Vodacom's non confidential response

Draft Amendment to the Call Termination Regulations, 2014

This submission is structured as follows: Page

Executive summary

Vodacom welcomes the opportunity to comment on the Draft Regulations published in Government Gazette No. 50325 ("**Draft Regulations**") intended to amend the Regulations published by Government Notice No. 844 (Government Gazette No. 38042) of 30 September 2014, as amended by Government Notice No. 729 (Government Gazette No. 41132) of 01 October 2017; Government Notice No. 811 (Government Gazette No. 41167) of 06 October 2017; and Government Notice No. 1016 (Government Gazette no. 41943) of 01 October 2018 (hereafter the "**Regulations**"). As well as carrying out a detailed review of the Draft Regulations, we also commissioned Frontier Economics to undertake an in-depth assessment of the Bottom-Up mobile cost model v5 ("**V5 BU Mobile model**") and Bottom-Up fixed cost model v5 ("**V5 BU Fixed model**"). We would be happy to engage further with ICASA on any of the points raised in this response and look forward to participating in the oral hearings on this matter.

In commenting on the Draft Regulations, Vodacom notes that ICASA's proposals are inherently tied to the content of the Findings Document on the Review of the 2014 Pro-competitive Remedies imposed on Licensees, Gazette 46107 dated 28 March 2022 ("**Findings**"), i.e., market definition, assessment of the effectiveness of competition, identification of Licensees with Significant Market Power ("**SMP**") and identification of market failures. As such, the Draft Regulations and the Findings need to be evaluated jointly, because the Draft Regulations are informed by the Findings and because the Final Regulations must be consistent with ICASA's accurate and relevant Findings. We also address in this response the content of the Findings. In addition, the Draft Regulations have been informed by ICASA's Methodology Briefing Note on CTR review 2021 cost modelling phase August 2023 ("**Methodology note**"). Consequently, some of Vodacom's comments in this response also relate to issues discussed in the Methodology note.

Vodacom supports a number of the proposed Draft Regulations and highlights these at various places within this submission. However, we also have multiple concerns with ICASA's proposals. In the remainder of this summary, we describe our principal concerns. These are then articulated in more detail in the remainder of this submission, taking into account also the shortcomings highlighted by Frontier Economics in its separate report ("**Frontier report**").

Matters specific to wholesale voice call termination on South African ("S.A.") numbers[1] within South Africa ("WVCT") of calls originating from Non-S.A. numbers ("International WVCT")

<u>ICASA should keep the rates for International WVCT, i.e., international termination rates ("**ITRs**") deregulated</u>

Vodacom agrees with the proposal to rule out regulating ITRs at the same level as the rates for WVCT, on either a mobile location ("**MTR**") or fixed location ("**FTR**"), of calls originating from S.A. numbers from inside of S.A. ("**Domestic WVCT**"), i.e., Option 1, as set out in the Findings ("**Option 1**").

However, we disagree with the proposal to regulate ITRs using a reciprocal approach ("**reciprocal ITRs**"), i.e., Option 3, as set out in the Findings ("**Option 3**"). Instead, we consider that keeping ITRs deregulated, i.e., Option 2, as set out in the Findings ("**Option 2**"), which is in line with the status quo, represents the most appropriate approach. This is because, unlike the other options presented in the Findings, deregulation provides Vodacom and other S.A. Licensees with the commercial flexibility and bargaining power to set ITRs in a way that helps to minimise the net outpayments for ITRs, whilst also taking into account the competitive constraints imposed by Over the Top ("**OTT**") services and International Bypass Fraud ("**IBF**").

[1] S.A. number means numbers from the National Numbering Plan corresponding to the E.164 country code for the geographic area belonging to the territory of South Africa

Indeed, despite the current operation of Option 2, and despite the scale of net outpayments declining since 2017, Vodacom is still making significant net outpayments for ITRs. As a result, S.A. consumers still cross-subsidise users and governments in other countries. ICASA needs to ensure that the Draft Regulations do not make this worse.

However, in the Draft Regulations, ICASA has proposed full reciprocity for ITRs (Option 3). This appears aligned with Ofcom's approach towards reciprocity for ITRs in the United Kingdom ("**U.K.**"). Vodacom is concerned that, if implemented, Option 3 will simply worsen the net outpayments that Vodacom and other S.A. Licensees have to make for ITRs. This is because of the following:

- There will be a selection bias in terms of which international operators are willing to offer a low rate to terminate voice calls originating from S.A. numbers and terminating on non-S.A. numbers ("**Foreign ITRs**") to S.A. Licensees in exchange for paying low ITRs to S.A. Licensees. This is because it is only likely to be those international operators who are net senders of traffic to S.A. who are likely to be willing to set low Foreign ITRs to S.A. Licensees. Therefore, there will be a reduction in the net ITR income that S.A. Licensees receive from such international operators. In contrast, those international operators who are net receivers of traffic from S.A. are likely to want to continue to charge high Foreign ITRs to S.A. Licensees. As a result, S.A. Licensees may not be able to reduce the net outpayments that they make to such international operators. [redacted] and

- Vodacom is unlikely to be able to set ITRs as high as the Foreign ITRs of some of the international operators to whom Vodacom sends outbound traffic, as Vodacom faces competitive constraints from OTT services and IBF.

If the level of net outpayments for ITRs increases under ICASA's proposed approach, the extent to which S.A. consumers are cross-subsiding telecom users in other countries will also increase. Furthermore, ICASA's proposed approach is likely to be very difficult and costly to implement and maintain, especially for smaller-transit operators, whilst IBF and billing disputes are also likely to increase.

In addition to these challenges, we consider that the Draft Regulations for International WVCT are legally defective. This is because, in its Findings, ICASA simply added International WVCT into the same market definition as Domestic WVCT (International WVCT was excluded from the market definition in the Discussion Document on the review of the pro-competitive conditions imposed on Licensees in terms of the Call Termination Regulations, 2014 ("**Discussion Document**")), without considering the following:

- Whether this was appropriate given the relevant framework for carrying out a market definition exercise; and

- The implications for the rest of its competition assessment (i.e., the assessment of the effectiveness of competition, the identification of Licensees with SMP and the identification of market failures).

Instead, ICASA should have re-done its analysis on both of these matters. Had ICASA done so, Vodacom believes that ICASA would have concluded that ITRs should continue not to be subject to price controls. Vodacom is particularly concerned that ICASA incorrectly concludes that the market failure relating to inefficient pricing applies to ITRs.

<u>If ICASA nonetheless wants to impose a price ceiling via reciprocal ITRs, then following an approach styled on the European Commission's ("**EC**") model would be more appropriate than ICASA's proposed approach</u>

Under such an EC-style approach, for any international operator that charges a Foreign ITR:

- Equal to or below the MTR or FTR (depending on whether the termination is on a mobile or fixed location), S.A. Licensees would have to set their ITR at the MTR or FTR (depending on whether termination is on a mobile or fixed location) in S.A.

- Above the MTR or FTR (depending on whether the termination is on a mobile or fixed location), S.A. Licensees would be able to set their ITR at a level of their choosing.

Compared to ICASA's proposed approach, an EC-style approach is likely to result in the following:

- Greater scope for Licensees to manage IBF and reduce billing disputes.

- A model with a lower cost to implement and maintain.

At the same time, an EC-style approach is likely to have similar benefits to ICASA's proposed approach i.e., S.A. Licensees would have to set ITRs at a low level where international operators are willing to set their Foreign ITRs equal to or below the MTR or FTR in S.A.

<u>Additional measures are required to tackle bypass</u>

Regardless of which approach ICASA decides to pursue, new initiatives and regulations are required to address IBF, which is currently increasing net outpayment for ITRs (and therefore resulting, to a greater degree than would otherwise be the case, in S.A. consumers cross-subsidising users in other countries), leading to billing disputes and resulting in a lower quality of service for calls subject to IBF.

While ICASA's general powers and procedures may be employed to prosecute and prevent IBF, the problem is specific and calls out for bespoke regulations to deal with it in a manner tailored to the conduct at issue. Given this, to help complement the new Numbering Plan Regulations ("**NPR**"), bespoke IBF Regulations ought to be promulgated, with ICASA undertaking an inquiry process to better understand IBF. In this regard and notwithstanding our other concerns set out in this response, ICASA should (if it decides otherwise to go ahead) postpone any reintroduction of price controls for ITRs until such an inquiry has been concluded.

Price control for Domestic WVCT

<u>Cost-based charges</u>

We agree with the Findings (s5.1.5.1) that all Licensees must charge cost based FTRs and MTRs (including a reasonable rate of return). However, we disagree with the Methodology note (s4.2) which seems to suggest that ICASA could consider factors other than cost when setting FTRs and MTRs. It is clear from ICASA's own cost modelling that, despite the shortcomings in the V5 BU Mobile model as identified in the Frontier report, there are significant differences between the costs of fixed and mobile termination services. As ICASA itself acknowledges, this is at least partly driven by the costs of the access network not being relevant for estimating FTRs. Setting symmetric FTRs and MTRs would, therefore, be inconsistent with ICASA's own competition assessment in its Findings, where it defined separate markets for fixed and mobile termination services. It would also be inconsistent with the remedy of implementing cost based prices, given ICASA concluded that each type of service should face cost based charges. As a result, setting symmetric MTRs and FTRs (or making any other ad-hoc adjustments to FTRs that are not related to the costs of FTRs) would not only result in economic inefficiencies, but would also render the Final Regulations legally vulnerable for being irrational.

<u>Move to symmetric MTRs</u>

ICASA's Findings (s4.7.10.4 and S5.1.5.2) state that "*Mobile termination rates will move to symmetry within a transitional period of twelve months*". Vodacom agrees with the move to symmetric MTRs and the length of the glide path. Our reasons for why symmetric MTRs are justified are set out in further detail in our 11 January 2022 submission and the expert report prepared by Frontier Economics Limited that was provided as part of that submission. In summary:

- Removing the ability for some established operators to charge higher asymmetric MTRs is long overdue and would bring ICASA's approach more in line with international best practice.

- Economies of scale are not a valid justification for asymmetric MTRs in S.A. Notwithstanding the irrelevance of economies of scale for MTR asymmetry, Vodacom notes that neither Telkom nor Cell-C suffers from a lack of economies of scale, as demonstrated by Telkom's growth and Cell-C's move to a capital-light business model. Cell-C has now completed its network migration, which involved switching off all its tower infrastructure.

- The only factor the EC considered to be outside of the operators' control (and hence which could be used as a justification for asymmetry in MTRs for a period of time) was a lack of spectrum when a spectrum auction has not taken place or spectrum trading is not possible. Telkom and Cell-C already have significant spectrum holdings and had the opportunity to acquire additional spectrum in ICASA's 2022 auction, with smaller operators receiving significant support e.g., through the opt-in round. As such, this factor does not apply in South Africa.

- Continuing to allow asymmetric MTRs could result in economic inefficiencies e.g., by reducing operators' incentives to become more efficient.

- Asymmetric MTRs can reinforce any traffic imbalances.

- Any alleged historical market failures do not provide a valid justification for asymmetric MTRs, since regulators should set MTRs based on a forward-looking assessment.

- Asymmetric MTRs are unlikely to significantly improve the position of smaller operators, given the declining importance of voice services and termination revenues. The fact that Telkom and Cell-C have been charging the same asymmetric MTRs for several years whilst experiencing very different market outcomes shows that asymmetric MTRs are increasingly not relevant for explaining market outcomes.

Vodacom considers that symmetric MTRs are justified regardless of which cost standard is used. For the avoidance of doubt, Vodacom considers that Long Run Average Incremental Cost ("**LRAIC**") Plus ("**LRAIC+**") and symmetric MTRs is the best outcome for South Africa. Nonetheless, Vodacom notes that one of ICASA's justifications for moving to Pure Long Run Incremental Cost ("**P-LRIC**") is that it will also transition to symmetric MTRs. Given this, based on ICASA's own reasoning, ICASA definitely should not use P-LRIC unless it also imposes symmetric MTRs. In general, and notwithstanding the irrelevance of economies of scale for MTR asymmetry, economies of scale are even less relevant under P-LRIC, given that there is no recovery of joint and common costs, and the relevant increment just relates to call termination services. For this reason, it is not surprising that Vodacom is not aware of any countries that use both P-LRIC to set MTRs whilst also allowing some operators to charge higher asymmetric MTRs.

<u>Cost standard</u>

Vodacom disagrees with ICASA's proposed move from LRAIC+ to a P-LRIC cost standard. This is because:

- The change to P-LRIC is not supported by changes in the competitive nature of the relevant market;

- ICASA did not fully appreciate the differences between P-LRIC and LRAIC when it decided to adopt P-LRIC;

- LRAIC+ would better promote economic efficiency;

- Moving to P-LRIC could have an adverse impact on low-income consumers;

- Moving to P-LRIC is unlikely to increase competition (meaning that the benefits of P-LRIC that ICASA describes are likely to be overstated); and

- International precedent shows that only a fairly limited set of countries have adopted the P-LRIC cost standard.

However, to the extent that ICASA decides to persist with a P-LRIC cost standard:

- It needs to err on the side of caution when estimating P-LRIC given that, as recognised by the EC, the consequences of underestimating P-LRIC are likely to be greater than the consequences of overestimating P-LRIC. This is contrary to the unsubstantiated position ICASA has advanced in the Guide on costing modelling for the determination of mobile and fixed-line wholesale voice call termination rates, Version 5, Date: 26 January 2024 ("**V5 Guide**").

- Given that one of ICASA's key justifications for adopting P-LRIC is the move to symmetric MTRs, it is logical to have the same length of glide path for both the move to P-LRIC and symmetric MTRs, as is currently the case in the Draft Regulations.

Critically, there is a clear inconsistency in the Methodology note (s6.6.4.1). On the one hand, ICASA argues that moving to P-LRIC would have a significant impact on competition. On the other hand, ICASA argues that moving to P-LRIC would not have any material impact on termination revenues, so would have no or limited impact on low-income consumers and investment. Both of these cannot be true, so undermining significantly ICASA's decision to move to P-LRIC. In its reasoning for the Final Regulation ICASA must resolve this tension, lest the regulation remain fundamentally irrational for this radical contradiction.

<u>ICASA's cost models</u>

The V5 BU Mobile model currently does not provide a sound basis for estimating mobile termination costs. A key issue is that in many areas of the model, ICASA has explicitly stated that it has chosen parameters and/or data inputs in order to understate the costs of termination. This leads to serious calibration issues (i.e., the model significantly understates the volumes of equipment that a S.A. mobile operator needs), as demonstrated by the fact that the V5 BU Mobile model produces highly unrealistic results on key outputs such as the number of sites. Critically, this means that there is a significant risk now that the V5 BU Mobile model is inconsistent with the regulatory remedies ICASA has imposed (i.e., to set cost-based domestic MTRs), as ICASA's estimates of MTRs are in fact likely to understate costs. This is particularly an issue given that ICASA has used the P-LRIC cost standard, which means that an underestimate of costs will result in the regulated MTRs being below incremental costs (excluding any recovery of joint and common costs). It also renders the model legally vulnerable for being irrational.

A. Legal framework for conducting market reviews in S.A.

It is critical that in developing the Final Regulations, ICASA follows properly the framework set out in the ECA for conducting market reviews. For the reasons set out later in this submission, Vodacom has significant concerns as to whether ICASA has done this. For ease of reference, therefore, we summarise, in this section, the relevant legal framework. For the avoidance of doubt, we urge ICASA to rectify, before publishing the Final Regulations, those matters in which it appears to have erred.

1. Section 67(4) of the ECA

This section provides ICASA with the legislative powers to address market failure, where it is found to exist, by way of an inquiry in terms of section 4B of the ICASA Act 13 of 2000. To do so, however, ICASA must, among other things:

- *"<u>define</u> <u>relevant</u> wholesale and retail <u>markets</u> or market segments;*
- *determine whether there is <u>effective competition in those relevant markets</u> and market segments;*
- *determine which, if any, licensees have <u>significant market power</u> in <u>those markets</u> and market segments <u>where there is ineffective competition</u>;*
- *impose appropriate pro-competitive licence conditions on those licensees having significant market power to <u>remedy the market failure</u>;*
- *set out a schedule in terms of which the Authority will undertake periodic review of the markets and market segments ...; and*
- *provide for monitoring and investigation of anti-competitive behaviour in the relevant market and market segments."*

2. Section 67(8) of the ECA

This section provides ICASA with the legislative powers to review the pro-competitive conditions imposed upon one or more Licensees. To do so, ICASA must:

- *"review the market determinations made on the basis of earlier analysis; and*
- *decide whether to modify the pro-competitive conditions set by reference to a market determination"*

Where there have been changes in competitive conditions, ICASA must modify, or at the very least review, the pro-competitive conditions to ensure that they remain proportional[2].

[2] "*Where, on the basis of such review, the Authority determines that the licensee to whom pro-competitive conditions apply continues to possess significant market power in that market or market segment, but due to changes in the competitive nature of such market or market segment the pro-competitive conditions are no longer proportional in accordance with subsection (7), the Authority must modify the applicable pro-competitive conditions applied to that licensee to ensure proportionality*".

B. Matters specific to International WVCT

Vodacom agrees with ICASA's proposal to rule out regulating ITRs at the same level as MTRs or FTRs (Option 1). However, Vodacom disagrees with ICASA's proposal to regulate ITRs using a reciprocal approach (Option 3). Instead, Vodacom considers that keeping ITRs deregulated (Option 2, which is in line with the status quo) would represent the most appropriate approach. A move to reciprocity would simply worsen the net outpayments that Vodacom and other S.A. Licensees have to make for ITRs. The key issue with the net outpayments for ITRs likely increasing, is that this will increase the extent to which S.A. consumers will likely cross-subside telecom users in other countries.

In addition to these challenges, we consider that the Draft Regulations for International WVCT are legally defective. This is because, in its Findings, ICASA simply added International WVCT into the same market definition as Domestic WVCT (International WVCT was excluded from the market definition in ICASA's Discussion Document), without considering the following material factors:

- Whether this was appropriate given the relevant framework for carrying out a market definition exercise; and

- The implications for the rest of its competition assessment (i.e., the assessment of the effectiveness of competition, the identification of Licensees with SMP and the identification of market failures).

Instead, ICASA should have re-done its analysis on both of these matters. Had ICASA done so, Vodacom believes that ICASA would have concluded that ITRs should continue not to be subject to price controls, as no market failure has been found to exist relating to inefficient pricing for ITRs. A statutory prerequisite for exercising the price control power by way of pro-competitive conditions in this market has accordingly not been met.

Notwithstanding the above economic and legal concerns with ICASA's proposed move to reciprocity, Vodacom considers that ICASA should, if it continues to pursue some form of reciprocal approach, adopt an EC-style approach to this issue. Compared to ICASA's proposed approach, an EC-style approach is likely to result in:

- Greater scope for Licensees to manage IBF and therefore fewer billing disputes.

- A model which is lower cost to implement and maintain.

At the same time, an EC-style approach is likely to have similar benefits to ICASA's proposed approach i.e., S.A. Licensees would have to set ITRs at a low level where international operators are willing to set their ITRs equal to or below the MTRs or FTRs in S.A.

Regardless of which approach ICASA decides to pursue, new initiatives and regulations are required to address IBF.

The rest of this section explains all of these points in more detail.

As an aside, the way in which ICASA has phrased its Draft Regulations suggests that the requirement to apply reciprocal ITRs may apply only to Vodacom and MTN for mobile termination services and Telkom Fixed for fixed termination services. We take this to be a drafting error, which needs to be corrected in the Final Regulations. For the avoidance of any doubt, Vodacom considers that any ITR regulation should apply to all Licensees, consistent with the generally accepted approach to the definition of termination markets (i.e., at the level of individual Licensees) and the regulation of termination services. Applying this requirement to only Vodacom and MTN for mobile termination services and Telkom Fixed for fixed termination services would be unreasonable and irrational.

1. Context

1.1 International WVCT have a number of unique features

There are three key issues that distinguish International WVCT from Domestic WVCT:

- ICASA does not have the jurisdiction to regulate the ITRs charged by operators in other countries. ICASA can also not regulate the international retail rates for calling SA, even in the instance where the ITRs are adjusted by SA or the international provider.

- OTT services are likely to impose a stronger competitive constraint on ITRs than on MTRs (not FTRs), as consumers are more willing to use OTT services for international calls to mobile locations; and

- International calls are subject to significant IBF.

ICASA has recognised, in its Discussion Document (s2.1.2), the importance of the first two of these points:

> *"The Authority's preliminary view is that deregulating the international termination market is in the best interest of the country as SA licensees are given pricing freedom to charge reciprocal rates in order to minimise or mitigate exploitation of SMP by licensees in other jurisdictions. The Authority is also of the view that this approach is the best option for SA given that the Authority does not have legislative powers to directly control the international termination rates charged by terminating licensees for voice calls that originate in SA. While the Authority is mindful that reciprocity might not necessarily deliver the preferred low international termination rates, the Authority's view is that the impact of high international termination rates on licensees' revenue and traffic volumes as well as the prevalence of OTT services in the international calling market should disincentivise licensees from charging high international termination rates."*

1.1.1 <u>ICASA does not have the jurisdiction to regulate the Foreign ITRs charged by operators in other countries</u>

A pivotal issue with ITRs is that ICASA only has the jurisdiction to regulate the ITRs of S.A. Licensees, but not the Foreign ITRs of operators in other countries. As a result, by regulating the ITRs of S.A. Licensees, ICASA risks restricting the commercial freedom of operators to set ITRs in a way that minimises the net outpayments for ITRs. In particular, S.A. Licensees could end up in a situation where they are being forced to charge low ITRs to some international operators, whilst having to pay high Foreign ITRs to many other international operators. There is no equivalent issue when regulating MTRs or FTRs.

1.1.2 <u>OTT services are likely to impose a stronger competitive constraint on ITRs than on MTRs, as consumers are more willing to use OTT services for international calls</u>

Another important point is that OTT services are likely to impose a stronger competitive constraint on ITRs than on MTRs, as consumers are more willing to use OTT services for international calls for the reasons set out below, which were also discussed in our 11 January 2022 submission (pages 22-23):

- International calls typically have higher effective retail prices than domestic calls, which means that the potential cost savings from switching to OTT voice services (from the user's perspective) are even higher for international calls than for domestic calls.

- Relative to domestic calls, a greater proportion of international calls are typically out-of-bundle, for which a higher retail rate applies. As a result, consumers are more likely to face an incremental cost for making international calls, which may provide them with a stronger incentive to switch to OTT services, than for domestic calls.

- Relative to domestic calls, international calls tend to be of a longer duration (see Figure 5 of Vodacom's 11 January 2022 submission), which provides users with a greater incentive to plan ahead to help ensure that they are in a location where they have adequate data coverage, should they wish to use an OTT service.

[redacted]

1.1.3 <u>International calls are subject to significant IBF</u>

In general, IBF can occur due to the following factors:

- International WVCT from origins subject to high Foreign ITRs being masked as Domestic WVCT or on-net domestic calls[3].

- International WVCT from international operators subject to high Foreign ITRs being masked as calls from international operators who are subject to lower Foreign ITRs[4].

IBF is a greater issue for international calls than it is for domestic calls.

1.2 Situation to date

Prior to 2017, International WVCT in S.A. were included in the same defined market as Domestic WVCT termination services, with the prices for both services regulated at the same cost-based rate. At the time, S.A. Licensees were therefore forced to charge a much lower ITR than they typically paid to international operators. As a result, Vodacom made large net outpayments for ITRs. In 2017, ICASA then deregulated ITRs, which allowed S.A. Licensees to bring their ITRs more in line with the Foreign ITRs that it had to pay to international operators.

Nonetheless, Vodacom still makes considerable net outpayments for ITRs, with this being a consequence [redacted]

[3] This could occur either due to refiling or SIM-boxing (see Vodacom's 18 Feb 2022 submission)
[4] Again, this could occur either due to refiling or SIM-boxing
[5] As of April 2024, Vodacom's ITR now stands at USD 0.145/min.

[redacted]

[redacted]

[redacted]

1.3 The Draft Regulations

The Findings (s4.3.2.12.17.3/4/5) considered three options for setting ITRs:

Options considered	ICASA's assessment
"Option 1: *Same termination rate for domestic and internationally originated voice calls terminating in South Africa, as pre the 2017 amendment of the geographic market definition.*	• *Consumers and licensees would not be served best by Option 1.* • *S.A. Licensees are likely to pay high termination rates and receive low termination rates from international operators, resulting in an outflow of funds from S.A. to other countries and S.A. consumers subsidising consumers in other countries.*
Option 2: *Deregulation of ITRs allowing pricing freedom, as per post the 2017 amendment of the geographic market definition (i.e. maintain the status quo).*	• *Consumers and licensees would not be served best by Option 2.* • *Has led to worse outcomes for S.A. Licensees and consumers compared to Option 1 due to high termination rates, increase in billing disputes and high retail international voice call prices.*
Option 3: *ITRs are still deregulated, but S.A. licensees are required to use the principle of reciprocity to negotiate down the ITRs (not unilaterally). Therefore, the ITRs charged by S.A. licensees should not be less than the domestic regulated termination rate or higher than the ITR offered by an international operator.*	• *Is likely to result in positive outcomes, as it will incentivise S.A. licensees and their international counterparts to reduce ITRs".*

The Findings (s4.3.2.12.17.5 and S5.1.5.4) then determined that Option 3 should apply to International WVCT. In apparent reference to the Findings, the Draft Regulations propose the following in respect of International WVCT:

- In contrast to the Regulations, the Draft Regulations include International WVCT in the same relevant markets as Domestic WVCT, whilst keeping the distinction between fixed and mobile call termination services[6].

- Given the expanded market definitions, the Draft Regulations apply the same Findings of ineffective competition and the identification of Licensees with SMP that apply to Domestic WVCT, to International WVCT.

- Given the expanded market definitions, the Draft Regulations apply the same market failures (i.e., a lack of provision of access, the potential for discrimination between Licensees offering similar services, a lack of transparency, and inefficient pricing) that apply to Domestic WVCT, to International WVCT[7].

- Licensees must charge no more than reciprocal ITRs for International WVCT (i.e., Option 3). The ITRs charged by a licensee must not be: (a) less than the domestic MTR / FTR; or (b) higher than the ITRs offered by an international operator[8]. In addition, the requirement to publish a Reference Interconnection Offer ("**RIO**") would also apply to International WVCT[9].

2. ICASA's current competition assessment which underpins the move to full reciprocity is legally defective

As already discussed, International WVCT exhibit three key features that help distinguish them from the termination of domestic calls:

- ICASA does not have the jurisdiction to regulate the ITRs charged by operators in other countries. This is relevant when considering whether there is a market failure in relation to inefficient pricing, as the ITRs charged by S.A. Licensees cannot be properly assessed without also considering the ITRs that S.A. Licensees are having to pay to their international counterparts.

- OTT services impose a stronger competitive constraint on ITRs than on MTRs, as consumers are more willing to use OTT services for international calls. This is relevant when considering all aspects of the competition assessment (i.e., defining markets, assessing the effectiveness of competition, identifying Licensees with SMP and establishing the nature of any market failures).

- International calls are subject to significant IBF.

ICASA has itself stated the importance of the first two points in the Discussion Document (s2.1.2). However, when carrying out its competition assessment, ICASA has failed to take into account these points. Instead, when performing its competition assessment, ICASA considered only the extent to which OTT services impose a competitive constraint on <u>domestic</u> calls. This renders the Draft Regulations legally defective for International WVCT, as ICASA has not followed the steps required under the Legal Framework set out above. A prerequisite stipulated by the statute was accordingly not met. Furthermore, a material consideration was clearly not considered.

This issue appears to have arisen as the Discussion Document proposed to define the relevant markets for fixed and mobile call termination services as excluding International WVCT. In turn, the

[6] Deletion of sub regulation 3(c) of the Regulations
[7] Substitution of 7(1) of the Regulations
[8] Substitution of 7(5)(b)(ii) of the Regulations
[9] Substitution of 7(5)(a) of the Regulations

Findings focused only on responding to stakeholders' comments on the Discussion Document, which did not include a competition assessment for International WVCT. As a consequence, ICASA cannot rely on its Findings to impose any pro-competitive conditions on International WVCT. We elaborate on these points below.

2.1 Despite recognising the importance of these two unique features, ICASA has failed to take them into account when conducting its competition assessment

The following table provides evidence that the competition assessment in the Findings failed to consider the two key factors discussed above (i.e., ICASA does not have the jurisdiction to regulate the ITRs charged by operators in other countries and OTT services impose a stronger competitive constraint on ITRs than on MTRs). We focus less on the impact of IBF on the competition assessment, as we consider that ICASA should put in place measures that tackle this directly.

Relevant step in competition assessment	**Evidence that ICASA only considered the competitive constraint from OTT services on the termination of <u>domestic</u> calls**
Market definition	The Discussion Document reviewed the market definitions in the Regulations and limited the HMT test accordingly. I.e., the consideration of OTT and Voice over Internet Protocol ("**VoIP**") as retail demand-side substitutes for mobile off-net voice calls at S2.1.1.i.d of the Discussion Document was limited to OTT / VoIP substitution of <u>domestic</u> off-net calls. This is evident from S2.1.1 which states that "*VoIP apps provide only a <u>minimal</u> price advantage compared to traditional voice calls*". This statement was made in the context of domestic calls, as in S2.1.2 footnote 19, ICASA stated that international call prices are high ("*this is based on the assumption that the switch to OTT services by consumers in response to the increase in retail international voice calling rates <u>would be high</u> <u>due to high international voice calling rates</u>*"), which therefore suggest a large price difference between international calls and OTT services. It is also evident that the Findings considered only OTT and VoIP as retail demand-side substitutes for <u>domestic</u> mobile off-net voice calls. For example: • The Findings (s4.3.1.1.8.1) simply refers back to the conclusions reached in the Discussion Document (which did not include internationally originated calls as part of the market definitions): *"<u>as already noted in the Discussion Document</u>, the Authority considers OTT voice calling service to be unlikely a sufficiently close substitute for traditional mobile voice calls during the period under review, because OTT voice calling services act as a complement rather than a substitute to traditional voice services."* • The Findings (s4.3.1.1.8.2) refer to the minutes of use on Vodacom's network when considering the constraint from OTT services, whereas the more relevant consideration for internationally originated calls would be the volumes of inbound calls to S.A. from international operators abroad and outbound calls from S.A. to international operators: *"... This doesn't seem to be the case as Vodacom reported, on average, annual increases in minutes of use and voice traffic (minutes) albeit exponential growth in data traffic. This implies that a sufficient number of customers still prefer to make traditional voice calls and that OTT voice services are complementary rather than substitutes*".

Assessment of effectiveness of competition	Whilst we support the methodology in regulation 4 of the Regulations, both the Discussion Document and Findings confirm clearly that this methodology was applied to only the wholesale voice call termination market for <u>domestic</u> calls. This is because, as we explained above, the market definitions reviewed and confirmed in the Discussion Document excluded International WVCT and, as the legal framework makes clear, the assessment of effectiveness of competition is about the extent of competition in the relevant markets, as defined. When the Discussion Document invited comments on its proposed assessment, stakeholders commented on the basis of the proposed market definition, which included only Domestic WVCT. This is important because the ICASA's responses to stakeholder comments in the Findings (s4.5) are limited, accordingly, to an assessment of the effectiveness of competition for Domestic WVCT. By way of example, the Findings (s4.5.7.1.1) simply state that "*No comments were submitted by the stakeholders*" on actual and potential existence of competitors in the Domestic WVCT market. Because ICASA applied its methodology to assess the effectiveness of competition to the Domestic WVCT market, the Finding (s4.5.18) on "*Conclusion on the assessment of effectiveness of competition*" that provides "*No comments were submitted by the stakeholders*" on S2.3.4(xiii) of the Discussion Document, does not justify a finding of ineffectiveness of competition in the WVCT market <u>including</u> International WVCT.
Identification of Licensees with SMP	ICASA assessed and identified SMP in only the Domestic WVCT market. For example, when responding to Vodacom's argument that OTT calls provide a competitive constraint on Licensees when providing mobile call termination services, the Findings (s4.6.5.1) simply refer back to the arguments that it made when discussing the relevant product market definitions. Because ICASA did not assess whether Licensees had SMP in a market broadened to include International WVCT (nor a separate market for International WVCT), the Finding (s5.1.4) that "*each licensee that offers wholesale voice call termination services has Significant Market Power in its wholesale voice call termination market defined above*" is not justified, and lacks any foundation in the expanded market (or the separate ITR market).
Market failures	Both the Discussion Document and Findings confirm clearly that market failures were identified for only Domestic WVCT. The Discussion Document (s2.3.4(xiii)(b)) explains "*In the absence of a potential demand-side and supply-side alternative to the provision of voice call termination over a particular network, licensees with SMP have an incentive to act independently of their competitors in the setting of termination rates*". As we explained above, the Discussion Document defined the relevant market as only Domestic WVCT and consequently also considered effectiveness of competition for only Domestic WVCT. It then follows that the market failures identified in the Discussion Document and vetted in the Findings (s4.5.19) pertain to only Domestic WVCT. The Findings (s5.1.5.4) provide that it would be fair and reasonable for domestic Licensees to set their ITRs at a level in between i) MTRs or FTRs (depending on mobile vs fixed location) and ii) the ITRs set by international operators: *"The international termination rates charged by South African licensees should not be less than the domestic regulated termination rate or higher than the international termination rate offered by an international operator. Therefore,*

	the difference between domestic termination rates and international termination rates should be fair and reasonable". This therefore means that ICASA cannot simply assume that the same market failures apply to International WVCT, as for Domestic WVCT.

2.2 As a result, ICASA's analysis is legally defective and provides neither a legal nor economic basis for imposing any pro-competitive conditions on International WVCT

From the above, it is clear that ICASA has not complied with the legal framework that must be applied before ex ante regulatory remedies can be introduced for International WVCT. A statutory pre-requisite for the imposition of a price control pro-competitive condition (for ITRs) was not met. Furthermore, clearly material considerations were not taken into account.

Vodacom is particularly concerned with ICASA's identification of market failures, especially in relation to inefficient pricing. ICASA cannot simply assume that the same market failures that apply to Domestic WVCT, also apply to International WVCT. It does not even expressly make this assumption, but the regulation is implicitly premised on this assumption. In particular, the pricing of ITRs by S.A. Licensees cannot be properly assessed without also considering the level of ITRs that are being paid by S.A. Licensees and the competitive constraints imposed by OTT services and IBF. Further evidence of these constraints is the fact that, under deregulation, [redacted] – a level which ICASA itself acknowledges is "*fair and reasonable*" (see above and Findings (s5.1.5.4)) and hence a level which cannot possibly justify regulatory intervention.

Because no market failures were identified for International WVCT, the price control contained in Findings (s5.1.5.4) is not competent. As a consequence, we do not support:

- The amendment of regulation 3 of the Regulations by the deletion of sub regulation 3(c);
- The proposed price control in Draft Regulation 7(5)(b)(ii); and
- The RIO requirement in Draft Regulation 7(5)(a).

To rectify this matter, ICASA must re-do its competition assessment, so that it takes into account the key differences between International WVCT and Domestic WVCT. This should include a reconsideration of the appropriate market definitions, the assessment of the effectiveness of competition, the identification of Licensees with SMP and the assessment of market failures[10] for International WVCT. Should ICASA do this required analysis before considering whether to impose price controls on International WVCT, Vodacom is confident that there will not be a case for imposing pro-competitive conditions on International WVCT.

Vodacom now turns to assessing the three options put forward by ICASA for ITRs.

3. Option 1 is the worst possible option

We agree with the Findings (s4.3.2.12.17.5) that regulation of ITRs at the same level as MTRs or FTRs will not serve the interests of either S.A. consumers or Licensees. This is because under this option, S.A. Licensees will be paying high Foreign ITRs and will receive low ITRs from international operators, resulting in an outflow of funds from S.A. to other countries and, as a result, S.A. consumers subsidising consumers in other countries. ICASA tried Option 1 prior to 2017 and this was indeed the outcome.

[10] As an aside, Vodacom considers that IBF is not an indicator of ineffective competition and is not a market failure and should be addressed separately to this process (see Section B.7).

Vodacom disagrees with the Findings (s4.3.2.12.17.4) that consumers and Licensees would not be served best by Option 2 because, according to the Findings, it has led to worse outcomes for S.A. Licensees and consumers compared to Option 1 due to high Foreign ITRs, increase in billing disputes and high retail international voice call prices. We say so because of the following:

- Following deregulation in 2017, [redacted]
- [redacted]
- Whilst there have been some increases in billing disputes, this has been driven mainly by increased IBF. However, Option 1 should not be considered as an appropriate way of addressing this. Resolving the IBF by restricting the activities of parties acting lawfully is clearly inappropriate and irrational. Instead, ICASA should implement measures that tackle IBF directly (see Section B.7).

Vodacom also notes that the EC rejected Option 1 in the European Union ("**EU**"):

> *"including calls originated from third country-numbers - where operators charge high termination rates - and terminated to Union numbers, would deprive Union operators of the possibility to negotiate termination rates with non-Union operators on an equal footing, which they can currently do. In fact, if they were bound to apply the single maximum Union-wide voice termination rates to calls originated from Union-numbers even where there is no guarantee that the termination rates charged by those third country operators are set or regulated in an appropriate manner, Union operators would be bound to accept any rate charged by third country operators, while being bound to charge to them very low prices (the single maximum Union-wide voice termination rates)"*[11]

4. ITRs should remain deregulated (Option 2)

Given that there is a clear case for rejecting Option 1 (which ICASA has itself recognised), and without prejudice to the submissions above on the legal obstacles to the Draft Regulations, ICASA faces the choice between keeping ITRs deregulated or imposing some form of reciprocity.

We remain of the position that ITRs should remain deregulated (Option 2) because it provides S.A. Licensees with commercial flexibility to respond appropriately to all of the factors that drive net ITR outpayments.

[redacted]

[redacted]

[redacted]

[11] COMMISSION STAFF WORKING DOCUMENT Accompanying the document COMMISSION DELEGATED REGULATION (EU) …/…supplementing Directive (EU) 2018/1972 of the European Parliament and of the Council by setting a single maximum Union-wide mobile voice termination rate and a single maximum Union-wide fixed voice termination rate.

[redacted]

In addition to the above commercial factors, Vodacom considers that ICASA should keep ITRs deregulated (Option 2) rather than requiring full reciprocity because of the following:

- The current difference between MTRs or FTRs and ITRs is fair and reasonable;
- Many international operators may not be willing or able to reduce their ITRs;
- A move to full reciprocity is likely to result in a significant increase in net outpayments for ITRs;
- Full reciprocity is likely to result in significant implementation and other ongoing issues; and
- Full reciprocity may worsen IBF and billing disputes.

The rest of this section explains these points in more detail, after which we explain that, should ICASA decide that it still wants to implement reciprocity despite the issues raised in this section, then an EC-style approach would be a more appropriate approach to this.

4.1 The current difference between MTRs or FTRs and ITRs is fair and reasonable

It is unrealistic to expect that ITRs should approximate MTRs / FTRs. ICASA, itself, acknowledged this to be an unrealistic expectation in the Findings (s5.1.5.4) where it stated that it would be fair and reasonable for domestic Licensees to set their ITRs at a level in between MTRs or FTRs and the ITRs set by international carriers:

> *"The international termination rates charged by South African licensees should not be less than the domestic regulated termination rate or higher than the international termination rate offered by an international operator. Therefore, the difference between domestic termination rates and international termination rates should be fair and reasonable".*

[redacted] That is, deregulation of ITRs has not led to these being set at an unreasonable or excessive level. This means that, by definition, there is no market failure relating to inefficient pricing to justify ICASA's proposed intervention. (This leaves aside the legal problem discussed above of the absence of an assessment of any such market failure).

4.2 Many international operators may not be willing or able to reduce their Foreign ITRs

We have already indicated that in the absence of an analysis and finding of market failure in the provision of ITRs, ICASA lacks the legal power to regulate ITRs. But in any event, given the clear lack of any market failure in the provision of ITRs, ICASA would not be able to impose ex ante regulatory remedies, such as price controls. But leaving this aside, it is also clear that ICASA's proposed reciprocal model has many challenges.

First, one of the potential rationales for moving to full reciprocity is to help reduce the Foreign ITRs charged by operators abroad and therefore also the ITRs charged by S.A. Licensees. However, many international operators may not be willing or able to reduce the Foreign ITRs that they charge to S.A. Licensees because of the following:

- Regulators/governments in some other countries actually set a floor for the level of Foreign ITRs, with the floor often being set at a high level[12]. For example, the regulators in Tanzania, DRC and Mozambique have proposed to set a minimum floor of USD 0.18/min, USD 0.25/min and USD 0.21/min respectively for Foreign ITRs, which is considerably above Vodacom's current deregulated ITR (USD 0.145/min).

- International operators' willingness to set low Foreign ITRs often depends on the balance of traffic between the international operator and the domestic operator[13]. The operator that is the net-receiver of calls will prefer reciprocal high ITRs, as the amount it receives in ITRs will be greater than the amount it pays to the counterparty, and high ITRs would therefore increase net termination revenues. [redacted] Therefore, there are a considerable number of international operators that will not be willing to set low Foreign ITRs to Vodacom S.A., even if Vodacom offers to set a low ITR to them.

- Some international operators may not be willing to set granular Foreign ITRs e.g., due to the complexity involved, so may not be willing to lower their ITRs only to S.A. Licensees[14].

Indeed, Ofcom's move to full reciprocity had little benefit in the UK, [redacted]

Given that ICASA's proposed approach may only result in selective reductions in Foreign ITRs, it is also unlikely that ICASA's proposed approach will lead to material reductions in international retail call prices for a significant number of countries. [redacted] This helps demonstrate that the current ITR regime in S.A. (Option 2) is not an important driver of international retail call prices for outgoing calls from S.A.

4.3 A move to full reciprocity is likely to result in a significant increase in net outpayments for ITRs

The net outpayments for ITRs are a function of the following[15]:

- The ITRs that S.A. Licensees are able to charge relative to the Foreign ITRs that S.A. Licensees have to pay to international operators; and

- The balance of inbound and outbound traffic to each destination, which will be driven by differences in consumer demand for making international calls, as well as OTT substitution and IBF.

Vodacom is already making significant net outpayments for ITRs, even without price controls. As a result, a move to full reciprocity would simply worsen the net outpayments that Vodacom and other S.A. Licensees have to make for ITRs. This is because of the following:

---

[12] Ofcom stated that "*some non-EEA telecoms providers have price floors on the termination rates they can charge*" (Ofcom consultation August 2020, S6.94)

[13] Ofcom consultation (August 2020), S6.91

[14] Ofcom stated that "*there may be practical difficulties in reaching a reciprocal low outcome even if they have the incentive to do so. For example, there may be costs associated with reducing termination rates to UK telecoms providers while maintaining high rates with other countries*" (Ofcom consultation (August 2020), S6.94)

[15] The net outpayments to a given international operator can be expressed as the ITR paid * outgoing traffic to the international operator – ITR received * incoming traffic from the international operator.

- There will be a selection bias in terms of which international operators are willing to offer low Foreign ITRs to S.A. Licensees in exchange for paying low ITRs to S.A. Licensees. This is because it is only likely to be those international operators who are net senders of traffic to S.A. who are likely to be willing to set low Foreign ITRs. This means that there will be a reduction in the net income that S.A. Licensees receive from ITRs from such international operators. In contrast, those international operators who are net receivers of traffic from S.A. are likely to want to keep Foreign ITRs high. As a result, S.A. Licensees are unlikely to be able to reduce the net outpayments that they make to such international operators.

- In addition, Vodacom is unlikely to be able to set ITRs as high as some of the international operators charge Vodacom, as Vodacom faces competitive constraints from OTT services and IBF. Therefore, Vodacom may struggle to increase any of its ITRs to help offset the reduction in ITRs that Vodacom will be required to pass on to other international operators.

4.4 Full reciprocity is likely to result in significant implementation and other ongoing issues

Full reciprocity is likely to result in significant implementation challenges. In contrast, under ICASA's current approach of deregulation, Vodacom simply charges a single uniform ITR across all international operators (USD 0.145/min). Importantly, under this status quo, S.A. Licensees have the opportunity to charge differentiated reciprocal ITRs for each country or operator per country of origin. The fact that S.A. Licensees chose to charge a uniform rate to a wide range of countries (despite there being different levels of demand and price sensitivities) is consistent with there being significant challenges with setting different reciprocal ITRs.

In general, under ICASA's proposed approach, S.A. Licensees would face a trade-off between the following factors:

- Implementing the approach at a very granular level. In principle, this would be one way of limiting the net outpayments under ICASA's proposed approach. However, the more granular the approach that is used, the greater the implementation challenges are likely to be.

- Adopting a more aggregated approach by, for example splitting the Foreign ITRs charged by international operators into different tiers. However, this is likely to result in greater net outpayments for ITRs. For instance, S.A. Licensees could choose to charge an ITR of USD 0.04 for any international operator that charges a Foreign ITR between USD 0.04 and USD 0.06[16]. However, this would mean that S.A. Licensees would be charging less for ITRs than the Foreign ITRs they are having to pay to some international operators.

4.4.1 <u>Level of granularity</u>

At an extreme, ICASA's proposed "full reciprocity" approach could mean having to charge a different ITR to every single operator in each country. For example, reciprocal rates mean potentially setting ITRs for each of the more than 1500 international call origins. Each of the more than 1500 international call origins review and amends its Foreign ITRs from time to time. This means that, to ensure compliance with the Draft Regulations, we will have to review continuously the ITRs we charge.

The process of notifying international carriers of such ITRs (and those of other ECSLs', where we transit calls) will be more complex that the status quo. We will have to notify each of the international carriers and operators of all our ITRs. Not only will the notification be more complex, but it will also have to be done more frequently given the need continuously to update ITRs to adhere to the Final Regulation. In cases where we transit calls to other S.A. Licensees, we will have

[16] The ITR that S.A. Licensees can charge for each tier would need to be the lower bound for the tier in order to meet the full reciprocity requirement.

to notify each of the international carriers and operators of all of the ITRs of other S.A. Licensees for call termination in S.A.

Given this, billing will become very complex. Under reciprocal ITRs, S.A Licensees will not only have to separate Domestic WVCT (+27) from International WVCT (those calls with a prefix other than +27), but will also have to apply their Master Dial Code Plan ("**MDCP**") and reciprocal ITRs to all international calls and bill accordingly. As a consequence, billing disputes are likely to increase, of which a large component will likely be attributable to numbers not appearing on a Licensee's MDCP and due to timing differences in the application of reciprocal ITRs. For example, there could be a delay between when international operators reduce or increase their Foreign ITRs, compared to when S.A. Licensees will be able to reciprocate.

Given the complexities in setting up and maintaining a reciprocal ITR regime, such a scheme is likely to be considerably more burdensome for all S.A. Licensees than the status quo, requiring investment in both human and physical capital. It will require investments in new billing & business support systems and regular system upgrades will be required. Amongst others, systems will have to account for information on both the origination and termination of a call for billing and dispute resolution purposes for each of the 1500 call destinations/origins. This will cause S.A. Licensees to incur both once-off costs associated with implementing the systems, and recurring costs associated with regular upgrades.

4.4.2 <u>Feedback on the UK implementation and post-implementation experience</u>

ICASA's proposed approach towards regulated ITRs appears to be aligned with Ofcom's approach under which the ITR charged by the UK telecoms provider can be no more than the ITR charged by the relevant international telecoms provider for a call originating in the UK, or the UK domestic rate, whichever is the higher. Prior to this, ITRs in the UK were regulated at the level of domestic MTRs and FTRs, so this was a major change in the regulation.

[redacted]

[redacted]

In general, the more complex the regulatory approach towards ITRs, the greater the number of operators that will struggle to implement it.

4.5 Full reciprocity is likely to worsen IBF and billing disputes

4.5.1 <u>IBF</u>

Regardless of the regulatory approach adopted, additional measures are required to address IBF (see section B.7). As already mentioned, IBF can occur due to the following factors:

- International WVCT from origins subject to high Foreign ITRs being masked as Domestic WVCT or on-net domestic calls[17].

- International WVCT from international operators subject to high Foreign ITRs being masked as International WVCT from international operators with lower Foreign ITRs[18].

At present, only the first type of IBF is an issue given that Vodacom charges a uniform ITR. ICASA's proposed approach is likely to worsen IBF, given that not only would the first type of IBF be an issue, but the second type of IBF would likely also become an issue. For example:

- Fraudsters may start to superimpose USA numbers (a country with low Foreign ITRs) onto calls that originate from high Foreign ITR countries, like Zimbabwe. This would mean that, instead of charging a reciprocal high ITR for calls originating from Zimbabwe, S.A. Licensees will incorrectly charge a low ITR applicable to the USA to such calls.

- Fraudsters could also set-up SIM-boxes in countries with lower Foreign ITRs (compared to the originating country Foreign ITR) to take advantage of such lower ITR. On the same basis, fraudsters could use SIM-boxes residing in the USA (a country with low Foreign ITRs), to convert VOIP calls that originated from high Foreign ITR countries, like Zimbabwe, into traditional calls that appear to originate from the USA.

Given this, under ICASA's proposed Regulation, S.A. Licensees will be exposed to IBF via SIM-boxes residing in both domestic and international markets and the superimposition of both domestic and international numbers. ICASA will not be able to stop this – whilst it has jurisdiction over SIM-boxes residing domestically and the use of S.A. numbers, ICASA has no jurisdiction over SIM-boxes residing internationally or the use of international numbers.

4.5.2 <u>Billing disputes</u>

ICASA has stated that consumers and Licensees would not be served best by deregulation because it has led to worse outcomes for S.A. Licensees and consumers compared to Option 1. The Findings (s4.3.2.12.17.4) argues that this is partly due to billing disputes. Whilst billing disputes may have increased, the significant benefits in moving away from Option 1, which ICASA itself acknowledged, far outweigh any negative impacts from an alleged increase in billing disputes.

Importantly, the commercial flexibility afforded post 2017 allowed S.A. Licensees to structure their ITRs in a way that will also minimise billing disputes, which is what Vodacom has done. [redacted] The number of billing disputes is likely to increase considerably under ICASA's proposed approach. This is also because ICASA's proposed approach is likely to lead to greater IBF, as discussed in the previous sub-section.

5. If ICASA wants to impose a price ceiling via reciprocal ITRs (Option 3), then following an approach styled on the EC model would be more appropriate

For the reasons set out above, we believe ICASA should maintain its current approach and not impose a price control on ITRs. However, should ICASA nonetheless still decide to impose some form of reciprocity (and ignore the legal obstacles considered above to doing this), an approach styled on the

[17] This could occur either due to refiling or SIM-boxing (see Vodacom's 18 Feb 2022 submission).
[18] Again, this could occur either due to refiling or SIM-boxing.

EC model would be more appropriate than ICASA's proposed approach (i.e., full reciprocity). Under the EC's approach[19], for any international operators that charge a Foreign ITR:

- Equal to or below the MTR[20] or FTR in S.A., S.A. Licensees would have to set their ITR at the MTR or FTR in S.A.[21].
- Above the MTR or FTR in S.A., S.A. Licensees would be able to set their ITR at a level and structure of their choosing.

Given this, under such an approach[22]:

- The ITRs charged by S.A. Licensees will be low in cases where international operators also charge low Foreign ITRs (i.e., equal to or below the S.A. MTR or FTR). This will help to provide an incentive for international operators to set low Foreign ITRs, at least those that are net-senders of traffic to S.A. Licensees.
- For operators that choose to set high Foreign ITRs (or where they are forced to set high Foreign ITRs due to price floors), S.A. operators will retain commercial flexibility to respond appropriately and flexibly to all of the factors that drive net ITR outpayments.

We consider that this approach is likely to be superior to ICASA's proposed approach[23] because of the following:

- The implementation issues and ongoing challenges would be more manageable than under ICASA's proposed approach;
- ICASA's proposed approach is likely to result in greater IBF and billing disputes; and
- ICASA's proposed approach offers no material incremental benefits compared to an EC-style approach.

Indeed, prior to the EC implementing this approach towards Foreign ITRs, a number of Member States had full reciprocity regimes in place (in line with ICASA's proposed approach). In particular, France, Germany, Ireland, Netherlands, Portugal, Romania and Spain allowed operators to set Foreign ITRs, with certain conditions, typically that the Foreign ITRs were not higher than those charged by their third country counterparts.

Given the prevalence of these regimes, it seems very likely that, when deciding on its approach, the EC would have considered the merits of applying full reciprocity. The fact that it chose not to, therefore, is indicative of the fact that the incremental benefits of such an approach are likely to be very small, relative to the approach the EC ultimately implemented.

---

[19] The same approach applies to both MTRs and FTRs
[20] In practice, the EC has now set a single domestic MTR across all EU countries i.e., an EU-wide MTR.
[21] "*where a provider of voice termination services in a third country applies to calls originated from Union-numbers, mobile or fixed voice termination rates equal or lower than the maximum termination rates set out in Articles 4 or 5 respectively for mobile or fixed termination, for each year and each Member State, on the basis of rates applied or proposed by providers of voice termination services in third countries to providers of voice termination services in the Union*" (COMMISSION DELEGATED REGULATION (EU) 2021/654 of 18 December 2020 supplementing Directive (EU) 2018/1972 of the European Parliament and of the Council by setting a single maximum Union-wide mobile voice termination rate and a single maximum Union-wide fixed voice termination rate, Article 1 (4a))
[22] There is also another scenario under which EU operators have to set the ITR equal to the domestic termination rate. In particular, any country where the ITR is set based on a similar costing methodology to the EC's approach towards setting the EU-wide MTR can apply to be charged the EU-wide MTR . In practice, no countries have applied to be added to this list so far. Given this, we consider that adding such a provision would add little value to any approach adopted by ICASA, other than serving to risk significant complication.
[23] Vodacom also discussed the downsides of an Ofcom-style approach in "ICASA CTR questions – Vodacom CONFIDENTIAL response 18 Feb 2022".

5.1 Compared to the EC's approach, the downsides of ICASA's proposed approach are likely to outweigh any incremental benefits it may have

5.1.1 The very clear practical challenges of ICASA's proposed approach would be ameliorated under our alternative proposal to instead apply an approach based on that used in the EC

As already discussed, at an extreme, ICASA's proposed approach could mean S.A. Licensees have to charge a different ITR to every single operator in each country. For example, reciprocal ITRs mean potentially setting ITRs for each of the more than 1500 international call origins. In contrast, under an EC-style approach, S.A. Licensees would be able to split international operators into different tiers of ITRs to help reduce the number of ITRs that they need to charge. There would need to be one tier for international operators that charge an ITR equal to or below the MTR or FTR in S.A. Other than that, S.A. Licensees will have flexibility as to how many other tiers that they want to have for international operators that charge Foreign ITRs above the MTR or FTR in S.A.[24]

There are also numerous implementation issues that add to the above practical challenges. These are discussed at section B.6 below.

5.1.2 ICASA's proposed approach is likely to result in greater IBF and billing disputes

Whilst the EC approach will not eliminate IBF, the amount of IBF would be significantly worse under ICASA's proposed approach. As already discussed, this is because the scope for the second type of IBF (i.e., international calls from international operators subject to high Foreign ITRs being masked as calls from international operators with lower Foreign ITRs) would be greater because S.A. Licensees would need to charge a much more granular set of ITRs under ICASA's proposed approach. In contrast, under an EC-style approach, S.A. Licensees will retain commercial flexibility to respond appropriately and feasibly to disincentivise the second type of IBF. Given that IBF would be lower under an EC-style approach compared to ICASA's proposed approach, the number of billing disputes is also likely to be lower under an EC-style approach.

5.1.3 ICASA's proposed approach may not have any material incremental benefits compared to an EC-style approach

As we have explained above and relative to the EC's approach to Foreign ITRs, ICASA's proposed approach is unlikely to increase materially the incentives for international operators to reduce their Foreign ITRs. This is because of the following:

- Regulators/governments in some other countries actually set a floor for the level of Foreign ITRs, with the floor often being set at a high level. It is improbable to suggest that action only from Licensees in S.A. will cause a change in these floor levels.

- International operators that are net-receivers of calls will prefer reciprocal high Foreign ITRs, regardless of whether S.A. Licensees face an EC-style approach or ICASA's proposed approach towards ITRs. This is because the amount the international operators receives in termination charges will be greater than the amount it pays to the counterparty, and high Foreign ITRs would therefore increase net termination revenues for the international operator. Put another way, even if S.A. Licensees were willing to reduce their ITRs, the international operator will not have an incentive to follow suit.

- International operators that are net-senders of calls will prefer reciprocal low ITRs as this would reduce their net termination costs, regardless of whether S.A. Licensees face an EC-style approach or ICASA's proposed approach towards ITRs. Under an EC-style approach,

[24] S.A. Licensees could also split operators into different tiers under ICASA's proposed approach, but this would likely result in significant net outpayments for ITRs, as the ITR charged for each tier would need to be equal to the operator with the lowest ITR within the tier.

international operators would be able to get S.A. Licensees to reduce their ITRs to a low level (i.e., the MTR or FTR in S.A.), as long as the international operator was willing to set their Foreign ITR at or below the MTR or FTR in S.A.

Given this, any incremental benefits from ICASA's proposed approach relative to the simpler EC-style approach are likely to be outweighed by the challenging implementation issues and potential higher levels of IBF and billing disputes.

5.2 Notwithstanding our disagreement with ICASA's proposed Regulation, if ICASA decides to proceed with full reciprocity, it should be applied at a country-level and Licensees should be allowed a sufficient implementation period

5.2.1 <u>It should be applied at the country-level using either the maximum or the traffic weighted average Foreign ITRs for the country, rather than operator-level</u>

A reciprocal approach towards ITRs could operate either at the operator-level or the country-level:

- Under an operator-level approach, the ITR charged to a given operator will in turn depend on the Foreign ITR charged by the relevant international operator.
- Under a country-level approach, the ITR charged to a given operator will in turn depend on the Foreign ITRs charged by the country in which that operator is present (e.g., it could be a weighted average of the Foreign ITRs across all the operators in that country or the maximum Foreign ITR charged by any operator in that country).

S.A. Licensees will face a difficult trade-off between minimising net outpayments for ITRs and making sure that the ITR regime is not overly complex under ICASA's proposed approach. One way to address this trade-off would be to reduce the number of ITRs charged, without creating large additional net outpayments for S.A. Licensees. This could be done by adopting a country-level approach using either the maximum or the traffic weighted average Foreign ITRs[25], updated annually.

In contrast, it should be possible to implement an EC-style approach at the operator-level, as it is much simpler to implement than ICASA's proposed approach.

5.2.2 <u>A lengthy implementation period would have to be agreed with all stakeholders, after which routes via S.A. Licensees that are not ready can be terminated</u>

As already discussed, all S.A. Licensees must be able to implement any new approach towards ITRs. Importantly, given that S.A. Licensees also act as transit operators of international traffic, Vodacom will only be able to "go-live" with ITR reciprocity when all its direct and transit routes are also ready and capable to handle such complex rate sheets and bills as would be necessary under ICASA's proposed approach.

However, the amount of time required to implement any new approach will depend on the nature of the approach adopted. Vodacom considers that an EC-style approach could be implemented within 6 months. ICASA's proposed approach could require significantly more time, potentially up to 12 months, depending on whether a country-level approach is permitted (we understand that in the U.K., implementation was delayed by seven months due to challenges with implementation). This provides another reason for favouring an EC-style approach. If any S.A. Licensees aren't ready by the go-live date, then S.A. Licensees should be able to shut down such routes.

[25] Using the minimum ITR charged across the different operators in a given country to set the country-level ITR clearly wouldn't be appropriate, as this would lead to large net outpayments for ITRs for South African operators.

6. Regardless of which Option ICASA decides to pursue towards reciprocity, implementation issues require consideration and consultation

6.1 Exemptions

It is crucial that S.A. Licensees are able to identify the country of origin of the caller. For this to happen correctly, S.A. Licensees need to receive a valid calling line identification ("**CLI**") assigned to every incoming call. CLI is the commonly used method to identify the origin of an inbound call via the signalling associated with that call. In particular, the country of origin of the caller is identifiable through the country code in the CLI.

Under Ofcom's approach, Licensees have commercial freedom for setting ITRs where there isn't a valid CLI (the EC also follows a similar approach[26]):

> *"To ensure that the correct termination rate is charged by the UK telecoms providers and to incentivise originating providers to provide complete CLI, we agree with the suggestion made by Three and BT that UK telecoms providers should have pricing freedom on the termination rate for calls with masked, missing, incomplete, or fraudulent CLI."*[27]

ICASA should adopt a similar approach, i.e., SA Licensees should have complete pricing freedom over calls with missing, incomplete, or malformed CLIs, or where the CLIs can be identified as having been spoofed. Please refer to our recommendations under section D5.3.3 below.

6.2 Transit operators

International WVCT services can often be provided via transit operators. In these cases, pricing structures can be complex, with transit services being bundled with termination services, thereby making it difficult to identify the charge for termination services. As a result, it should be the rate charged by transit providers (i.e., the Foreign ITR including any surcharge plus any transit fees) that should determine the ITR ceiling that S.A. Licensees are able to charge their international counterparts.

6.3 Mobile Number Portability

The calling party number prefix cannot be used to identify the originating operator from a third country where the number ported[28]. This would add to the practical challenges of ICASA's proposed approach discussed above.

6.4 International inbound roamers

All calls originating from non-S.A. numbers, regardless of whether the call originates from inside or from outside of S.A., should be treated as calls from Non-S.A. numbers (international originated calls) for the purpose of ITRs. Specifically, this should include calls originated by international visitors whilst roaming on S.A. Licensees, that terminate on S.A. numbers. This is important for a number of reasons, i.e.:

- It may be difficult or impossible to determine accurately for all calls by Non-S.A. numbers whether the Non-S.A. number was inside or outside of South-Africa at the time the call originated;

[26] "*In order to ensure a correct application of this Regulation, Union operators should receive a valid CLI assigned to every incoming call. Consequently, Union operators would not be bound to apply Union-wide termination rates to termination of calls if the CLI is missing, invalid or fraudulent*." (COMMISSION DELEGATED REGULATION (EU) 2021/654 of 18 December 2020 supplementing Directive (EU) 2018/1972 of the European Parliament and of the Council by setting a single maximum Union-wide mobile voice termination rate and a single maximum Union-wide fixed voice termination rate, paragraph 15)
[27] Ofcom (30 March 2021) Wholesale Voice Markets Review 2021-26 - Statement (paragraph 6.145)
[28] Ofcom (30 March 2021) Wholesale Voice Markets Review 2021-26 - Statement (paragraph 6.150) and BEREC (9 June 2022) - Report on the monitoring of the termination rates for mobile and fixed voice calls (page 7)

- Creating exceptions for calls from Non-S.A. numbers whilst inside S.A. will increase materially the scope for IBF;

- All return calls by S.A. consumers to the non-S.A. numbers of international visitors whilst roaming on S.A. Licensees will first be effectively terminated by the international host operator, before being forwarded to the visited S.A. Licensee. Therefore, the S.A. Licensee initiating the return call will have to pay the ITR of the international host operator, thereby off setting the ITR collected with the ITR paid; and

- It is consistent with the treatment by the EC[29].

Please refer to our recommendations under section D1.2.4 below to include a new definition for "International termination rates".

6.5 Unitisation

International operators may have a different billing structures compared to S.A. Licensees. In particular, operators in some countries:

- Bill per second increment, but with a minimum bill of 60 seconds; or

- Bill per 60 second increments with a minimum bill of 60 seconds.

This would add to the practical challenges of ICASA's proposed approach discussed above.

6.6 Exchange rates

If ICASA continues to require some form of reciprocity, then the regulation needs to be clear on what exchange rates should be used, given that ITRs will typically be expressed in a foreign currencies. Exchange rates change constantly, so it will be important to take the average exchange rate over a period of time. We recommend that exchange rates be updated on a quarterly basis, to avoid the need to change ITRs too often.

6.7 Ongoing implementation of rate changes

It will be difficult, if not impossible, for reciprocal changes in ITRs to come into effect immediately following a rate change by an international telecoms provider. This lag can be due to many reasons, such as ITRs not being filtered down timeously by the carriers. Therefore, S.A. Licensees should be allowed to reciprocate any rate change as soon as is reasonably practicable. We consider that it would be realistic for S.A. Licensees to update their ITRs within 30 days of any change in the ITRs that they are being charged by international operators.

7. Regardless of which Option ICASA decides to adopt, new initiatives and regulations are required to address IBF

7.1 An inquiry process is required

Much research is required to finesse technical approaches to the IBF problem. Therefore, ICASA should conduct an inquiry process specifically into this topic. In this regard and notwithstanding our other concerns set out in this response, ICASA should (if it decided otherwise to go ahead and to

[29] COMMISSION DELEGATED REGULATION (EU) …/… of 18.12.2020, Article 1.4 on page 13 "*…calls originated from third country-numbers*"

ignore the legal and substantive problems identified above) postpone any reintroduction of price controls until such an inquiry has been concluded.

7.2 The role of the new NPR

The new NPR has been a helpful step in the right direction in addressing IBF. In particular, Regulations 12(1)(d), (g) and (h) of the NPR are relevant for helping to address IBF:

> *"A licensee must – (d) ensure that Caller Line Identification (CLI) presented to the end user receiving the call, where the caller has opted not to restrict their CLI, includes a valid, dialable number which uniquely identifies the caller and the terminating licensee and any transiting licensee, includes at all times, a valid, dialable number which uniquely identifies the caller;*
>
> *'.... (g) ensure that, as the originating licensee, the correct CLI is generated at call origination and that the correct CLI data is exchanged, over points of interconnection and as the transiting licensee, the correct CLI data continues to be exchanged, over points of interconnection, such that the terminating licensee receives the correct CLI; and*
>
> *(h) ensure that, as a transit and\or terminating licensee, where it is technically capable, calls with an invalid number and/or non-dialable number and/or CLI that is not correct are stopped."*

Regulation 25 makes a licensee contravening these provisions liable to a fine of between R300,000 and R3m per violation. IBF falls into this category. This must now be properly enforced.

7.3 New bespoke IBF Regulations should be promulgated

While ICASA's existing general powers and procedures may be employed to prosecute and prevent IBF, the problem is specific and calls out for bespoke regulations to deal with it in a manner tailored specifically and appropriately to the conduct at issue. Such bespoke IBF Regulations should address the following:

- Identification of specific conduct falling under the definition of IBF, to which the IBF Regulations relate;
- The creation of appropriately penal fines, as was done by Regulation 22 of the Interconnection Regulations, capable of being imposed by ICASA itself, for IBF specifically;
- The reception of an "in camera ex parte application" by the CCC that IBF is occurring, brought by an affected Licensee, with a request that ICASA inspectors be deployed under s17G to enter, search and seize as appropriate to determine the existence and extent of any IBF;
- Issue of notice, following upon any investigation and report by inspectors after any such complaint, to the allegedly offending licensee in the event that the CCC believes a prima facie case of IBF has been made out, to call upon such licensee to show cause, on a specified return day, why –
    - certain tailored and appropriate suspending action on the part of the affected operator should not be authorised, to the extent appropriate and in relation to the relevant traffic;
    - any other relief should not be granted, whether interim or final, including specified fines created specifically for the purposes of IBF, with the requested relief being set out in the original application and as determined by the CCC;

- After a hearing in relation to the above, reporting back by the CCC of its findings to ICASA to make a determination and act under s17E(2) of the ICASA Act.

C. Price control for Domestic WVCT

In this Section, Vodacom sets out its views on ICASA's proposed price control for Domestic WVCT. In particular, we explain the following:

- For both economic and legal reasons, FTRs and MTRs should be set based on the costs for Domestic WVCT to a fixed and mobile location respectively, so ICASA should not consider setting symmetric FTRs and MTRs (or making any other adjustments to FTRs).

- We agree that MTRs should be symmetric within 12 months of the start of the price control.

- We disagree with ICASA's proposal to use a P-LRIC cost standard. However, to the extent that ICASA decides to keep a P-LRIC cost standard:

  - ICASA needs to err on the side of caution when estimating P-LRIC given that, as recognised by the EC, the consequences of underestimating P-LRIC are likely to be greater than the consequences of overestimating P-LRIC; and

  - Given that one of ICASA's key justifications for adopting P-LRIC is the move to symmetric MTRs[30], it is logical to have the same length of glide path for both the move to P-LRIC and symmetric MTRs, as is currently the case in the Draft Regulations.

Vodacom also has significant concerns on the actual level of the MTR proposed by ICASA, given the very significant and clear shortcomings in its V5 BU Mobile model. We refer ICASA to the Frontier report, for further discussion of the cost models.

1. MTRs and FTRs should be cost based, including a reasonable rate of return

Vodacom agrees with the following aspects of ICASA's proposed approach towards setting MTRs and FTRs:

- The Finding (s5.1.5.1) that all Licensees must charge cost based FTRs and MTRs (including a reasonable rate of return).

- Draft Regulation A1.1 that "*fair and reasonable prices are rates that are equivalent to the cost-based rates imposed on the licensees identified in regulation 7 (4) of the Schedule*".

- The Finding (s4.7.10.3) that these rates should be based on the efficient cost of providing a termination service by a hypothetical efficient operator (including a reasonable rate of return), although, as set out in the Frontier report, it is critical that these models calibrate effectively to real-world networks.

[30] For example, the Methodology note (s6.10.1.1.1) states that "*In order to promote competition in the absence of asymmetric termination rates and in the presence of low on-net prices that are below termination rates, lower termination rates applying the pure-LRIC standard are needed.*" In its June 2018 briefing note (s2.7) on asymmetric termination rates, ICASA also set out that "*termination rates are not regulated using bottom-up pure Long-Run Incremental Cost (or at marginal cost), which should in principle result in no asymmetries in relation to termination rate charged by late (small) entrants and new entrants and large operators.*" In its August 2014 briefing note (s2.3) on asymmetric termination rates, ICASA stated that "*While asymmetry remains appropriate for the current regulatory period, an indefinite asymmetry provision potentially also holds the danger that smaller and late entrants would have less of an incentive to become efficient operators. In addition, once termination rates for larger well-established operators are regulated at marginal costs this would reduce the negative externalities faced by smaller operators and late entrants.*"

- The Methodology note (s4.2) stating that *"the access component of the fixed line access networks are recovered via direct monthly charges, which means it would be inappropriate to apply the costs of mobile call termination to it, since the latter includes the recovery of access network charges. This means that the modelling for separate fixed and mobile termination rates ought to be carried out by the Authority"*. We therefore agree with ICASA's approach to develop separate BULRIC models for fixed and mobile networks respectively.

However, we disagree with s4.2 of the Methodology note, which seems to suggest that ICASA could consider factors other than cost when setting FTRs and MTRs, i.e., *" the Authority can take a decision once the modelling is complete as to whether symmetry should be applied between fixed and mobile termination rates, including due to similarities between their costs"*. As set out below, taking into account non-cost factors would be legally problematic, given the specific remedies set by ICASA.

1.1 Not setting FTRs based on costs would be inconsistent with ICASA's own competition assessment and render ICASA's regulation of FTRs legally defective

Not setting FTRs based on costs would be inconsistent with ICASA's own competition assessment. In particular, ICASA defined fixed and mobile termination services as being in separate markets, concluded that both had ineffective competition, stated that all providers of both types of services have SMP as a result of having 100% market share, and identified the same market failures for both markets. Given this and consistent with the determination in the Findings (s5.1.5.1) which states that Licensees must charge cost-based pricing, the only relevant factor for determining MTRs and FTRs is the cost of providing mobile and fixed call termination services respectively.

Vodacom notes that ICASA's estimate of P-LRIC of FTRs was R0.006, whereas it proposes to regulate FTRs at R0.01 due to rounding up. This means that ICASA has in effect already set the FTR at almost double its estimate of the cost of FTRs. Vodacom would not support any increase in FTRs above R0.01 in the Final Regulations, as this would mean that FTRs would depart even further from costs and therefore ICASA's own Findings.

1.2 There are significant cost differences between FTRs and MTRs

It is clear from ICASA's own analysis that there is a significant difference in the costs of MTRs and FTRs. One of the key reasons for this is that, as ICASA correctly acknowledged, the cost of mobile call termination includes the access and backhaul network, whereas fixed call termination excludes these network segments and is limited to upgrades to core equipment. Given the materiality of the access and backhaul network in terms of costs, one should expect cost based MTRs to be materially higher than cost based FTRs.

We note from the Methodology note (s4.1) that Telkom argued that *"the MEA for fixed line services is in fact a mobile network since fixed voice usage is declining substantially due to, amongst others, fixed / mobile convergence and so there should be a single, converged fixed and mobile termination rate"*. We consider that ICASA correctly dismissed this flawed line of argument in its "Findings document on priority markets inquiry in the electronic communications sector" in August 2018 at page 29. That is, contrary to Telkom's claim of "*fixed / mobile convergence*", the low penetration of fixed services in S.A. is, instead, symptomatic of competition problems in the fixed sector. We consequently agree with ICASA's rejection of Telkom's argument and ICASA's decision to calculate separate cost-based rates for FTRs and MTRs.

2. A 12-month glide path to symmetric MTRs is justified

ICASA's Findings (s4.7.10.4 and S5.1.5.2) state that "*Mobile termination rates will move to symmetry within a transitional period of twelve months*". Vodacom agrees with the move to symmetric MTRs and the length of the glide path. Our reasons for why symmetric MTRs are justified are set out in further detail in our 11 January 2022 submission and the expert report prepared by Frontier Economics Limited that was provided as part of that submission. In summary:

- Removing the ability for some established operators to charge higher asymmetric MTRs is long overdue and would bring ICASA's approach more in line with international best practice. For instance, the EC now sets a maximum MTR that applies to all countries and operators within the EU, meaning there is no asymmetry under any circumstances. And precedent from Africa also indicates that the vast majority of African countries now set symmetric MTRs. As highlighted by ICASA in its Findings (s4.7.10.2), "*the Authority has already granted small entrants asymmetry for twelve years, which is more than the recommended international best practice of three to four years*".

- Economies of scale are not a valid justification for asymmetric MTRs in S.A. In the past, ICASA has considered that operators should be allowed to charge asymmetric MTRs if they face higher unit costs for reasons outside the operators' control, or if they enjoyed lower economies of scale than other operators. The first reason was acknowledged by the EC historically in its 2009 Recommendation on termination rates, but it did not acknowledge the rationale relating to economies of scale.

- The only factor the EC considered to be outside of the operators' control was a lack of spectrum when a spectrum auction has not taken place or spectrum trading is not possible. Telkom and Cell-C already have significant spectrum holdings and had the opportunity to acquire additional spectrum in ICASA's 2022 auction, with smaller operators receiving significant support e.g., through the opt-in round. As a result, operators in S.A. should not face higher unit costs for reasons outside of their control, especially on a forward-looking basis.

- Notwithstanding the irrelevance of economies of scale for MTR asymmetry, Vodacom notes that neither Telkom nor Cell-C suffers from a lack of economies of scale, as demonstrated by Telkom's growth and Cell-C's move to a capital-light business model. Cell-C has now completed its network migration, which involved switching off all its tower infrastructure[31]. MTN provides Cell-C with access to a "virtual radio access network" for its prepaid and mobile virtual network operator (MVNO) subscribers. Cell-C's contract subscribers all roam on Vodacom. With its network migration complete, Cell-C says it now has access to around 14,000 towers countrywide. Rain and Liquid also make extensive use of infrastructure-sharing.

- Continuing to allow asymmetric MTRs could result in economic inefficiencies. In particular, asymmetries may dampen smaller operators' incentives to become more productively efficient (reducing their costs), whilst also creating allocative inefficiency by distorting production and consumption decisions.

- Traffic imbalances do not justify asymmetric MTRs since traffic imbalances will inevitably occur alongside market entry and expansion and as a result of operators having different commercial strategies. Intervention aimed at accounting for imbalances can even have the effect of reinforcing traffic imbalances, via asymmetric MTRs impacting on-net/off-net differentials.

- Any alleged historical market failures do not provide a valid justification for asymmetric MTRs, since regulators should set MTRs based on a forward-looking assessment (meaning historical market characteristics should not be taken into account).

- Asymmetric MTRs are unlikely to significantly improve the position of smaller operators. Voice services are declining in importance, given the rapid increases in data usage and revenues, which reduces the significance for competition of any cost disadvantages that an operator might face

[31] https://mybroadband.co.za/news/cellular/497185-cell-c-finishes-switching-off-its-towers.html?

when providing voice services. As ICASA itself acknowledges at s6.3.2.4 in the Methodology note, the low current levels of termination rates have also reduced the relative importance of termination rates for operators' financial performance . In addition, the fact that Telkom and Cell-C have been charging the same asymmetric MTRs for several years whilst experiencing very different market outcomes suggests that factors other than asymmetric MTRs are much more important in determining those outcomes.

Vodacom considers that symmetric MTRs are justified regardless of which cost standard is used. Furthermore, and for the avoidance of doubt, Vodacom considers that it is most appropriate, given the context of the local market, to set symmetric MTRs on the basis of LRAIC+ estimates.[32] Nonetheless, Vodacom notes that one of ICASA's justifications for moving to P-LRIC is that it will also transition to symmetric MTRs. Given this, based on ICASA's own reasoning, it definitely should not use P-LRIC unless it also imposes symmetric MTRs. In general, economies of scale are likely to be less relevant under P-LRIC, given that there is no recovery of joint and common costs, and the relevant increment just relates to call termination services. For this reason, it is not surprising that Vodacom is not aware of any countries that use both P-LRIC to set MTRs, whilst also allowing some operators to charge higher asymmetric MTRs. In contrast, there are examples of countries that have symmetric MTRs, but not P-LRIC. For example, Ethiopia has already moved to symmetric MTRs (but not P-LRIC) despite having only very recently liberalised the market[33].

3. A LRAIC+ cost standard should be adopted

Despite ICASA's responses in the Methodology note (s6.2), we remain of the position (see our 24 July 2023 response) that, in determining the cost standard, ICASA did not follow a meaningful consultation process designed rationally, fairly and logically. As such, Vodacom continues to reserve its rights to respond as it may at the appropriate point to protect its rights in regard to this Review process.

In any event, Vodacom disagrees with ICASA's proposed move from LRAIC+ to a P-LRIC cost standard. This is because of the following:

a. The change to P-LRIC is not supported by changes in the competitive nature of the relevant market;

b. Moving to P-LRIC is unlikely to increase competition;

c. ICASA did not fully appreciate the differences between P-LRIC and LRAIC when it decided to adopt P-LRIC;

d. LRAIC+ would better promote economic efficiency;

e. Moving to P-LRIC could have an adverse impact on low-income consumers;

f. International precedent shows that only a fairly limited set of countries have adopted the P-LRIC cost standard.

[32] For the avoidance of doubt, ICASA must not use either V5 of the mobile cost model, or previous versions, to assess the case for symmetric MTRs on the basis of how the P-LRIC of call termination services changes in the model as the market share of the hypothetical operator changes. This is because the purpose of the model is to estimate the costs of a hypothetically efficient operator, so it would be illogical to start considering the costs of an operator that was a different scale to such an operator. Given the explicit inclusion of different market share scenarios in V4 of the model, our submission from 15 January 2024 set out a number of concerns with the way this was done. We note that ICASA has now removed these scenarios from the model, and we agree with that decision. Given this, this model should not be used to estimate the costs of different hypothetical operators or to seek to derive cost estimates for operators below that hypothetical scale. Should any stakeholder suggest that the model should be used in that way, that suggestion must be dismissed.

[33] https://eca.et/wp-content/uploads/2024/05/Determination-on-Mobile-and-Fixed-Termination-Rates.pdf

Vodacom elaborates on the first two points below. For points c-f, we refer to and stand by our responses in our 24 July 2023 submission.

To the extent that ICASA decides to persist with a P-LRIC cost standard:

- ICASA needs to err on the side of caution when estimating P-LRIC given that, as recognised by the EC, the consequences of underestimating P-LRIC are likely to be greater than the consequences of overestimating P-LRIC; and

- Given that one of ICASA's key justifications for adopting P-LRIC is the move to symmetric MTRs, it is logical to have the same length of glide path for both the move to P-LRIC and symmetric MTRs, as is currently the case in ICASA's Draft Regulations.

3.1 The change to P-LRIC is not supported by changes in the competitive nature of the relevant market

The Methodology note (s6.3.1 & S6.3.2) explains that "*There are very different views on whether the market has changed over time*" and notes that "*Vodacom is correct that the ECA requires that a change in market conditions must precipitate a change in remedies. There have been at least four changes in market conditions that warrant a change in remedies*".

As required expressly under the Legal Framework above, the changes in the market conditions have to be in the relevant defined market for WVCT:

> *"(8c) Where, on the basis of such review, the Authority determines that the licensee to whom pro-competitive conditions apply continues to possess significant market power in that market or market segment, but due to <u>changes in the competitive nature</u> of <u>such market or market segment</u> the pro-competitive conditions are no longer proportional in accordance with subsection (7), the Authority must modify the applicable pro-competitive conditions applied to that licensee to ensure proportionality."* [Emphasis added]

None of the views expressed by other Licensees and changes discussed by ICASA in the Methodology note (under s6.3) qualify as changes within the WVCT markets. Critically, at s6.3.3 of the Methodology note ICASA acknowledges this, agreeing with Vodacom that there were no changes in relevant market *"..., while Vodacom is correct that all licensees continue to have 100% share of inbound calls to their networks, and the relevant markets have not changed in this sense*".

As such, ICASA has erred in making the change in the pro-competitive conditions from a LRAIC+ based charge control to one based on P-LRIC. In Vodacom's submission of 24 July 2023, we also explained that ICASA had not identified any changes in the market failures in the Domestic WVCT markets since previous reviews. Given this, ICASA did not have a basis for moving to the P-LRIC cost standard.

Even if one were to ignore these fundamental failures, and if one were to review the changes identified by ICASA on their merits, it is also clear that none of these justifies a move to P-LRIC. We consequently remain of the position that the significant change from LRAIC+ to P-LRIC is not supported by changes in the competitive nature of the Domestic WVCT market. Furthermore, given the fact that the Findings found no change to the competitive conditions in the relevant market, there is also no basis for the statement in the Methodology note (s6.4.4) that *"..., ICASA's Findings Document permits a choice between only LRIC and LRIC+ at this stage*". The same applies to the Findings (s4.7.10.3), which state that efficient costs can involve *"... using LRIC or the LRIC-plus cost standard".*

ICASA attempts to justify P-LRIC based on there being ineffective competition in other mobile markets[34]. As for ICASA's consideration of other markets covered in the mobile broadband inquiry, we

[34] s6.3.3 of the Methodology note.

must stress that this is not the relevant market as defined. Even if one were to leave this aside, we note the following:

- The mobile broadband inquiry focused on data services and not voice services.
- ICASA is in the process of amending its regulations for the mobile broadband inquiry, following the legal challenge by MTN.

We now respond to the four "changes" that ICASA used to justify the move to P-LRIC.

3.1.1 <u>The move to symmetric MTRs</u>

The first change that ICASA used to justify the move to P-LRIC is the move to symmetric MTRs. However, the use of symmetric MTRs does not necessarily require or imply that P-LRIC should also be used. There are many countries outside of Europe that have symmetric MTRs, but where national regulators do not use P-LRIC to set MTRs. Therefore, the imposition of symmetric MTRs does not hinge on the use of P- LRIC.

For instance, in the EU, the EC started calling for symmetric MTRs as early as 2002, which is many years before it advocated the use of P-LRIC in its 2009 Recommendation. This demonstrates that the imposition of symmetric MTRs does not depend on the use of P-LRIC.

3.1.2 <u>The impact on connections, investment and coverage</u>

The second change that ICASA used to justify the move to P-LRIC is that it claims there is no evidence that the reductions in termination rates and increasing call volumes have resulted in a waterbed effect[35], in terms of disconnections, lower investment or reduced coverage. But this ignores the fact that any adverse impact from lower termination rates is unlikely to show up in aggregated data on connections, investment and coverage. This is because there are many different factors that influence these outcomes in addition to termination rates. Given this, Vodacom considers that the apparent absence of a waterbed effect when looking at highly aggregated outcomes does not provide a reason for moving to P-LRIC. Also refer to the Frontier report.

3.1.3 <u>The growth of OTT services</u>

The third change put forward by ICASA as a justification for moving to P-LRIC is the substantial growth in OTT services. As set out in the Methodology note (s6.10.1.1.3):

> *"Furthermore, there has been substantial growth in OTT services which stakeholders have commented on. Their success in the absence of termination rates or any charges to consumers is a relevant consideration where the choice of costing methodology for traditional termination rates is concerned. Applying P-LRIC, which is closer to marginal costs and will likely result in higher usage volumes, will help bring traditional voice services closer to the business model used in OTT services, assisting in the growth of traditional voice services."*

However, ICASA itself concluded that OTT services do not form part of the Domestic WVCT markets. Therefore, it has adopted an inconsistent approach towards OTT services. This is because, based on ICASA's own assessment, the growth of OTT services does not represent a change in the market conditions within the Domestic WVCT markets, meaning that the growth of OTT services cannot be used as a reason for changing the pro-competitive conditions within such markets. Further, even if ICASA were correct to consider the impact of OTT services on the pro-competitive conditions, then

[35] A waterbed effect may arise because telecom operators are forced to recover a higher share of joint and common costs from other services when termination rates are regulated at P-LRIC.

the growth of OTT services would actually suggest that the pro-competitive conditions should become less stringent relative to previous market reviews rather than more stringent (moving to P-LRIC can be considered as a more stringent pro-competitive condition than LRAIC+ since no allowance is made for the recovery of joint and common costs). This is because the growth of OTT services would represent a strengthening of competition and mean that Licensees face stronger competitive constraints when pricing their call termination services.

3.1.4 The growth of data services

The fourth change put forward by ICASA as a justification for moving to P-LRIC is the growth in data services. However, Vodacom contends that the growth in data services actually weakens the case for moving to P-LRIC, as it means that voice services have become a less important driver of competition.

3.2 Impact on competition

Vodacom disagrees with ICASA that a move to P-LRIC would have a significant impact on competition. As already discussed, ICASA has itself stated that termination revenues have become relatively immaterial for operators, whilst also arguing that OTT services now impose a stronger competitive constraint on termination services.

[redacted]

The Methodology note (s6.7.4) further refers to the Findings of its mobile broadband inquiry to help justify why moving to P-LRIC might help to remedy ineffective competition. However, Vodacom has already explained that these findings are not relevant to voice termination services.

3.3 Cost modelling approach and model complexity / transparency

ICASA argued in the Methodology note (s6.9) that it was possible to develop a P-LRIC model which balanced the need for a granular modelling approach with the need to not place an undue burden on Licensees and to ensure the modelling approach remains transparent. However, it is clear from Frontier's various reports on the different versions of the mobile model that ICASA has failed to develop any such model.

In many important ways, the V5 BU Mobile model remains insufficiently granular to estimate accurately the incremental costs of termination to a mobile location. For example, it does not properly apply adjustments for non-homogeneity in traffic across or within sites, or on backhaul. It also does not properly define the coverage network, with ICASA apparently not recognising that it is inappropriate, in a P-LRIC model, to rely on its previous LRAIC+ model approach for estimating coverage networks.

Despite the insufficient granularity in parts of the model, ICASA has also failed to make the model properly transparent, falling well short of regulatory norms in this area. For example, changes between one version and the next are not always explained and sometimes not even explicitly mentioned in the V5 Guide, whilst ICASA also does not comment on the impact to the model by each change it has made. This lack of transparency is a serious shortcoming, especially given the very evident problems with the model, as documented in the Frontier report. Most notably, despite Acacia's explicitly recognising in the December 2023 Guide (s1.3.1.4) that top-down data should be used for the purposes of comparing model outcomes to the real-world, ICASA has singularly failed to do this – with V5 BU Mobile model showing absurd outcomes completely disconnected from actual mobile networks in S.A.

3.4 Implications of moving to P-LRIC

3.4.1 <u>ICASA needs to err on the side of caution when estimating P-LRIC</u>

Estimating the P-LRIC of termination services clearly isn't an exact science, so there is a risk that ICASA under- or over-estimates the true P-LRIC cost of termination services for a hypothetically efficient operator. For example, ICASA itself recognised in the Methodology note (s6.9.4) that:

> *"... a balance needs to be struck between the information burden on licensees and developing a sufficiently granular model to reasonably identify costs."*

The EC has explained why the risks associated with setting MTRs too low are greater than the risks associated with setting MTRs too high[36]. In particular, the EC states that its approach, i.e., setting the maximum MTR at the level of P-LRIC in the EU Member State with the highest P-LRIC costs of termination, and hence allowing regulators in other Member States to set prices above country-specific P-LRIC, is:

> *"consistent with economic theory as generally, there is an asymmetric risk of setting prices too high or too low with the <u>risks of setting the prices too low being greater than the risk of setting prices too high</u> (i.e. in case of doubt it is preferable to risk setting the prices too high rather than too low). This is because <u>the problem of under- investment</u> (if the MTRs are set too low) is considered to be of greater importance to consumer welfare, including both quality and long-term prices for consumers, than the problems derived from over-investment (if the MTRs are set too high). <u>This is important when approaching the setting of wholesale caps based on projections</u> of either costs or prices, which will be subject to uncertainties regarding the accuracy of such projections, in particular further into the future."*[37] [Emphasis added]

Given the risks of underestimating P-LRIC, when making its modelling choices, ICASA needs to err on the side of caution. As set out in the Frontier report, there are, however, many areas where ICASA has not done this, with the V5 BU Mobile model understating dramatically the network equipment that a hypothetical operator would require.

3.4.2 <u>ICASA should use the same length of glide path for moving to P-LRIC and symmetric MTRs</u>

As explained in Section C3.1.1 above, ICASA has tried to justify the move to P-LRIC on the basis that it is also imposing symmetric MTRs. Given this, based on ICASA's own reasoning, it would be logical for the length of glide path for the move to symmetric MTRs to be the same as the length of glide path for the move to P-LRIC. This is currently the case in ICASA's Draft Regulations, given that MTRs will be symmetric and will be set based on P-LRIC by 1 July 2025. As ICASA's view is that smaller Licensees will benefit from the move to P-LRIC, there is no need to have a longer glide path for the move to symmetric MTRs.

4. The proposed "Maximum call termination rate for New Entrants" in Table 2 of the Draft Regulations

4.1 Mobile call termination services

[36] The World Bank has also made a similar point by stating that "*The LRIC methodology has been criticized by several authors. Salinger (1998) and Laffont and Tirole (2001) argued that LRIC regulation provides the regulators with a key tool to manage industry entry. It is, therefore, crucial to ensure that, whenever a mistake is made, it is made in favor of overinvestment rather than underinvestment.*" (World Bank December 2003 - A Model for Calculating Interconnection Costs in Telecommunications)

[37] COMMISSION STAFF WORKING DOCUMENT Accompanying the document COMMISSION DELEGATED REGULATION (EU) .../...supplementing Directive (EU) 2018/1972 of the European Parliament and of the Council by setting a single maximum Union-wide mobile voice termination rate and a single maximum Union-wide fixed voice termination rate, pages 47-48.

We agree with the Findings (s4.7.10.5) that any asymmetry that is allowed for new entrants in the provision of mobile call termination services, for a limited transitional period of three years, should be based on cost differences. However, it is not clear to us that ICASA has complied with the commitment it gave in the Findings (s4.7.10.3) that "*The Authority will consult on the appropriate level of asymmetry for new entrants during the cost modelling process*". This is because this is not discussed in the V5 Guide and has not been part of the preceding model reviews either. We require ICASA to clarify urgently how it derived these "*cost-based*" rates.

Vodacom also notes that the Findings were published before ICASA decided to use P-LRIC as the cost standard. In practice, we wouldn't expect significant differences for the cost of mobile termination services for new entrants in a P-LRIC model, given that such models do not allow for any recovery of joint and common costs.

In addition, ICASA also needs to make it clear that a new entrant has to be an ECNS licensee that operates its own radio access network ("**RAN**"), rather than a virtual network operator e.g., an MVNO. This is because, without a RAN, virtual network operators or service providers will not suffer from network cost differences due to a lack in economies of scale and scope. See our proposed amendment of the definition for New Entrant under D1.3 below.

The EC has considered this issue in previous cases and concluded that MVNOs should be subject to the same MTRs as the host network i.e., there should not be higher MTRs for MVNOs. For example, in the context of the French regulator proposing to set asymmetric MTRs for MVNOs (and Free Mobile), the EC stated that:

> *"The Commission considered that full MVNOs and their respective host MNOs provide the same termination service because both operators make use of the same mobile network on the basis of the wholesale service for national roaming. The same is also true for all calls of the new MNO Free Mobile that are terminated under the national roaming agreement. Consequently, the Commission noted that both Free Mobile and full MVNOs can benefit from the same economies of scale and/or scope as the host MNO and hence achieve the same unit costs irrespective of their actual market shares. Furthermore, the Commission pointed out that ARCEP itself argued that Free Mobile can generate the same efficiencies as the established MNOs when terminating calls on its own network. Therefore, the Commission stated that it could not at that stage identify any higher per unit incremental termination costs incurred when Free Mobile or full MVNO customers are receiving calls."*[38]

4.2 Fixed call termination services

To ensure consistency with ICASA's pro-competitive conditions, any asymmetry in FTRs should be based on cost differences. Table 2 of the Draft Regulations propose that new entrants for fixed call termination services would be able to charge an FTR of R0.04/min for a transitional period of three years. This is significantly higher than the FTR of R0.01/min that established operators would be able to charge from July 2025 onwards under the Draft Regulations. It's unclear how ICASA has derived the FTR of R0.04/min for new entrants. In any event, Vodacom considers that there is no reason why new entrants for fixed call termination services should be able to charge a higher FTR than established operators. This is because there should be very limited difference between the P-LRIC of fixed termination services for new entrants and established operators, especially when taking into account that only the costs of the core network are relevant for FTRs. As a result, Vodacom believes it would be consistent with ICASA's pro-competitive conditions for it to remove the asymmetric FTRs for new entrants.

[38] Commission Decision concerning Case FR/2012/1304: Voice call termination on individual mobile networks of Free Mobile, Lycamobile and Oméa Télécom in France Decision to lift reservations pursuant to Article 7a of Directive 2002/21/EC as amended by Directive 2009/140/EC

To the extent that ICASA does retain a higher FTR for new entrants for a transitional period, ICASA needs to make it clear that this should only apply to new entrants that own their own core network, and therefore exclude any access seekers that rely on the core network of the host operator.

5. The target MTRs and FTRs proposed in Tables 1, A1 and A2 of the Draft Regulations

The V5 Guide (s1.5.1) provides an extract of the cost results from the V5 BU Mobile model and V5 BU Fixed model and explains (s1.5.2) "*The costs thus suggest approximately 0.6 cents per minute for termination of fixed calls, and between 3.9 and 4 cents per minute for mobile calls*".

	2024	2025	2026	2027
Fixed termination costs	0.00594	0.00610	0.00627	0.00644
Mobile termination costs	0.0386	0.0390	0.0395	0.0403

S1.5.3 explains "*In general, termination rates are rounded to the nearest reasonable fraction of a cent. In the present case, this suggests setting an MTR at 4 cents, and an FTR at 1 cent. This will permit smaller operators in South Africa the ability to offer retail prices per minute for off-net calls that are not loss-making*".

5.1 MTRs

Based on Vodacom's assessment, the estimates of mobile termination costs do not reflect the true costs of a hypothetical mobile operator in S.A. As such, we recommend that the target MTRs set out in the Draft Regulation need to be increased before the Final Regulation is published. If this does not happen, it is very likely that ICASA will have failed to implement the remedy of cost-based pricing, instead forcing mobile operators, such as Vodacom, to set MTRs below cost. This will clearly make the Final Regulation vulnerable to successful legal challenge, as there will be a clear misalignment between the ostensible purpose of the regulation and the regulation itself, rendering the Final Regulations irrational.

The Frontier report sets out, in detail, the challenges with the V5 BU Mobile model and the reasons why it is very likely to understate costs. It also sets out some simple adjustments that ICASA can make to the model to resolve the most grievous inaccuracies in that version of the model. For reasons of brevity, we do not repeat that report here. It must be stressed, however, that Vodacom regards the Frontier report as an integral part of its submission. Without detracting from the important detail in the Frontier report, Vodacom highlights the following severe flaws in the V5 BU Mobile model here. These problems, and others identified by Frontier, must be resolved before the Final Regulation is published and done so in a manner significantly more transparent than the changes that have been made to the model up to now:

- ICASA has failed properly to calibrate the model, leading to absurd outcomes which bear no resemblance to actual mobile networks in S.A. and also no resemblance to the outputs of P-LRIC BU mobile models developed by other leading regulatory authorities;

- ICASA has made a series of simplifying assumptions which are not appropriate for a P-LRIC model, and which understate the incremental costs of providing mobile termination services – to the extent that the model even estimates, in some situations, that adding termination traffic to the mobile network would, in some elements, lead to absolute cost reductions; and

- ICASA has ignored Vodacom data and has instead continued to use outdated information from the 2018 model, often giving the impression that its end goal is to achieve a "cherry picked" and pre-determined level for mobile termination costs, rather than properly investigate the actual costs involved in providing the service.

Taken together, these points mean that the V5 BU Mobile model almost certainly understates the costs of mobile termination. As such, it is not clear why ICASA puts such focus in its V5 Guide on the risks (as it sees them) of the model overstating costs. In fact, by seeking to reduce the risks of the model overstating costs, ICASA has almost certainly made the problems with the V5 BU Mobile model worse.

ICASA justifies its position that a below cost termination rate carries few risks by arguing that "*even if rates were set at zero, this would have a negligible impact on operators*." and that "*substantially lower termination rates in South Africa have not led to lower investment and clearly improved outcomes for consumers*". However, these arguments are not evidenced and are in complete contradiction with economic theory[39] and with the EC's view that underestimating costs will lead to greater issues than overestimating costs (see section C3.4.1).

ICASA also does not in any way define or quantify the "outcomes for consumers" which have, in its opinion, *"clearly improved"* because of recent decreases in MTR levels. To substantiate the validity of its assertions and avoid contradicting its own finding to set cost based rates, ICASA must employ a more rigorous approach in its economic analysis than it appears to have done to reach its current conclusions regarding the merits of below-cost rates. That is, it must:

- Consider scenarios with different MTR levels (one scenario with MTR above costs, one scenario with MTR below costs);
- Explain the logical / theoretical basis on which it believes that, given South African market characteristics, the risk of setting prices above cost outweighs the risk of setting termination prices below cost;
- Provide a quantification of (i) the alleged absence of effect on investment and (ii) of the alleged benefits of a further *"improvement of outcomes for consumers"* in the scenario where MTR is set below costs;
- Demonstrate the validity and robustness of its findings with sensitivity analysis and identification of possible limitations of the proposed analytical framework.

5.2 FTRs

In terms of FTRs, as already explained, Vodacom would not support an FTR that was above ICASA's current proposal of R0.01/min.

6. The move to the new MTRs and FTRs by 1 July 2025 in Tables 1, A1 and A2 of the Draft Regulations

Notwithstanding our comments on the proposed target charges, we agree with the principle of a limited reduction in the first year of the glidepath. Given that one of ICASA's key justifications for adopting P-LRIC is the move to symmetric MTRs, it is logical to have the same length of glide path for both the move to P-LRIC and symmetric MTRs, as is currently the case in the Draft Regulations.

[39] This is a generally accepted principle of wholesale price regulation, for example, see: Competition Economists Group, Uplift asymmetries in the TS-LRIC price, February 2015, pp. 5-6; Ballance, T. and Taylor, A., Competition and Economic Regulation in Water, p. 76-79, available here ; Oxera Consulting, Aiming high in setting the WACC: framework or guesswork?, March 2015

D. Detailed comments on the wording and structure of the Regulations and Draft Regulations

It is important to stress that these comments are made without prejudice to the submissions above and in the Frontier report, including on the legal obstacles to the Draft Regulations. Our proposed amendments to the Draft Regulations and Regulations are in *grey italics*.

1. Definitions in regulation 1 of the Regulations

Except for the insertion of a definition for "*New Entrant*", the Draft Regulations propose that the Definitions in regulation 1 of the Regulations be retained. We have the following comments and suggested drafting.

1.1 Definitions that are not used should be removed

The Definitions listed below are not used and, to increase the clarity of the Regulation, should be removed:

- ~~*"Fixed Wholesale Voice Call Termination Service" means a wholesale voice call termination service provided by an ECNS or ECS licensee to a fixed location;*~~ and
- ~~*Mobile Wholesale Voice Call Termination Service" means a wholesale voice call termination service provided by an ECNS or ECS licensee to mobile subscriber equipment enabled by wireless technology*~~.

1.2 New Definitions that need to be inserted

1.2.1 New definition to define the term "Licensee" used in, amongst other, regulations 3a and 3b of the Regulations

- *"Licensee" refers to licensee as defined in the ECA.* This proposal aligns with Gazette 33121 dated 16 April 2010 ("GG33121"), page 48 *"... all licensees that provide wholesale call termination services are included in this market definition ... as well as Class ECNS/ECS Licensees*"[40]. This is to define the term "Licensee" contained in 3a and 3b of the Regulations.

1.2.2 New definitions used in our proposed amendment of Market definitions in regulations 3a and 3b of the Regulations

- *"South African Mobile number" means mobile number as defined in the Numbering Plan Regulations.*[41] This term is used in the proposed amendment of Regulation 3a as set-out in section D2.2 below[42] [43].
- *"South African Fixed geographic number" means geographic number as defined in the Numbering Plan Regulations.* This term is used in the proposed amendment of Regulation 3b as set-out in section D2.2 below[44] [45].

---

[40] To the extent that Class Licensees are allowed the use of numbers. We understand this is currently the subject of investigation by ICASA

[41] Gazette 39861, dated 24 March 2016

[42] Ofcom's Wholesale Voice Markets Review 2021-26 Statement, page 37, s5.39 "*termination services that are provided by [named mobile communications provider](MCP) to another communications provider, for the termination of voice calls to UK mobile numbers in the area served by that MCP.*"

[43] COMMISSION DELEGATED REGULATION (EU) .../... of 18.12.2020, Article 2.1.a on page 13 "*'mobile voice termination service' means the wholesale service required to terminate calls to mobile numbers that are ...*"

[44] COMMISSION DELEGATED REGULATION (EU) .../... of 18.12.2020, Article 2.1.b on page 14 "*fixed voice termination service' means the wholesale service required to terminate calls to geographic numbers and non-geographic numbers used for ...*"

[45] Ofcom's Wholesale Voice Markets Review 2021-26 Statement, page 34, s5.25 "*... for the termination of voice calls to United Kingdom geographic numbers in the area served by that FCP.*"

- *"South African Fixed non-geographic number" means non-geographic numbers as defined in the Numbering Plan Regulations, other than South African Mobile numbers.* This term is used in the proposed amendment of Regulation 3b as set-out in section D2.2 below.

1.2.3 <u>New definitions used in the new definitions we propose for i) Fixed, ii) Mobile and iii) International termination rates.</u>

- *"South African number" means a number allocated by ICASA as per the National Numbering Plan Regulations[46] corresponding to the E.164 country code for the geographic area belonging to the territory of South Africa*[47]. This term is used in the proposed new definition for "Fixed termination rate" and Mobile termination rate" below.

- *"Non-South African number" means all numbers other than South African numbers*. This term is used in the proposed new definition for "International termination rate" below[48].

1.2.4 <u>New definitions that we propose be used in our proposed simplification of Draft Regulations 7(2) under section D5.3.3 below</u>

- *"Fixed termination rate" means the rate for Fixed voice termination service markets, as defined in regulation 3b, for calls originating from South African numbers from inside South Africa.*

- *"Mobile termination rate" means the rate for Mobile voice termination service markets, as defined in regulation 3a, for calls originating from South African numbers from inside South Africa.*

- *"International mobile termination rate" means the rate for Mobile voice termination service markets, as defined in regulations 3a, for calls originating from:*
  - *Non-South African numbers, regardless of whether the call originates from inside or from outside of South Africa.* It specifically also includes calls originated by international visitors whilst roaming on S.A. Licensees, that terminate on S.A. numbers. This is important for the reasons set out under section B6.4 above.
  - *South African numbers from outside South Africa.* Creating exceptions for calls from South African numbers whilst outside South Africa will increase materially the scope for IBF.

- *"International fixed termination rate" means the rate for Fixed voice termination service markets, as defined in regulations 3b, for calls originating from:*
  - *Non-South African numbers, regardless of whether the call originates from inside or from outside of South Africa.*
  - *South African numbers from outside South Africa.*

1.3 Definitions that need to be amended

- *"New Entrant Licensee" means a**n ECNS** Licensee **that operates its own radio access network and** who has been in the **relevant** market **as defined in regulation 3a of the Regulations** for a*

[46] Gazette 39861, dated 24 March 2016
[47] COMMISSION DELEGATED REGULATION (EU) …/… of 18.12.2020, Article 2.1.c on page 14 "*Union-number' means a number from national numbering plans corresponding to E.164 country codes for geographic areas belonging to the territory of the Union*"
[48] COMMISSION DELEGATED REGULATION (EU) …/… of 18.12.2020, Article 2.1.c on page 13 "*Articles 4 and 5 shall also apply to calls originated <u>from third country-numbers</u> and terminated to Union-numbers where …*"

period of less than three (3) years". This proposed amendment should be read with our comment under C.4.1 above. Given our recommendation under C.4.2 above that the asymmetric FTR for new entrants be removed, this definition should be narrowed to new entrants to market 3a only.

2. Market definition at regulation 3 of the Regulations

2.1 "Licensee" in regulations 3a and 3b of the Regulations is not defined in regulation 1 of the Regulations.

Please refer to section D1.2.1 for our proposed new definition for "Licensee" under regulation 1 of the Regulations.

2.2 The relevant product market is termination on the customers (or numbers) of each Licensee and is not limited to termination on a physical communication facility or to a system that can only be provided by an ECNS provider

We agree with the Findings (s4.3.2.11.4) which argues correctly that the relevant product market is termination on subscribers, i.e.: "*in line with the Authority's 2010 and 2014 determinations in respect of a common pricing constraint. There is a common pricing constraint since the relevant markets include wholesale voice termination <u>to all subscribers</u> of one licensee"*.[49] Further, s1.16 of GG33121 on page 27 clarified correctly that the relevant product market is not limited to physical networks but includes the logical / services layer[50].

Vodacom also notes that the EC determined that it was technical control of the number and the legal right to use it, and thus the ability to set the termination rate, that was the main factor for the existence of the termination monopoly:

> *"Therefore, the Commission services consider that the key element to determine the scope of the termination services is the number on which these calls are terminated. In line with BEREC's opinion, the Commission services define this number as a number in national numbering plans corresponding to E.164 country codes for geographic areas belonging to the territory of the Union (Union numbers). This holds both at the retail level (i.e. users calling a certain number) and at the wholesale level (i.e. operators route a call to the terminating network). Defining termination services based on the number called therefore reflects the fact that technical control of the number and the legal right to use it, and thus the ability to set the termination rate, is the main factor for the existence of the termination monopoly".*[51]
>
> "*The number called is also the element for classifying a given termination service as fixed (for calls terminated on geographic numbers or non-geographic numbers other than numbers for mobile services that behave as "traditional" termination services where there is a termination monopoly, i.e. fixed nomadic and emergency access numbers) or mobile (for calls terminated on mobile numbers)*"[52].

---

[49] This Finding is also consistent with the "Call Termination Regulations", GG33121 on page 25, which provided correctly that the relevant market is termination on subscribers, i.e.: *"… the appropriate market definition might appear to be wholesale voice call termination to a specified telephone number (or subscriber) … due to the existence of this common pricing constraint across call termination to all subscribers of a network, the relevant market can be broadened to call termination to all subscribers*".

[50] Section 1.16 on page 27 states that "*wholesale call termination on any electronic communication network operating in S.A., the word network does not refer to a physical communication facility or to a system that can only be provided by an ECNS provider. Rather it refers to the logical network layer, which may be built on top of the physical communication facilities offered by ECNSL and ECSL … in particular, the provider issues numbers to each of its individual customers, which are dialled when calling those customers*"

[51] COMMISSION STAFF WORKING DOCUMENT Accompanying the document COMMISSION DELEGATED REGULATION (EU) …/…supplementing Directive (EU) 2018/1972 of the European Parliament and of the Council by setting a single maximum Union-wide mobile voice termination rate and a single maximum Union-wide fixed voice termination rate, page 15

[52] COMMISSION DELEGATED REGULATION (EU) …/… of 18.12.2020, page 6

Given the above, we submit that the reference to "*network*" in the market definitions contained in Regulation 3 seems unnecessary and risks incorrect interpretation. The Regulations also do not define mobile location and fixed location respectively. We recommend that Regulation 3 be amended as follows:

3. Market definition

(a) Mobile ***voice*** *termination* ***service*** *markets: The market for wholesale voice call termination services* ***within the Republic of South Africa*** ~~***on the network of***~~ ***by*** *each* ***L****icensee* ***or person providing a service pursuant to a licence exemption, with the ability to control termination and set the termination rates, for calls to South African*** *Mobile* ~~***location***~~ ***numbers*** ~~*within the Republic of South Africa*~~*.*[53]

(b) Fixed ***voice*** *termination* ***service*** *markets: The market for wholesale voice call termination services* ***within the Republic of South Africa*** ~~***on the network of***~~ ***by*** *each* ***L****icensee* ***or person providing a service pursuant to a licence exemption, with the ability to control termination and set the termination rates, for calls to South African*** *Fixed* ***geographic numbers or South African Fixed non-geographic numbers*** ~~***location***~~ ~~*within the Republic of South Africa*~~*.* [54]

3. Effectiveness of competition at regulation 5 of the Regulations

The Discussion Document (s2.3.4(iv)) included graphs comparing market shares of termination minutes on fixed and mobile networks, as well as graphs illustrating the HHI for termination minutes. It concludes "*both fixed and mobile termination markets still remain highly concentrated, despite the slight decrease in HHI in both markets*".

The Findings (s4.5.8.1.1) explain that "*Market shares and HHI for termination minutes are relevant when assessing the effectiveness of competition in the relevant markets. This is in line with section 67(4A) of the ECA and A Guideline for Conducting Market Reviews. However, the Authority agrees that market shares and HHI may be inconsistent with the significant market power determination in the context of call termination services*".

Vodacom remains of the view (see our 11 January 2022 submission, page 32) that ICASA is mistaken in its understanding and application of both the Legal Framework and the methodology that ICASA itself committed to apply, i.e., ICASA is required to analyse market shares in the relevant market, which ICASA defined to be termination services on each licensee as a separate market. Therefore, each licensee has a market share of 100%. Indeed, the EC has treated wholesale call termination in this way since 2003, when its first list of relevant markets was published. There is, therefore, an identical level of market power, or effectiveness of competition, within each of these wholesale call termination markets. It therefore makes no sense also to consider market shares in other markets when assessing SMP and the effectiveness of competition in wholesale call termination markets. Such an exercise is irrational and contradictory.

Critically, it is also opposite to ICASA's position in the Methodology note (s6.3.3) where ICASA acknowledges "*..., while Vodacom is correct that all licensees continue to have 100% share of inbound calls to their networks, and the relevant markets have not changed in this sense*".

Because of this flawed, contradictory, irrational and hence legally defective analysis, the Finding (s5.1.3) on ineffective competition is also, to the extent that ICASA relied on this flawed market share analysis, legally defective.

[53] COMMISSION DELEGATED REGULATION (EU) .../... of 18.12.2020, Article 2.1.a on page 13
[54] COMMISSION DELEGATED REGULATION (EU) .../... of 18.12.2020, Article 2.1.b on page 13

4. SMP determination at regulation 6 of the Regulations

GG33121 (page 48) made it clear that all ECNS and ECS Licensees that provide wholesale call termination services were included in the market definition, including Class ECNS/ECS Licensees. Further, the Findings (s4.5.4.1) provide:

> *"... in the absence of regulation in the relevant termination markets, a licensee with a 100% share of terminating minutes on its network (which provides a strong presumption of significant market power) would have the ability and incentive to influence competition parameters such as prices".*

The Findings (s5.1.3) provide:

> *"... competition in the Mobile termination markets and Fixed termination markets would be ineffective without regulatory intervention. This is due to the nature of the call termination markets (i.e. each licensee, whether new, existing or small, has monopoly in the provision of termination services over its own network)".*

Based on ICASA's own Findings, all Licensees in the call termination markets have SMP. ICASA is therefore both internally contradictory and mistaken in limiting the SMP declaration in regulation 6 of the Regulations to Individual ECNS/ECS Licensees. It therefore makes no sense to treat individual licences different from class (or exempted) licensees. The proposed Draft Regulation (and Finding at s3.1.3) should be corrected as follows (read with our proposed new definition to define the term "Licensee" under section D1.2.1 above):

> *The Authority declares that each ~~individual ECNS and individual ECS~~ **L**icensee **or person providing a service pursuant to a licence exemption** that offers wholesale voice call termination services is dominant and has SMP in its own market for wholesale voice call termination.*

We note that ICASA failed to respond to this comment in our 11 January 2022 submission on page 33. Failure to correct the Regulations by aligning it, as we propose, to the determinations under regulation 5 of the Regulations, renders regulation 6 legally defective for being contradictory and irrational.

5. Pro-competitive terms and conditions at Draft Regulation 7

5.1 The requirement to publish a RIO should be removed

Both the Legal Framework and the Methodology at regulation 4(c) of the Regulations, that require a forward-looking assessment of the level of competition and market power in the relevant markets, also require ICASA to take into account any other sector-specific regulation that may impact the market. By way of example, the EC Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services (2018/C 159/01) Staff Working Document states that:

> "*NRAs should take into account existing market conditions as well as expected or foreseeable market developments over the course of the next review period in the absence of regulation based on significant market power; this is known as a Modified Greenfield Approach. On the other hand, the analysis should take into account the effects of other types of (sector-specific) regulation, decisions or legislation applicable to the relevant retail and related wholesale market(s) during the next review period*'. Furthermore, S67(4)(d) of the ECA requires ICASA to "*impose appropriate pro-competitive licence conditions on those licensees having significant market power <u>to remedy the market failure</u>*".

We remain of the view (see our 11 January 2022 submission on page 39) that the Interconnection Regulations are explicitly designed to cover the market failures of a) lack of provision of access, b) potential for discrimination between Licensees offering similar services and c) lack of transparency. These Regulations prevent any licensed operator from refusing to provide services, discriminating between service providers requesting access, or failing to provide sufficiently transparent terms.

In light of those conditions being imposed within the Interconnection Regulations, we consider it inappropriate and unnecessary to introduce further pro-competitive conditions, in this process, to also resolve these. By way of example, the Interconnection Regulations already meet the majority of the requirements of a reference offer, for example setting out how the principles of transparency and requirements that should be applied. There is therefore no need to require Licensees to provide RIOs. We consequently recommend that Draft Regulation 7(5)(a) be removed in its entirety, including the entire Annexure B.

> ~~*(5) All licensees referred to in sub-regulation (4), must comply with the following additional pro-competitive terms and conditions:*~~
> ~~*(a) Publication of a Reference Interconnection Offer ("RIO"):*~~
> ~~*(i) Licensees identified in sub-regulation (4) must submit a RIO to the Authority for approval within forty-five (45) days of the promulgation of these Regulations.*~~
> ~~*(ii) The RIO must comply with the requirements set out in Annexure B.*~~
> ~~*(iii) The Authority will assess a RIO submitted by a licensee within thirty (30) days of its submission.*~~
> ~~*(iv) Licensees identified in sub-regulation (4) are obliged to offer interconnection using IP-based protocols.*~~
> ~~*(v) Provided that all requirements in the RIO are met by both an interconnection seeker and provider, a request for interconnection based on the RIO must be concluded within thirty (30) days of such a request for interconnection unless otherwise agreed between the licensees.*~~
> ~~*(vi) A licensee identified in sub-regulation (4) must publish the approved version of its RIO on its website within five (5) days of receiving notice of approval from the Authority.*~~
>
> ~~*Annexure B*~~

5.2 Should ICASA decide to retain the RIO requirement, then it should apply to all SMP Licensees

Notwithstanding our recommendation that the RIO requirement be removed, we also remain of the view (see our 11 January 2022 submission on page 39) that, should ICASA decide to retain this requirement, then it should apply symmetrically across all SMP Licensees. This would be consistent with ICASA's Finding that all Licensees have 100% market share for wholesale mobile call termination services on their respective networks. Any other approach would be clearly irrational.

As we explained above, the explanation in the Findings (s4.6.5.2) is based on a flawed market share analysis where market shares were calculated mistakenly for termination across all networks.

> "*... a RIO obligation must be imposed on Vodacom, MTN and Telkom, because the three licensees still continue to benefit from economies of scale and scope, with each licensee maintaining a share of greater than 20% of the total terminated minutes in South Africa*"

Notwithstanding this fundamental flaw, economies of scale and scope are also totally irrelevant when deciding on a RIO as a means to "*impose appropriate pro-competitive licence conditions on those licensees having significant market power to remedy the market failure*". Practically, it is important that all Licensees provide sufficient information and requirements, in order to allow the interconnection seeker to plan for interconnection and be in an informed position to start interconnection negotiations. Such provisions expedite the conclusion of agreements.

5.3 Price control terms and conditions at Draft Regulation 7 and Annexure A could be simplified

5.3.1 Annexure A could be deleted in its entirety

ICASA used regulation 7(5)(b) and Annexure A of the Regulations to distinguish between regulated maximum:

- MTRs for Vodacom and MTN (R7(5)(b), Table 1) vs other mobile services providers (Annexure A, Table A1)
- FTRs for Telkom (R7(5)(b), Table 1) vs other fixed services providers (Annexure A, Table A2)

Current FTRs in Tables 1 and A2 are already symmetric, and Annexure A therefore superfluous in this regard. Further, since asymmetry in MTRs will be removed by 1 July 2025, Annexure A will also become superfluous for MTRs. We recommend that ICASA simplify the Draft Regulations by deleting Annexure A in its entirety, and instead deal with asymmetry in the transitional period under Draft Regulation 7. Please see below how this can be done.

5.3.2 There is no longer a need to justify asymmetric MTRs during the transitional period based on Draft Regulation 7(3)

It is clear from the Regulations that Vodacom and MTN can currently charge a maximum MTR of R0.09 and all other mobile service providers can currently charge a maximum MTR of R0.13. The Findings (s4.7.10.4) make it clear that the transitional 12-month period is "to minimise the shock" for mobile service providers other than Vodacom and MTN to move to maximum MTRs that are symmetric with the maximum MTRs of Vodacom and MTN.

Draft Regulation 7 can therefore be simplified us proposed under D5.3.3 below.

5.3.3 The Draft Regulations 7(2) and 7(5)(b) be simplified as follows:

"7. Pro-competitive terms and conditions

(2) In order to address the market failures identified in sub-regulation (1) above, an ECNS and ECS licensee must charge fair and reasonable prices for wholesale voice call termination ~~consistent with Annexure A~~, i.e.:
(a) Mobile termination rates not exceeding the cost-based rates contained in tables 1 and 2;
(b) Fixed termination rates not exceeding the cost-based rates contained in table 3; and
(c) International mobile termination rates not (i) less than the rates contained in table 1 and 2 below; or (ii) higher than the rates offered by an international operator to terminate, on Non-South African mobile numbers, voice calls originating from S.A. numbers.
(d) International fixed termination rates not (i) less than the rates contained in table 3 below; or (ii) higher than the rates offered by an international operator to terminate, on Non-South African fixed geographic or Non-South African fixed non-geographic numbers, voice calls originating from S.A. numbers. We stress the submissions made above that the statutory prerequisites for setting rates for ITRs have not been met, and that doing so is legally incompetent in the circumstances.

To ensure the correct application of this Regulation, Licensees or persons providing the service pursuant to a licence exemption should receive a valid CLI assigned to every incoming call. If the CLI is missing, invalid or fraudulent, Licensees or persons providing the service pursuant to a licence exemption would not be bound to apply regulations 2(a), 2(b), 2(c) or 2(d) to wholesale voice call termination services, and will, instead, have complete pricing freedom.

Table 1: Mobile termination rates (without VAT) per minute, charged on a per second basis

Period	*MTN (Pty) Ltd (MTN) Vodacom (Pty) Ltd (Vodacom)*	*Licensees* other than Vodacom, MTN, New Entrant*	*New Entrant Licensees ***
1 July 2024 to 30 June 2025	*R0.07*	*R0.09*	*R0.07*

Table 2: Mobile termination rates (without VAT) per minute, charged on a per second basis

Period	*Licensees* other than New Entrant*	*New Entrant Licensees ***
1 July 2025 onwards	*R0.04*	*R0.07*

Table 3: Fixed termination rates (without VAT) per minute, charged on a per second basis

Period	*Licensees* other than New Entrant*	
1 July 2024 to 30 June 2025	*R0.04*	
1 July 2025 onwards	*R0.01*	

**** Or persons providing the service pursuant to a licence exemption***
*****New Entrant Licensees will qualify for asymmetry for a limited period of three years from the time of entry into the relevant market as defined in regulation 3a of the Regulations.***

~~*5(b) Price Control: Cost-based pricing:*~~
~~*(i) A licensee identified in sub-regulation (4) must charge wholesale voice call termination rates to a mobile or fixed location as specified in Table 1*~~
~~*Table 1: Termination Rates*~~
~~*(ii)A licensee identified in sub-regulation (4) must charge reciprocal international termination rates for voice calls originating outside of South Africa. The International termination rates charged by a licensee must not be: (a) less than the domestic regulated termination rates; or (b) higher than the international termination rates offered by an international operator.*~~
~~*(iii)New entrants will qualify for asymmetry for a limited period of three years after entry into the market.*~~
~~*Table 2: Termination Rates for New Entrants*~~

~~*"Annexure A:*~~
~~*APPLICATION OF THE FAIR AND REASONABLE OBLIGATION*~~

5.4 Draft Regulation 7(3) and 7(4) are no longer required and should be removed

Further to our proposed uncoupling of the price control for domestic calls from Draft Regulation 7(3) and given our explanation above that all Licensees should be required to publish a RIO (or the requirement should be removed entirely), Draft Regulation 7 can be simplified further by the deletion in its entirety of Draft Regulation 7(3). This is because there should not be any regulations that apply only to Licensees with a market share of more than 20% of total minutes terminated.

~~*(3) In addition to sub-regulation (2), the Authority has determined that additional pro-competitive terms and conditions are necessary to correct the market failures identified in sub-regulation (1), which are to be imposed on the following types of licensees:*~~

~~(a) A licensee that benefits from economies of scale and scope with a share of total minutes terminated in the wholesale voice call termination markets with more than 20% of total minutes terminated to a mobile location as at 31st December 2016.~~

~~(b) A licensee that benefitted from economies of scale and scope with a share of total minutes terminated in the wholesale voice call termination markets with more than 20% of total minutes terminated to a fixed location as at 31st December 2016.~~

~~(4) The Authority has determined that the following licensees have the characteristics mentioned in sub-regulation (3):~~

~~(a) Mobile termination markets:~~

~~(i) MTN (Pty) Ltd (MTN)~~
~~(ii) Vodacom (Pty) Ltd (Vodacom)~~

~~(b) Fixed termination markets:~~

~~(i) Telkom SA SOC Limited (Telkom)~~