however be objectively applied and available equally to all interconnection seekers. Equivalent volume discounts must be provided to equivalent licensees.

3.4.3.2.2.1 Impact of a non-discrimination obligation

The Authority recognises the potential adverse impacts of imposing a non-discrimination obligation. The existence of economies of scale in some markets means that some SMP Licensees will have lower unit costs than others. Imposing a non-discrimination obligation to force an SMP Operator to provide an input to a smaller rival at the same unit cost could lead to unintended impacts (such as inefficient entry into the market). Thus, differences in terms and conditions, even where transactions are not necessarily exactly the same, should be objectively justified to prohibit discrimination. The Authority will monitor this, and the potential for tacit collusion arising from this obligation.

The Authority notes that the imposition of minimum volume requirements, price floors and bank guarantee requirements have been imposed during interconnect negotiations. If unreasonable, these practices can

be seen as refusal to deal requirements and requirements that raise rivals costs. The imposition of a non-discrimination requirement addresses this competition problem.

The imposition of a non-discrimination obligation will be combined with other remedies (i.e. transparency and accounting separation) in order to address the effects of competition problems and to ensure that competition is not distorted. Transparency is a natural complement to this obligation as the ability to identify behaviour that could be detrimental through the use of discriminatory practices depends on the ability to detect such behaviour. In addition accounting separation is a complementary obligation to prevent price discrimination and is discussed later in this document.

3.4.3.2.2.2 Alignment with principles

The imposition of a Non-Discrimination obligation on all licensees with SMP as set out above is proportionate and justifiable. A non-discrimination obligation is neither onerous in that it increases the regulatory burden on licensees, nor is it expensive to implement and thus can be applied proportionally on all licensees. Accounting separation is a complementary obligation which assists to identify instances of discrimination, which the Authority feels should only be applied to established SMP licensees given that it is a burdensome obligation. This is discussed in greater detail in Section 3.4.3.2.6.

3.4.3.2.3 Transparency obligations

Imposing an *ex ante* obligation of transparency as provided for in terms of Section 67(7) (d) of the ECA can be used in relation to addressing potential problems in the wholesale call termination market. Section 37 of the ECA already provides that amongst other transparency related obligations, all parties to an interconnection agreement must:

- make public interconnection agreements, and any updates or amendments, and file them with the Authority; and
- make public interconnection prices and charges, and any changes thereto.

The potential benefits of the transparency obligations as set out above are that they will make all charges and changes to charges clear. They will act as a constraint to anti-competitive behaviour that might otherwise emerge such as delaying tactics, refusal to deal and discrimination.

3.4.3.2.3.1 Impact of transparency obligation

A transparency obligation, which is largely dealt with existing regulation and law, will not on its own be sufficient to address the effects of competition problems, including that relating to the cost of termination. It is therefore imposed in combination with other remedies.

Transparency of charges beyond the publication of such charges in interconnection agreements is dealt with in greater detail in Section 4.4.3.2.6 which deals with accounting separation obligations.

3.4.3.2.3.2 Alignment with principles

Transparency obligations are not overly burdensome since all licensees must prepare and publish interconnection agreements in any event, and transparency is a principle of the Interconnection Regulations; thus this obligation can be applied to all SMP licensees equally.

3.4.3.2.4 Publication obligation (Reference Interconnection Offer)

It is necessary to avoid delaying tactics and disputes and to ensure that interconnection seekers' costs are not unduly raised through the behaviour of established SMP licensees. As such, further to the

transparency requirements set out in Section 37 and the Interconnection Regulations, which are applicable to *all* licensees, the Authority requires that each established SMP Operator must publish a standard Reference Interconnection Offer (RIO) in terms of section 67(7)(e). At a minimum, a licensee's RIO must include:

- A description of the relevant electronic communications facilities and services on offer; and
- A description of the associated terms and conditions, including prices.

The Authority requires that each operator publishes its RIO on its website as well as lodge a copy with the Authority, which may be published on ICASA's website.

3.4.3.2.4.1 Impact of publication obligation

The requirement to prepare and publish a RIO will address the competition problems of delay, discrimination, tying and bundling. It will reduce complaints and enable licensees to respond to changes in pricing promptly given that standard terms and conditions are known.

It will furthermore assist the Authority to monitor the non-discrimination obligation. The RIO obligation will support the current provisions of the Interconnection Regulations dealing with transparency.[62]

The information set out in the RIO should ensure that[63]:

- new entrants have sufficient information about the SMP Operator's network to make informed business decisions, for example to plan its interconnection requirements;
- new entrants are presented with a standard offer against which they may negotiate and do not have to start negotiations from scratch; and
- the terms and conditions offered to different interconnecting licensees are non-discriminatory.

A RIO obligation, which is imposed solely on established SMP licensees providing call termination services will reduce the time needed to negotiate and finalise interconnection agreements from the currently regulated 45 days, and will ensure that similar terms and conditions are offered to all interconnection seekers. It will make all of the established SMP licensees' terms and conditions transparent, and importantly such terms and conditions will have to be approved by the Authority before the Reference Offer is made available to the public.

The detail of the RIO remedy is set out in the Call Termination regulations.

3.4.3.2.4.2 Alignment with principles

The Authority notes that apart from the RIO Obligation, all other transparency obligations are required to be met by interconnection seekers and providers in terms of the Interconnection Regulations. The Authority is thus of the view that the RIO obligation proposed herein is appropriate and proportionate and that it should be applied to all established SMP licensees.

3.4.3.2.5 Price Control obligation

The Authority's analysis has found that inefficient pricing is a key competition problem that this market review process and the imposition of remedies in terms thereof seeks to address. There is a lack of effective constraints on licensees to ensure that their call termination charges are set at an efficient charge level. The consequences of this could be excessive pricing and margin squeeze to the detriment of consumers, amongst others (see Section 3.3.2).

[62] Section 11 (Transparency) and Section 12 (Interconnection Information)
[63] Objectives of the Gambian Public Utilities Regulatory Authority's Reference Interconnection Offer Guidelines

In Section 67(7)(h) the ECA provides that the Authority may impose "such price controls, including requirements relating to the provision of wholesale and retail prices." Price Control obligations can range from light (e.g. an obligation that prices are "fair and reasonable") to heavy (e.g. an obligation that prices are cost oriented, or even that they are 'cost-based'[64]).

The Authority considers that the light touch approach applied in South Africa over the last decade has not constrained wholesale call termination prices to efficient levels and that a different approach is now required. The Authority intends to introduce a wholesale price control regime that encourages "fair and reasonable" pricing by all licensees and directly targets established SMP licensees' pricing policies and practices by ensuring cost-orientation of wholesale call termination prices. The Authority believes that, given the inability of other regulation to have the effect of bringing termination rates to efficient levels, the imposition of price control obligations is proportionate and justified.

The Authority is not intending to build a cost model as part of the current market review, although the previous decisions of the Authority are noted. In the absence of a specific costing model, the Authority intends to apply an alternative approach to gain insight on the costs of wholesale call termination rates in South Africa. This approach consists of a detailed review of the regulatory financial reports ("RFR") prepared by MTN, Telkom and Vodacom under the COA/CAM regulatory obligations and prepared based on FAC and CCA approaches. This analysis is complemented by international benchmarking of LRIC based wholesale call termination rates in other relevant jurisdictions.

A discussion on the design of the remedy is provided in Appendix A (Price Control Remedy Design). Establshed licensees will be required to comply with wholesale price controls as set out in the Call Termination Regulations.

3.4.3.2.5.1 Impact of Price on regulation of 'marginal subscribers ("Marginal Subscribers Argument")

It has been argued, particularly with respect to mobile services, that if price control is imposed and termination rates are reduced to the level of efficient costs, that a portion of low-usage pre-paid customers may no longer be profitable thus affecting universal service and access in South Africa. According to Vodacom:

> *Because of the demographics of the subscriber base and the policy objectives to drive coverage, penetration, access and affordability, the industry currently uses both retail and wholesale income to recover the cost of the subscriber over time. In other words the nature of our market allows licensees to retain marginal subscribers on the network as the cost of doing so is recouped through retail on-net and wholesale interconnection charges. Based on Vodacom subscriber data, over 35% of prepaid subscribers do not make a sufficient number of calls for direct revenues to offset the costs of retaining them on the network. They are retained on the basis of indirect revenue generated from incoming calls and thereby enjoy access and services they could not otherwise afford.*[65]

It is further argued both in South Africa and in other jurisdictions that reductions in mobile call termination rates will make it difficult to maintain current pre-paid offers and it may be necessary to cut handset subsidies by a certain amount, and/or introduce certain minimum commitment requirements in retail pre-paid packages.

The Authority considers that this argument ignores the dynamic nature of competition and customer behaviour in a network industry. It implies that licensees whose customer base consists largely of low-usage pre-paid subscribers are subsidised by other networks, including fixed networks, and finally by the subscribers of those networks. Given that this may result in higher prices for certain end-users and raise

[64] Cost-based is generally considered a tougher regulatory requirement on an operator compared to a requirement for charges to be 'cost-orientated'.

[65] Comments by Vodacom (Pty) Ltd in response to ICASA's Section 4B Inquiry into Wholesale Call Termination Market Definition in Notice 78 of 2007 (GG NO. 29568 published on 29 January 2007), page 1.

possible allocative-efficiency concerns, setting mobile call termination rates above the level of efficient costs in order to serve very low-usage customers does not seem to be justified due to the various market distortions it is likely to create.

The Authority notes that above cost mobile call termination can be justified in the presence of 'network externalities' can be demonstrated to the extent that such a cross-subsidisation would increase overall consumer welfare (fixed and mobile). This is discussed in more detail below.

3.4.3.2.5.2 Impact of Network externalities on the "Marginal Subscriber Argument"

Network effects provide incentives for network licensees to have more subscribers on their network. Revenue-generating customers benefit from being able to call more users and are more likely to stay on the network and make calls when those customers are available. The incentive for licensees to create communities of interest such as Cell C's Friends and Family package, suggests network licensees would seek to retain their 'marginal' pre-paid customers, even if their termination rates were regulated down to efficiently incurred costs. Thus, it may be expected that network licensees would seek to retain their pre-paid customers on their networks even if they were no longer subsidised by above-cost termination rates paid by customers of other networks.

The European Commission argues that "once licensees attract subscribers to their networks they will still have incentives to retain and grow that customer base so as to create communities of interest for their existing subscribers. Licensees may therefore be expected to internalise this externality in the absence of a mark-up above cost[66]."

Alternatively, where such subsidies continue to be applied they may increasingly be used to fund switches from competing networks or to upgrade customers to new services (for example 3G networks), rather than to attract marginal subscribers. This may be inferred from the very high customer churn rates (disconnections) observed in the South African market.

Table 3.1: 'Churn' rates in the South African mobile market

	Pre-pay customers	Contract customers
Licensee 1	49 %	7 %
Licensee 2	69 %	15 %
Licensee 3	40 %	10 %

Note: Churn percentage represents annualised percentage from the first 6 months of 2009
Source: Analysis of operator reported data.

This argument that marginal subscribers will be adversely impacted by regulation to lower call termination rates assumes that licensees can accurately target subsidies obtained from call termination revenues at marginal subscribers.

However, according to Albon and York (2008[67]) who reviewed this issue in Australia, handset subsidies in the retail mobile market do not tend to be primarily directed at attracting new mobile subscriptions. Rather, a substantial proportion of the handset subsidies are directed at enticing existing customers to particular networks and to migrating customers to higher value services (such as 3G). As neither of these activities is directly aimed at retaining marginal subscribers for voice services, the authors argued that this

[66] Commission Staff Working Document *accompanying the* Commission Recommendation On The Regulatory Treatment Of Fixed And Mobile Termination Rates in the EU: Implications for Industry, Competition and Consumers, page 40.
[67] Rob Albon and Richard York (2008), "Should mobile subscription be subsidised in mature markets," Telecommunications Policy 32, 294-306.

would not appear to provide sufficient justification for recovering these subsidies via the regulated voice call termination charge.

In addition the European Commission recently stated the following:

> *....in its 2002/2003 inquiry into the UK mobile market, the Competition Commission noted that some of the customers benefiting from replacement handsets may need no inducement to be a mobile customer as they have already made the commitment to join a network and are reluctant to forgo the benefits of mobile ownership. For example, it noted information from O2 pointing out that handset upgrades at less than cost are only made available to post-pay customers who have already been subscribers for a certain period of time. It was further noted that handset subsidies are more likely to be available to existing customers if they are high spenders. In its 2009 assessment of the UK mobile market, and specifically in disallowing a network externality surcharge which had been applied by Ofcom, the UK Competition Commission further noted this risk of 'leakage' whereby the surcharge is not fully passed through to the marginal customers for whom it is intended. Rather, it may be used to subsidise subscription for the more profitable, non-marginal consumers potentially leading to unnecessary upgrading or switching of handsets and/or excessive customer churn.* [68]

3.4.3.2.5.3 Impact of Penetration on the Marginal Subscriber Argument

MTN has argued in the past that:

> *...by ignoring the relationship between wholesale and retail in its analysis the Authority is ignoring a key component of the South African market penetration success, and puts at the risk penetration in the second economy*[69].

Mobile penetration in South Africa is high with operator data for June 2009 indicating that there were a total of 53 million customer connections in an estimated population of 44 million. The size of the prepaid market in South Africa which is over 90 percent of the total market, and the fact that low-usage subscribers are most likely to be prepaid makes the analysis in this market different from in Europe and United States. It is more relevant to compare outcomes in other emerging markets, particularly in Africa.

Table 3.2: Proportion of total South African mobile market that makes low (<5 per cent) or no outbound calls

	Proportion of customers with low outbound calling	Proportion of customers with no outbound calling
Contract customers	17.1 %	10.9 %
Prepay customers	17.0 %	12.7 %

Source: Analysis of operator data as of June 2009.

Note: Low outbound calling is classified as less than 5 per cent of the average outbound calling rate

Allowing mobile licensees to charge other networks, including fixed networks, termination rates above an efficient level of cost does not appear justified on the basis of perceived consumer benefits deriving from network externalities at this stage of market development. In fact, mobile licensees are more likely to concentrate their offers, such as handset discounts, on increasing churn by enticing existing customers away from their competitors rather than necessarily increasing the overall number of mobile subscriptions.

[68] European Commission (2009) *Commission Staff Working Document accompanying the Commission Recommendation On The Regulatory Treatment Of Fixed And Mobile Termination Rates in the EU: Implications for Industry, Competition and Consumers*, p. 41.

[69] MTN Submission on ICASA Wholesale Call termination Inquiry, 2007

Thus, in summary, given current levels of market penetration in South Africa, incentives to create network effects, and the fact that the regulated termination rates would continue to cover the efficiently incurred cost of this service, it is not clear why licensees would not be capable of internalising any such access externalities going forward or why mobile penetration levels would fall as a result. As such, the Authority believes that imposing price controls will not harm the market, but would actually address the problems alluded to in Section 3.3.2.

In terms of the fixed sector, penetration in South Africa is relatively low at approximately 10 per cent. The fixed retail market is also currently dominated by Telkom with over 99 per cent share.[70] Such extreme inequality in retail market share is more likely to allow market power to be wielded over the bottleneck termination service by Telkom.

The arguments made above for the mobile sector regarding network effects and the impacts on marginal subscribers of price controls are equally applicable when considered in relation to the fixed sector. There is no evidence that high fixed termination charges have been used to encourage the adoption of fixed services by marginal subscribers as the number of fixed lines in South Africa is relatively static or falling. Hence the imposition of a wholesale price obligation on the established fixed SMP operator is equally justified in order to achieve efficient wholesale pricing for fixed termination as it is for mobile termination.

3.4.3.2.5.4 Impact of wholesale price control obligation on retail prices

"Pass-through" refers to the passing on of wholesale call termination reductions to retail calls. On one hand it is argued that regulation of wholesale rates should be sufficient to enable competition in the retail market and thus reduce prices (e.g. Denmark[71]); however, it is noted that if the reduction in wholesale rates is greater than the reduction of retail rates this leads to a high retention rate, but relatively little direct impact on consumer prices.

In Europe, although the fixed to mobile termination rates have decreased significantly over the period 2004 to 2008, fixed to mobile retail call rates have not declined by the same amount in most countries. In fact, the average retention margins exceed 40 percent.[72]

This review focuses on the wholesale call termination markets defined by the Authority. The price control obligation seeks to address potential competition problems of excessive pricing, margin squeeze and inefficiency. The Authority has not reviewed the retail fixed or retail mobile market to assess the levels of competitiveness of such markets. However, the retail markets have a small number of networks, with significant entry barriers (such as high sunk costs and, in the case of the mobile market, spectrum scarcity).

The Authority intends to impose wholesale call termination market regulations, and as such will not at this stage, without having reviewed the retail market, impose regulation to require a set level of pass-through. The pass-through of competitive benefits to end consumers is however critical. The Authority would thus urge licensees to ensure that a significant portion of reductions in the fixed and mobile termination rates are passed through to consumers and encourages them to consider this in developing retail pricing strategies.

The Authority may subsequently review the fixed and mobile retail markets and, where ineffective competition is found, may impose retail remedies, such as price control and regulatory accounting, in order to ensure that retail rates are reduced.

[70] Analysis of operator responses to the industry data questionnaire.

[71] Analysys Mason, Report for the Australian Competition and Consumer Commission: Regulatory Treatment of Fixed-to Mobile Pass Through, page 7

[72] Analysys Mason, Report for the Australian Competition and Consumer Commission: Regulatory Treatment of Fixed-to Mobile Pass Through, page 31

3.4.3.2.5.5 Alignment with principles

The Authority recognises that the obligation to provide call termination at a cost-oriented rate is an intrusive measure as permitted by the ECA which places significant burden both on the Authority and the SMP licensees that must comply with the obligation.

The Authority believes it would be unreasonable and disproportionate to impose identical ex-ante price regulation obligations on all fixed and mobile SMP licensees. Any price regulation imposed on licensees must reflect their real economic costs and should permit a fair return on investment. The Authority will therefore have regard to the fact that the unit cost base of licensees with a smaller overall market share - in terms of volume or customer base - is inevitably higher than that of larger ones.

In addition, in assessing the risks associated with regulatory intervention of this nature, the Authority notes the fact that many smaller mobile licensees have yet to generate returns covering their costs of capital employed. The imposition of identical obligations on all licensees with SMP may therefore in effect have an entirely different impact on individual licensees.[73]

In addition to imposing a burden on licensees, cost-orientation places requirement on the Authority. It requires the Authority to establish the "efficient rate" and given the potential for SMP Licensees to shift anti-competitive behaviour from pricing to non-pricing behaviour (like discrimination on quality or product characteristics) as a result of the obligation, it requires that the Authority actively monitor the market. Further, in light of this obligation, the Authority has to monitor compliance on an on-going basis.

3.4.3.2.6 Accounting Separation obligations and Cost Accounting Method obligations

3.4.3.2.6.1 Accounting Separation

The accounting separation obligation set out in Section 67(7)(f) of the ECA and the cost accounting obligation discussed in Section 67(7)(g) are specifically useful to support the Authority in monitoring compliance with and implementing price control obligations. These two obligations also support the above-mentioned obligations of transparency and non-discrimination.

Accounting separation monitored through the submission of Regulatory Financial Reports ("RFR") supports the non-discrimination requirement discussed in Section 3.3.5 particularly for established, vertically integrated licensees. Analysis of RFR enables the Authority to have sight of an operator's wholesale prices and its internal transfer prices. Accounting separation is an important regulatory tool in that it may identify cases in which a vertically integrated company engages in unfair cross-subsidization. It can also act as a constraint on other anti-competitive behaviour as discussed in Section 3 such as margin squeeze.

3.4.3.2.6.2 Cost Accounting Methodology

Section 67(7)(g) allows the Authority to propose the accounting method to be used to maintain the separation of accounts required in terms of Section 67(7)(f). Common methodologies include:

- Fully Allocated Costing (FAC) based on either Historic Cost Accounting (HCA) or Current Cost Accounting (CCA); and
- Long Run Incremental Costing (LRIC).

A cost accounting methodology was determined in terms of previous interconnection regulations which provided for LRIC and FAC by "major licensees" providing "essential services.[74]" Furthermore the

[73] As argued by Orange Group in response to ERG's consultation on regulatory remedies

[74] Section 11 of the Interconnection Guidelines (Notice 1259 of 2000) provides that "Major Licensees of Essential Services must provide those Essential Services for interconnection to any requesting Public Operator at the long run incremental cost (LRIC) of those Essential Services." Further "Major Licensees may charge Service Providers no more than the fully allocated costs of the Major Operator for establishing a POI."

Supplementary Interconnection Guidelines provided for a transition from FAC to LRIC based costing over 2 years, but this period lapsed in 2004.

There are a number of approaches to estimating the efficient cost of a call termination service. However, international best practice suggests the most economically efficient method to use is one that calculates costs for termination services on the basis of forward-looking, long-run incremental costs (LRIC). This approach promotes efficient production and consumption, and minimises potential competitive distortions.

This method estimates prices that are consistent with those that would emerge in an effectively competitive market. In such a market, licensees would compete on the basis of current or forward-looking costs based on efficient technologies available in the timeframe considered.

Detailed cost accounting requirements including the cost standard, cost model, depreciation method, and cost differences are to be decided by the Authority and set out in regulations issued in terms of Section 67(7)(f) of the ECA setting out the manner in which the regulatory accounts are to be maintained and the format for regulatory accounts to be submitted.

3.4.3.2.6.3 Impact of accounting separation and cost accounting obligations

The obligations of Cost Accounting and Accounting Separation are intrusive and may be onerous on smaller new entrants. The Authority considers it proportionate that Cost Accounting and Accounting Separation obligations will apply only to established SMP licensees to support their price control obligations. It is intended that the Regulatory Financial Reports and information collected by the Authority under these obligations will inform decisions on price regulation and the imposition of wholesale price controls in the future. The Authority notes that established SMP licensees in South Africa except Cell C have previously had an accounting separation obligation imposed on them in the form of submission of RFRs under the COA/CAM regulations. As such, compliance with this obligation can be reasonably expected.

The Authority believes that it is proportionate and justified to apply this obligation to the established SMP Licensees which are Telkom, Vodacom, MTN and Cell C.

The detail of the implementation of accounting separation remedy will be set out in Accounting Separation and Cost Accounting to be issued by the Authority in terms of Section 67(7)(f) and (g) of the ECA. These regulations will set out the format for regulatory accounts to be submitted. The Authority will, in implementing the regulations, respect confidentiality and maintain tight control over information submitted.

3.4.3.2.6.4 Alignment with principles

The Authority notes that accounting separation and cost accounting are onerous and burdensome obligations that may be costly to implement given the level of detailed financial information that must be provided. The Authority therefore proposes that they are only applied to more established SMP licensees who have a greater potential to harm the market, namely Vodacom, MTN, Cell C and Telkom.

In order to ensure that the exemption of other (smaller) licensees found to have SMP in the relevant call termination market from submitting RFRs does not cause market distortions, the Authority is applying non-discrimination and cost-orientation remedies to all licensees. This ensures that transparency is achieved to the greatest extent possible with the least burden for all licensees.

3.5 Conclusion on pro-competitive measures

3.5.1 Promoting competition

The Authority has considered the range of pro-competitive remedies that form part of its regulatory toolkit and, for the reasons summarised in previous sections, the Authority has decided that the remedies will be applied only where they address a specific competition problem. Additionally there will be a proportionate application of the proposed remedies – general remedies will apply to all SMP Licensees, and additional obligations will apply only to established SMP licensees. This approach will be applied in a manner that is justified, flexible and forward looking.

3.5.1.1 General obligations

The Authority proposes the following pro-competitive terms and conditions be applied to all SMP Licensees:

- Obligation to provide access in terms of Section 67(7)(a);
- Non-discrimination obligation in terms of Section 67(7)(c);
- Transparency obligation in terms of Section 67(7)(d) and (e); and
- Wholesale price control obligation in terms of Section 67(7)(h), where termination rates must be fair and reasonable, and specific cost-oriented rates are set for established SMP licensees.

The Authority is of the view that an access obligation, as is already provided for in terms of the ECA when a reasonable request is made, ensures interoperability. This obligation alone will not address all the competition problems that have been identified. Coupled with transparency and non-discrimination obligations the access obligation can have a positive impact on promoting competition and addressing the non-pricing competition problems raised in Section 3.3.

It would not be proportionate for the price control obligation to be applied symmetrically to all licensees. As such, although the same remedy will be applied, two sets of obligations will be applied in terms of this remedy: 'fair and reasonable' pricing, and cost-orientation. In the interest of proportionality, the obligation to comply with specific cost oriented rates will apply only to established SMP licensees.

3.5.1.2 Additional obligations

Although the price control obligation is applied to all licensees, cost orientation is only to be applied to Vodacom, MTN, Cell C and Telkom. It is further proposed that additional obligations aimed at addressing the competition problem of inefficient pricing apply only to the established SMP Licensees to support the cost-orientation obligation as follows:

- Accounting Separation obligation in terms of Section 67(7)(f); and
- Requirement relating to the accounting methods to be used in maintaining the separation of accounts in terms of Section 67(7)(g).

Reducing wholesale prices down to an efficient level can best be achieved through a robust wholesale price control framework supported by a regulatory accounting separation and cost accounting obligation.

In the short and medium term, the Authority will use existing cost accounting data complemented by relevant international benchmarks of the cost of fixed and mobile call termination to determine the efficient charge level. The detailed approach to the imposition of wholesale price controls is discussed in Appendix A.

The Authority believes that the imposition of these pro-competitive remedies is consistent with South African legislation and supported by international best practice. In particular, the approach taken is proportionate, transparent, non-discriminatory and objectively justifiable.

3.5.2 Monitoring and enforcement

Monitoring and enforcement of the above-mentioned remedies between review periods will be important. As such, the Authority will require licensees to submit the information relevant to each remedy, whether that is RFRs, RIOs or other regulatory obligations. Additionally, the Authority will require ongoing information from the various licensees in order to monitor the development of the market and have sufficient information at its disposal at the time of the next review. Licensees will be required to provide regular basic reports as follows, in a format to be prescribed by the Authority:

- Bi-annual wholesale tariff reports
- Bi-annual market reports including information not limited to that submitted in terms of the Wholesale Call Termination Questionnaire (e.g. reporting on revenues, volumes, active subscribers, traffic, negotiations etc)

Every licensee must furnish the Authority with documents or information specified in a written notice relating to any matter in respect of which a duty or obligation is imposed on such licensee by the Act or any underlying statutes.[75] The Authority will therefore, in order to effectively monitor and evaluate compliance with the proposals arising from the market review, and in an effort to evaluate the effectiveness of the proposed remedies, set out the relevant reporting requirements in regulations made in terms of section 4(3)(g) of the ICASA Act. This will be reinforced by existing licence conditions and section 4(3)(j) of the ICASA Act which provides that ICASA may make regulations on any matter consistent with the objects of the Act and underlying statutes that are incidental or necessary for the performance of the functions of the Authority.

[75] Section 4(3)(g), ICASA Act

Annexure 1 – Wholesale Price Control Remedy Design

1. Wholesale Price Control Remedy

Increased competition will result in more pressure to minimise costs over time, and lead to greater investment in innovative new technologies and service by licensees. However, absence of competition in the wholesale call termination market means that ICASA must impose obligations to mimic the results that would be achieved in a competitive situation.

The Authority has decided to impose a wholesale price control obligation, on all licensees with SMP. The obligation is two-fold - established licensees with SMP, being Vodacom, MTN, Cell C and Telkom will be required to charge cost-oriented termination rates as discussed in Section B.3. All other licensees must charge fair and reasonable prices for the provision of call termination services as discussed in Section 1.2

This Appendix discusses the "fair and reasonable" and cost orientation obligation. The former obligation is fairly simple. As such, the Appendix goes further to detail the various considerations in designing a cost orientation remedy, the pros and cons of adopting various approaches, and the Authority's chosen approach.

1.2 "Fair and Reasonable" Obligation

The Authority recognises that all licensees have SMP on call termination on their own markets. As such, price control obligations shall apply to all licensees; however such obligations shall be imposed in a manner that is proportionate and justified. Established SMP licensees are in the greatest position to use such market power to distort the market and shall have the cost-orientation obligation imposed on them. The obligation to charge 'fair and reasonable' termination rates that are not excessive will apply to all other SMP licensees providing wholesale call termination services. The "fair and reasonable" obligation, akin to that imposed in Sweden and the French Territories for late entrants, will be applied to those SMP licensees that are not established enough to cause harm to the market. [76]

Licensees will be expected to charge rates that are not excessive and not abusive. In instances where it is believed that an operator is not complying with this requirement, a dispute shall be lodged with the Authority which will consider such disputes on a case-by-case basis.

Given that it is the least onerous of price control obligations, with minimal ex ante monitoring by the Authority, there are no supporting obligations for the 'fair and reasonable' obligations, such as regulatory accounting. A regulatory accounting obligation would be too intrusive and onerous a means of aiding the Authority to monitor compliance with an otherwise light touch obligation.

Given the imposition of the cost-orientation principle in the provision of call termination services, the Authority expects the following outcome of the "fair and reasonable" obligation for non-established licensees:

- Non-established licensees to charge a reciprocal rate with the rate set for Telkom if these licensees offer a fixed service, and
- Non-established licensees to charge a reciprocal rate with the rate set for Cell C, MTN and Vodacom if these licensees offer a mobile service.

Non-established licensees are given the right to refer any call termination price dispute to the Authority after the breakdown of commercial negotiations. The process for the lodging of disputes is specified in the Call Termination regulations

1.3 Cost Orientation: Determining the "efficient charge" level

[76] ERG (2006), *Revised ERG Common Position on the approach to appropriate remedies in the ECNS framework*, p. 67. See http://www.erg.eu.int/doc/meeting/erg_06_33_remedies_common_position_june_06.pdf

Any wholesale price control mechanism that the Authority adopts will have to promote efficiency in a sustainable manner that does not distort the market. It is generally accepted in economic theory that welfare is maximised in the long-run in a perfectly competitive market when prices are set equal to long-run marginal cost.[77] Setting prices according to long-run cost will lead to an efficient outcome in terms of incentives for market entry, while still providing licensees with a sufficient margin in order to cover costs and earn an appropriate return on capital employed.

Regulators revise the prices in markets where there appears to be an access bottleneck due to the existence of market power according to the costs that an efficient operator employing the latest available technology would incur. In arriving at the costs of an 'efficient operator', the Authority is aware of the need to balance the needs of the public and end users who seek high quality services at reasonable and affordable rates with those of licensees who need to achieve a suitable rate of return on their investment. The proposed "efficient charge" takes into account these considerations.

There are different forms of wholesale price control possible to try to reach the 'efficient charge.' Various approaches have been adopted throughout the world amongst which the most common is to set charges directly on the basis of licensees' costs or on the basis of external input such as benchmarking or cost modelling. Approaches to setting pricing include:

- At cost orientation using cost information (Current Cost Accounting, Fully Allocated Costing, Long Run Incremental Costing, etc);
- At a benchmark level (using relevant benchmarks appropriate to a given country); and
- Using a retail benchmarking approach.

The approaches set out above are not mutually exclusive. The Authority has considered all approaches and each are discussed in turn below.

1.3.1 Option 1: Cost orientation using cost information

The starting point in establishing economically efficient interconnection prices is usually the economic cost of interconnection. Cost modelling is the manner in which the Authority can establish 'cost' with the most certainty. In many jurisdictions, regulators set interconnection prices based on long run incremental costs (LRIC). LRIC has been applied in Australia, Tanzania, Uganda, Nigeria, UK, EC, and the United States. There are various forms of LRIC, with the most common form of LRIC being Total Service Long Run Incremental Cost (TSLRIC).[78]

LRIC can be estimated using two primary modelling approaches – 'top-down' and 'bottom up.' Briefly, 'bottom-up' modelling uses detailed industry data to build a hypothetical network that can supply electronic communications services, including interconnection services. The costs of this network, including capital costs and operations and maintenance costs are then allocated to all the services provided.[79]

Conversely, 'top-down' modelling measures LRIC using the operator's actual costs (CCA or HCA) as a starting point. These costs are those set out in the operator's accounts, presenting a classic information asymmetry case for regulators. 'Top-down' modelling is not forward looking and does not involve detailed network modelling. Instead, it separates the firm's assets and costs into service groups, and then adds the costs associated with interconnection to arrive at an estimate of LRIC.[80]

To summarise, some of the practical differences between top down and bottom up modelling include:

[77] See for example Kahn: "The Economics of Regulation" in John Wiley & Sons, Vol. 1, 1970, Vol. 2, 1971, reprinted by MIT Press, 1988.
[78] http://www.ictregulationtoolkit.org/en/Section.2092.html
[79]http://www.ictregulationtoolkit.org/en/Section.2092.html
[80] http://www.ictregulationtoolkit.org/en/Section.2092.html

- It is more difficult to take account of future changes in costs in a top-down approach than in a bottom-up approach that can incorporate explicit assumptions about technological change and its impact on the firm's choice of inputs; and
- It is possible to make adjustments to top-down approaches to remove inefficiencies in the firm's current network configuration and costs, but it is difficult to do so transparently.

The Authority notes that cost orientation is best achieved using information obtained through a cost model. The Authority has to date not created a cost model, however, similar information has been obtained from the fixed and mobile licensees through RFRs submitted in compliance with COA/CAM regulations. Such RFRs submitted using the Current Cost Accounting standard provide sufficient cost information for the Authority to assess the cost base of the mobile and fixed licensees. Thus cost orientation using cost information is feasible in South Africa immediately. A cost model, using a methodology such as LRIC, could subsequently be created and its findings applicable for the next review.

1.3.2 Option 2: Cost Orientation at Benchmark Level

Benchmarking interconnection rates is the process of establishing local practice based on practices in other jurisdictions. In the context of the design of a price control regime, benchmarking can be done on many aspects of the regime, including:

- Rates;
- Duration; and
- Asymmetry and levels thereof.

Benchmarking has two main purposes in interconnection pricing. In situations such as that in South Africa where detailed cost models can be estimated (based on RFRs), benchmarking can provide a 'sanity check' to verify the results derived from the RFRs. This is the approach that has been taken by the Authority in this review. Alternatively, benchmarking can be used directly to set interconnection prices (Botswana, Namibia, New Zealand).

Box 1: Benchmarking approach to regulating call termination in Namibia

The "Namibian Interconnection Benchmarking Study" published in 2009 benchmarked the cost of termination in Namibia against a number of countries including Tanzania, Australia, Sweden, France and Kenya and used a top-down cost estimation for a common sense check on the results. It noted that "a LRIC study using international best practice is likely to get to similar or even lower results" and that any of the Namibian licensees could request a revision of termination rates by demonstrating that its forward-looking long-run incremental cost of termination exceeds the proposed ceiling.

1.3.4 Option 3: At Retail benchmark level

In terms of this approach, the wholesale price is calculated as the retail price minus the costs of an efficient undertaking, and as such an excessive retail price will automatically feed into an excessive wholesale price (or vice versa). A retail benchmarking or "retail-minus" approach cannot effectively bring down excessive access prices to a cost-oriented level without retail price regulation.[81] The Authority notes that it has not reviewed the fixed or mobile retail markets and has not formed a view on pricing in such

[81] ERG (2006), *Revised ERG Common Position on the approach to appropriate remedies in the ECNS framework*, p. 85. See http://www.erg.eu.int/doc/meeting/erg_06_33_remedies_common_position_june_06.pdf

markets, however, it is sufficiently concerned about the level of retail prices to be wary of utilising this approach.

Setting prices at a retail benchmark level would reduce the established SMP licensees' incentives to discriminate, and would prevent them from exposing their competitors to a margin squeeze, since an efficient entrant in the market would be able to compete effectively. However, as pointed out by the ERG, "in the presence of economies of scope or scale on the retail market.... it will usually be difficult to set the margin such that is allows alternative licensees as well as the SMP operator's retail arm to compete on a level playing field."[82]

Box 2: Retail Benchmarking approach to regulating mobile call termination in Australia

In Australia, in 2001 the ACCC developed pricing principles for GSM termination services. The Commission adopted a retail benchmarking pricing methodology. This approach provides that changes in each mobile carrier's termination prices are benchmarked against the price movements of its overall mobile package (including access and outgoing calls). The Commission examined the issue again in 2003 and decided in 2004 that benchmarking should be dispensed with and that fixed to mobile termination needed to be set to reflect the LRIC of mobile termination. The Commission proposed a glide path from the existing level to achieve the calculated LRIC in 2007.

1.3.5 Proposals for reaching the "efficient charge" level in South Africa

Bearing in mind the above-mentioned approaches of cost orientation using cost information, benchmarking and retail benchmarking, and taking into account the information available to the Authority at this point in time, The Authority has decided to use a combined approach of Option 1 and Option 2 to determine the efficient charge level – cost orientation using available cost information coupled with benchmarking as a cross reference.

The Authority has decided that the best way forward in implementing price controls is to use the information obtained from the Regulatory Financial Reports submitted in terms of the Chart of Accounts and Cost Allocation Manual (COA/CAM) to arrive at the efficient charge in South Africa. Regulatory Financial reports in terms of COA/CAM have been submitted by Vodacom, MTN and Telkom. In arriving at the efficient charge level the Authority has reviewed the Regulatory Financial Reports submitted for the year to December 2007 by MTN and Telkom, for the year to March 2008 by Vodacom.

In the case of Cell C, which was not required to submit formal Regulatory Financial Reports as per the COACAM regulations, published statutory accounts are available and form the basis of the analysis undertaken. To permit comparison with the analysis for Vodacom and MTN, Cell C's accounts for the year ending 2007 have been used.

The Regulatory Financial Report analysis is supported in some instances by information provided by licensees in response to the Industry Data Questionnaire such as disaggregated traffic and wholesale and retail revenue. Finally, benchmarking data has been used to provide a 'sanity check' for the Authority to ensure that the Authority's chosen approach produces results that would reasonably be expected in other jurisdictions.

[82] ERG (2006), *Revised ERG Common Position on the approach to appropriate remedies in the ECNS framework*, p. 78. See http://www.erg.eu.int/doc/meeting/erg_06_33_remedies_common_position_june_06.pdf

While benchmarking is useful and may be a quicker approach, the Authority is of the opinion that using benchmarks alone to set fees is not the ideal approach in that there are inherent risks in using it as the primary means of determining rates – it is critical that the appropriate benchmarks are used and the necessary adjustments made (e.g. for exchange rates, traffic patterns, local costs) for benchmarking to be meaningful. Benchmarking against good practice in the EC which has an established history of market review, as well as in African countries that have similar market characteristics and have created cost models is, in the Authority's view, a useful approach to serve as a comparison with a cost-oriented approach.

The above-mentioned approach informs the efficient charge levels to be set in the price control regime to be implemented during this review period, i.e. 2010 – 2013.

For future review periods, the Authority will use information obtained as a result of cost modelling and derived through the imposition of the cost accounting and accounting separation obligations in terms of the regulations arising from this market review to inform the efficient charge. The Authority may also undertake specific additional cost modelling of licensees call termination costs to inform future determinations of rates where necessary. The Authority also intends putting in place regular reporting requirements for licensees, including at a minimum annual financial statements.

2. Framework Issues - Remedy Design

In addition to the methodology of arriving at an "efficient charge" level discussed above, the Authority has taken into account a number of framework issues relating to the imposition of a wholesale price control regime and the design of the wholesale price control remedy.

2.1 Efficient charge level – A blended rate or a single set rate?

There exist two methods to set wholesale rates: either as a single set rate or as an average or "blended" target rate. A blended approach allows licensees flexibility to set different rates for peak and off-peak termination, as long as the average or blended rate is consistent with the target rate. The alternative is the imposition of a set rate.

2.1.1 Option 1: Introducing a blended regulated charge

A blended regulated rate allows licensees flexibility to set different rates as long as the average or blended rate is consistent with the target rate. The main benefit of setting a blended rate is that it provides licensees with flexibility to set different rates for peak and off-peak traffic and thus provide price signals that reflect the underlying costs of termination during different times of the day. Depending on the specific retail pricing strategies of each operator, differential wholesale prices for peak and off-peak traffic may flow through to different retail prices.

The engineering capacity of networks is heavily influenced by the amount of traffic expected to pass-through the network at the busiest time of the day (the 'busy hour'). Typically, in peak traffic times, networks are likely to be close to fully utilised and hence, the cost of termination in these periods will be higher than in off-peak periods. Offering lower prices in off-peak times provides incentives on some consumers to make calls at off-peak rather than in peak periods (and hence save money) on the assumption that the time of day variation in the wholesale termination rate is passed through to the corresponding originating operator's retail prices. This can be an effective way to spread traffic across the day and improve network efficiencies.

If networks still have capacity during the peak times, then this weakens the arguments in favour of retaining a regulated termination rate based on a target average charge.

Setting a 'blended' regulated charge means that licensees must set peak and off-peak termination charges based on their expected traffic volumes in peak and off-peak times. If these traffic volumes are not met, then there is the potential for the operator to over-shoot (or under-shoot) the target rate. If an

operator over shoots the target rate, then it is technically charging a termination rate that is above the regulated rate – and hence in breach of the regulation.

It is recognised that setting a blended termination rate, and allowing licensees to differentiate their rates as long as they, on average, meet the target, will require the Authority to put in place a more extensive monitoring and compliance regime in terms of which licensees will have to provide reports to the Authority on a regular basis to demonstrate compliance. The introduction of reporting and monitoring will make it less likely that consistent 'overshooting' of the target rate will occur.

2.1.2 Option 2: Introducing a set regulated charge

A set (rather than blended) regulated charge would apply to all licensees equally. Licensees would be required to charge this set rate for all traffic at all times.

Introducing a set regulated charge would be consistent with the approach used in a number of other countries including Tanzania, Uganda Kenya, Germany, France, Italy, Netherlands and Norway. A set charge has the benefit of simplifying the charge control regime and removing the need for Licensees to forecast traffic volumes and provide compliance reports to the Authority. It also reduces administration costs for the Authority.

A potential drawback of imposing a set charge is that it prevents licensees from setting differentiated termination rates to account for differential unit costs for termination rates in peak and off-peak times. The Authority is aware that it is possible for that in peak times (where the network may face capacity constraints) the unit costs of mobile call termination may be higher whereas in off-peak times (such as the weekend) unit costs for mobile termination are likely to be lower. Being able to set peak and off-peak wholesale prices allows licensees to spread traffic away from the busy hour, and hence provides a way to manage network efficiencies by reducing the traffic load in the 'busy hour'.

However, a set regulated rate introduces a number of benefits. These benefits include a more transparent retail pricing structure for consumers. This is not only a benefit to consumers but also to licensees because it would allow licensees to more effectively manage their traffic through retail pricing mechanisms as well as reduce the complexity in retail billing services.

2.1.3 Proposal

Bearing in mind the pros and cons of a blended regulated rate versus a set regulated rate, the Authority is of the view that the impact of selecting one approach over the other on the Authority is relatively minimal. There is an increased monitoring and oversight role of the Authority should it impose a blended rate, and this is accompanied by increased reporting requirements that would have to be placed on the licensees.

The initial view of the Authority is that in a South African context, Option 2, a set regulated rate which reduces the regulatory burden, provides clarity to the market and simplifies the charging control regime is the preferred approach. The impact of this approach on the ability of licensees to set peak and off peak wholesale prices is noted, however, the Authority believes that this does not outweigh the abovementioned benefits and welcomes views from affected parties in this regard.

2.2 Designing a Glide path

On the understanding that a regulated charge control should be introduced and that current termination charges should be reduced to the efficient charge level, it is necessary to consider the speed at which charges should be decreased during the period of the control.

2.2.1 The economics of a Glide Path

In broad terms, the Authority recognises that the path of reductions in wholesale call termination charges should give due consideration to balancing two key objectives:

- reductions should be achieved sufficiently quickly in order to deliver substantial benefits to consumers, including benefits to be derived by addressing possible competitive distortions; and
- reductions should allow sufficient time for licensees to adjust to new charging levels and structures and take these changes into account in their business plans and planned capital expenditure.

The Authority firmly believes that wholesale and retail consumers should be able to benefit from lower prices for network services. Such consumer benefits must be reaped in the context of a regulatory framework that does not unduly disrupt or distort the market and licensees ability to provide services (i.e. through adverse effects on incentives to investment, which impact on long term consumer welfare). In addressing this question, we consider that licensees should not be denied the opportunity to recover their efficiently incurred costs.

A glide path can be effective in allowing SMP licensees a period of time in which they can increase network efficiencies and lower unit costs of termination (by, for example, building market scale and increasing market share, or replacing inefficient network elements & back-office support systems).

However, there are also arguments for an immediate reduction in rates rather than a glide path which will have a more immediate impact on the market and on wholesale and retail consumers. Whether a glide path should be implemented or not depends crucially on two factors:

- the degree to which a move to a lower termination rates would lead to some licensees being forced to charge termination rates below their efficiently incurred costs; and
- the size of the reduction of the termination rate from one price control period to another – the greater the reduction, the greater the potential disruption on the business plans of licensees.

The arguments in favour of a glide path depend on the final format of the price control. For example, if a symmetrical regulated rate (based on operator cost data) is applied to the three established SMP mobile licensees, a glide path may be warranted to allow the smaller operator time to improve its network efficiencies and increase its subscriber base in order to benefit from the economies of scale that the more established players already enjoy.

In addition, the size of the reduction from the current rates of R 0.89[83] peak/R 0.77 off-peak and fixed termination rates of R 0.31 peak and R 0.17 off-peak impacts the decision of whether or not to impose a glide path. The greater the differential between the efficient charge level and the existing termination rates, and the larger the reduction in the termination rates required, as is the case in South Africa, the stronger the arguments for a glide path.

The main argument against a glide path is that it will delay the benefits of lower prices to end-users and allow those licensees which already have scale and SMP advantages to continue to levy fixed and mobile termination rates above unit costs.

In Nigeria a hybrid approach is taken. In terms of the Nigerian regulations an asymmetric approach is adopted and the incumbents (those operational prior to the new licensing regime introduced in 2006) must face an immediate rate reduction, while new entrants are subject to a glide path which will, over four years (2013), converge with the rate imposed on incumbents from 2010.[84]

2.2 Proposal

The Authority recognises that any immediate implementation of very significant wholesale price reductions could distort competition and, like regulators in many other jurisdictions, is of the view that a

[83] The R 0.89 call termination rate is a recent reduction from the commercially agreed rate of R1.25. This reduction of R 0.36 took place as of 1 March 2010.

[84] Nigerian Communications Commission Interconnection Decision, December 21, 2009.

glide path is the optimal approach to migrate the sector to cost orientated levels. The Authority therefore proposes implementing a glide path.

2.3 Duration of price control

The Authority recognises that a key decision to be made relates to the duration of the price control. In the UK, Ofcom set price controls for mobile call termination for a period of four years. Ofcom's argument was that:[85]

- the price control period should be of sufficient length to establish material incentives for (mobile) licensees to reduce their costs (and offer the potential for increased profits if licensees are able to make efficiencies beyond those assumed in the charge control); and
- price control reviews require the mobile licensees (and major purchasers) to devote significant resources to presenting their views on competition and the level of costs.

As such, Ofcom considered that setting charges for an extended period of time is ideal in that it provide certainty to both suppliers and purchasers of termination services.

Using similar arguments, regulators in a number of countries have set varying price control periods including the Tanzanian Communications Regulatory Authority ("TCRA") which has a five year review period[86], and the Nigerian Communications Commission ("NCC") and the Uganda Communications Commission ("UCC") which put in place four year review periods. The Communications Commission of Kenya ("CCK") has a three year review period[87], but it has a process to confirm the proposed efficient charged set out in its glide path annually.

Table 1: Duration of Price control, various countries

	Fixed or Mobile	Review Period (years)
Tanzania	Fixed & Mobile	5
Kenya	Fixed & Mobile	3
Nigeria	Fixed & Mobile	4
Uganda	Fixed & Mobile	4
United Kingdom	Mobile	4

Source: National Regulatory Authority websites

The Authority recognises that the main drawback of adopting a longer time period (such as five years) in South Africa is that there is significant uncertainty about future traffic volumes and unit costs. This is particularly the case given the Authority is relying on the data only recently provided by licensees on the unit costs of mobile and fixed call termination rather than estimates derived by specific cost models (such as a LRIC approach as used by Ofcom, TCRA, UCC and many other regulators). There is also a chance that technological developments, such as the impact of VoIP or WiMAX over the period of the charge control may affect the market definition and price controls requiring that they be adjusted or removed.

2.3.1 Proposal

[85] Ofcom discusses this in detail in its 2007 Statement on Mobile Termination on pages 133-4.
[86] Tanzania is currently on its second five-year glide path
[87] 1 March 2007 – 1 January 2010, CCK Review of Implementation of Interconnection Determination No. 1 of 2007

The Authority has considered the various lengths of review periods adopted in other countries. It has also assessed the pros and cons of a longer versus a shorter price control period. The traffic information provided by responses to the industry data questionnaire indicates that licensees have detailed traffic data over the previous three years; however, the Authority notes the difficulties of forecasting traffic volumes and unit costs.

The Authority is of the view that a three-year period for regulatory assessment starting from July 2010 should be imposed. A three-year period is reasonable in that it provides stability and certainty in the short term; it also allows for a review once the impact of VoIP, WiMAX and other new technologies can be assessed, and once the Authority has obtained more detailed cost information on a greater number of licensees in the market, as a result of the imposition of accounting separation obligations arising from this market review process.

Three years would allow time for revised regulatory financial reporting requirements to be put in place, with clarification of any queries relating to methodology or allocation processes.[88] This will also provide a period in which smaller licensees could compete more strongly and any operator that requires it can bring its cost of termination down to more efficient levels.

Consequently, in conducting this inquiry, the Authority has used a three year period for the purposes of its analysis of the fixed and mobile markets and the likely developments in those markets.

2.3.2 Symmetric versus Asymmetric application of price control (symmetry of rates)

The Authority is aware of the debate around whether a single termination price cap should be set and made to apply to all licensees with SMP who must comply with a price control obligation or whether there should be more than one set of termination price caps set. The latter approach would introduce an element of asymmetric regulation of termination rates within the remedy. Economic principles tend to support a unique and uniform termination rate for all network licensees.[89] The European Commission considers that termination rates should normally be symmetric and that asymmetry requires adequate justification.[90]

Where asymmetry is permitted, the ultimate goal of encouraging efficiency is paramount; as such the duration of asymmetries should be defined upfront recognising that termination rates should be brought down to the efficient charge level in as short a period as possible. Asymmetric pricing causes efficient licensees to subsidize relative inefficiencies of their competitors, and in so doing does not favour productive efficiency. Thus if asymmetry is allowed for too long it could support inefficiency.

In light of the Authority's decision to apply the price control remedy on Telkom alone in the fixed sector, the discussion of asymmetry is not relevant to the fixed sector. Therefore the remainder of this section only addresses the question in relation to the mobile sector, where a decision is required on whether MTN, Vodacom and Cell C should comply with the same price control requirements.

There are generally four reasons that regulators advance for permitting asymmetry in the application of price caps. Broadly they are:

- To account for technology differences, e.g. in South Africa to account for the different costs of the combined PGSM 900/1800 MHz (Vodacom and MTN) and the EGSM 900/ 1800 MHz operator (Cell C);
- To encourage the development of a new or late entrant in the market, which suffers from a lack of scale due to its late entry in the market;

[88] During the period of the glide path, the Authority or the licensees, or both, could undertake detailed cost modelling in order to understand more fully the correct and appropriate inputs to a cost based termination rate. This should be explored in further detail in the design of the accounting separation remedy.
[89] ERG's Common Position on symmetry of fixed call termination rates and symmetry of mobile call terminations rates, ERG(07)83final, March, 12., 2008, p. 4.
[90] European Commission recommendation on the regulatory treatment of fixed and mobile termination rates in the EU. See http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:124:0067:0074:EN:PDF

- Due to different market shares of the licensees. The market shares in South Africa are Licensee 1 (54 per cent), Licensee 2 (32 per cent), and Licensee 3 (14 per cent); and
- Based on different costs of capital of the licensees.

The Authority has considered practices in other jurisdiction and adopted the principle that price controls will only be applied in an asymmetric manner against reasonable and objective criteria. In the main, only cost differences that are outside the licensees' control will form a basis for asymmetry (e.g. based on allocation of spectrum) and asymmetry may be applied in order to encourage new entrants in markets where there is insufficient competition and entry to the market is regulated, for example an Invitation to Apply is needed to enter the market.

The Authority is of the view that market share is not an objective or justifiable reason to allow asymmetry; nor is the cost of capital.

2.3.2.1 Technological Differences

Although all of the mobile licensees are using GSM technology, MTN and Vodacom have been allocated PGSM 900 MHz and GSM 1800 MHz spectrum; Cell C has an allocation of GSM 1800 MHz and a lesser allocation of EGSM 900 MHz spectrum. The cost differentials between 1800 MHz and PGSM 900 MHz networks have been reviewed by a number of regulators, including Ofcom. There appears to be higher network equipment costs on an 1800 MHz network and more expensive handsets compared to an equivalent 900 MHz network. As a result, 1800 MHz licensees have argued that they face lower earnings to repay their initial investment. The Authority notes that those arguments are relatively dated and that while the cost differentials may have been significant initially, the gap in costs is likely to have reduced over time.

The Authority also notes that all licensees in South Africa are dual band GSM 900/1800. While Cell C's GSM spectrum differs, the Authority has not received any evidence regarding the cost differentials between EGSM networks and PGSM networks that would justify asymmetry.

A factor to consider is whether the licensees can 'swap out' of their spectrum assignment through spectrum trading. In South Africa this practice is not permissible.

In summary, the Authority believes that the spectrum allocations to all three mobile licensees are substantially similar. Further, given the imposition of the price control regime at this time, eight years after the licensing of Cell C, it is the Authority's view that any differences in costs incurred are no longer relevant.

2.3.3.2 Late Entry

The mobile sector in South Africa was a duopoly consisting of incumbents MTN and Vodacom from 1993 to 2001, when Cell C was licensed and launched services. Since the entry of Cell C, regional players in the form of Under Serviced Area Licensees (USALS) who now hold ECS and ECNS licences, were licensed and assigned mobile numbers to provide services on a technology neutral basis. Several entered into roaming agreements with mobile licensees. More recently, in the last two years, former "VANS" licensees have been assigned mobile numbers to provide voice and data services, also on a technology neutral basis. Many have elected to use VoIP despite being assigned mobile numbers.

Asymmetry on the basis of late entry is not uncommon. In Nigeria, the NCC decided in its 2009 Interconnection Determination that:

> *The Commission has specified a glide path leading to symmetric mobile termination rates by 2013. The Commission believes that this time, and the rate differential implied by the glide path specified, should give new entrants sufficient opportunity to establish themselves and to compete with other licensees based on symmetric termination rates as of 2013.*

The NCC goes further to state that:

"...asymmetry is a temporary measure based on transparent criteria designed to take account of the introduction of unified licensing and the relative scales of fixed and mobile segments...New entrants will require time to build up a subscriber base and gain scale. Given the limited duration of the glide path defined by the Commission new entrants will still need to operate efficiently in order to create a sustainable business."

Nigeria, like South Africa, has moved to a converged license regime in the last few years. From 2006 the NCC began issuing unified licences to all players, and converted the licenses of existing players. Bearing this in mind, the concept of a "new entrant" in the Nigerian context must meet two criteria:

- The termination service is provided under a licence that was allocated after 01/01/06 AND is less than 4 years old AND
- The provider (or a company bought by the provider) of this termination service did not provide this service in Nigeria before 01/01/06 (under a different licence).

This definition relies on whether a party was providing a service, not whether they were licensed and the new entrant being under four years old. Thus, even where concessions are made for new entrants, a time limitation is set. In other countries where asymmetry was applied for late entrants, it has generally been applied at the time of market entry or within three years of licensing.[91]

2.3.3 Asymmetry Proposal for mobile services

The Authority notes and appreciates the arguments for the asymmetric application of the glide path. In principle, the Authority believes that asymmetry can be justified on the basis of being a new entrant, in which case the price control obligation will not apply in any event; and technological differences, for example an allocation of spectrum that increases the costs of providing services relative to competitors.

This will have to be demonstrated to the Authority on a case-by-case basis (for example, the service provider would need to prove that it has a higher cost-base based on technology).

At this point in time, the price control remedy applies only to established SMP licensees, and the Authority sees no basis for further distinguishing between such licensees. None of the three mobile licensees with SMP qualify for asymmetry based on technology.

3. Decisions on remedy design

In summary, in light of the market definition and analysis conducted, the Authority proposes designing the wholesale price control remedy as follows. The Authority recommends:

- introducing a glide path over a period of three years (July 2010 – June 2013);
- imposing a set termination rate; and
- recognising asymmetry on the basis of new entry or cost of technology. In the case of the South African mobile sector this means none of the licensees required to comply with a wholesale price control obligation are eligible for an asymmetric rate. In the case of the South African fixed sector, the wholesale price control obligation applies only to one party, Telkom SA.

3.1 Mobile Glide Path

From the initial recommended rate, three annual changes are recommended:

- From July 2010 – 0.65 ZAR per minute (~50 per cent reduction from pre-March 2010 rate)
- From July 2011 – 0.50 ZAR per minute (~23 per cent reduction); and
- From July 2012 – 0.40 ZAR per minute (~20 per cent reduction)

[91] Determination of Voice and SMS Interconnection, Nigerian Communications Commission, 21 December 2009.

It is recommended that the glide path will apply to Cell C, MTN and Vodacom from 2010 - 2013. The rates set out represent a price ceiling. Any other mobile licensees that may enter the market will be expected to provide call termination at fair and reasonable rates.

3.2 Fixed glide path

From the initial recommended rate, three annual changes are recommended:

- From July 2010 – 0.15 ZAR per minute (~50 per cent reduction);
- From July 2011 – 0.12 ZAR per minute(20 per cent reduction); and
- From July 2012 – 0.10 ZAR per minute (17 per cent reduction).

It is recommended that the above price ceiling apply to Telkom. The Authority expects that other fixed licensees, including those licensees providing VoIP services, who are not subject to a price control obligation, will provide call termination on their networks at fair and reasonable rates.