

ASSESSING THE ELECTRONIC COMMUNICATIONS AMENDMENT BILL

Part II: Assessment of the Economic Basis for the Bill's Amendments

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EXECUTIVE SUMMARY

In November 2017, the Department of Telecommunications and Postal Services (DTPS) of the Government of South Africa published an invitation to provide comments on the Electronic Communications Amendment Bill (the "Bill") hereinafter).

The Bill includes a number of significant amendments to the Electronics Communications Act (ECA). In light of this, Frontier Economics has been asked to provide an economic assessment of the Bill. Our assessment is composed of two parts:

- **Part I:** An assessment of the economic impact that the package of Bill amendments will have on the mobile sector and the wider economy; and
- **Part II:** An assessment of the economic basis for the amendments.

This report covers Part II, drawing on evidence from Part I (the "Impact Assessment"), where relevant. In particular, we:

- assess the economic basis for the Bill amendments, focusing on the extent to which they i) are likely to achieve what they set out to achieve and ii) are backed up by sound economic justification; and
- consider the extent to which amendments in two key areas – spectrum allocation and cost-oriented access obligations – are consistent with economic principles and regulatory best practice.

Below we summarise our key findings.

The Bill is unlikely to achieve its stated purpose

The main objective of the Bill¹ is to support the Government's long-term policy objectives for the ICT sector in South Africa. The key objectives that relate to the development of the mobile market in South Africa are shown in **Figure 1** below, which also summarises the impact of the Bill against these objectives. As **Figure 1** sets out, we find that the Bill is unlikely to support these objectives and hence achieve its stated purpose.

¹ The Bill, amendment 2a, p.12

Figure 1 Assessment of the Bill against Government objectives

Objective	Impact of the Bill
<p>Increase broadband coverage in rural and underserved areas</p>	<p>Lower coverage due to:</p> <ul style="list-style-type: none"> ▪ Limited access to additional spectrum (including low frequency) during the transitional period until WOAN is functional. ▪ Lower ability for existing operators to invest in new sites due to limited access to new spectrum. ▪ Lower incentives for existing operators to invest due to number of measures that impact on expected returns, including imposition of cost-oriented access obligations and prospect of having to return spectrum.
<p>Reduce the costs of communications services to end-users, including the promotion of infrastructure sharing and access</p>	<p>Higher prices due to:</p> <ul style="list-style-type: none"> ▪ Slower migration to new technologies due to lack of competitive pressure on the WOAN and limited ability/incentives of existing operators to invest. ▪ More inefficiencies at the network level due to lack of competitive pressure on the WOAN. ▪ Higher margins at the network level due to lack of competitive pressure on the WOAN and imperfect regulation.
<p>Promoting investment and innovation in the sector</p>	<p>Less investment and innovation due to:</p> <ul style="list-style-type: none"> ▪ Lower ability and incentives for existing operators to invest (see above). ▪ Lower incentives for the WOAN to make efficient and timely investments in the long-run due to lack of competition at the network level. ▪ Limited ability of downstream service providers to innovate due to lack of control over underlying network.
<p>Enhancing service-based competition, to increase consumer choice</p>	<p>Likely limited impact relative to “no Bill” scenario:</p> <ul style="list-style-type: none"> ▪ retail competition would be promoted via the competitive WOAN which would compete alongside existing operators, and further strengthened through MVNO obligations under the ICASA ITA; and ▪ Potentially less effective retail competition due to limited competition at wholesale level.
<p>Redressing market dominance and control</p>	<p>Significant risk of establishment of a dominant WOAN which would increase in market concentration at the wholesale level.</p>

The Bill contains a number of measures that are arbitrary and/or lack a reasonable analytical or economic basis

The Bill introduces a series of measures, including ex ante interventions, without clear justification. These include:

- the requirement that unreleased high-demand spectrum be awarded first to the WOAN;
- the return of already assigned spectrum to ICASA;
- the requirement that spectrum is assigned on a non-exclusive basis;
- the requirement that certain operators (including all operators with exclusive spectrum licences) provide cost-oriented wholesale access; and
- incorporating into the ECA the SADC Roaming Policy Guidelines (agreed to by SADC ministers) which include the requirement that prices for all roaming services (i.e. wholesale and retail) should be cost-based.

Regarding the first two measures relating to the allocation of spectrum, we understand that these are intended to facilitate the establishment and longer-term viability of the WOAN. However, by constraining operators' access to spectrum, the Bill is likely to have a significant negative impact on investment during the transitional period, before the WOAN has become established. At the same time, the government has not demonstrated that the measures introduced by the Bill will deliver material benefits that will justify the costs. Similarly, the assignment of spectrum on a non-exclusive basis would make it difficult for network operators to manage interference and would most likely lead to a reduction in quality of service. It also goes against international best practice.

In terms of the cost-based access and roaming obligations, the importance of conducting market reviews prior to imposing ex-ante remedies such as these is well-established and is a key principle of international best practice. This is because regulatory interventions can give rise to market distortions which could lead to worse outcomes for consumers. Before implementing any regulatory measures/remedies, it is therefore important to conduct a detailed market investigation to first identify any market failures and potential regulatory measures/remedies, and then assess the likely impact of such measures/remedies. The Priority Markets review should help to facilitate this process by identifying the markets that are susceptible to ex-ante regulation.

In addition to lacking an analytical basis, certain aspects of the proposed remedies appear entirely arbitrary. In particular, the Bill specifies that open access obligations will apply to any licensee that (among others):²

- has more than 25% of the total electronic communication infrastructure in such a market; or

² The Bill, amendment 31d, p.63

- controls a scarce resource, such as exclusively assigned radio frequency spectrum.

Whilst a substantive market share may, in certain circumstances, be indicative of market power, there is no basis for the 25% market-share threshold. Under the EU regulatory framework, access obligations may be required where telecommunications operators are found to be dominant, which typically requires a market share above 40-50%. In addition, the majority of mobile markets within the EU have three or four players (and hence MNOs with market shares of above -and in many cases well above - 25%,) yet wholesale access regulation is rarely observed in EU Member States. Furthermore, access to spectrum does not lead to market power. On the contrary, it is rare for MNOs in telecoms markets to be found to have market power, despite all of them having generally exclusive access to spectrum. Thus making exclusive access to spectrum an automatic trigger for imposing access remedies is also arbitrary.

The decision to apply cost-based regulation to international roaming is similarly arbitrary and unjustified. International roaming is a highly complex area of regulation, not least due to the fact that it applies in relation to services provided in other jurisdictions and is likely to give rise to significant distributional impacts between consumers in different countries. In particular, regulating retail roaming charges at “cost” is, to our best knowledge, unprecedented and could result in higher domestic call charges due to the “waterbed effect”. Further, it would limit operators’ ability to design tariffs in response to consumers’ needs. As such it is important to carefully consider the likely impacts before imposing regulations of this sort.

1 INTRODUCTION

In November 2017, the Department of Telecommunications and Postal Services (DTPS) of the Government of South Africa published an invitation to provide comments on the draft Electronic Communications Amendment Bill (the "Bill" hereinafter).

The Bill includes amendments to the Electronics Communications Act (ECA) which will have a major impact on the future structure and functioning of communications markets in South Africa, including the market for mobile services. These include amendments related to the creation of a Wireless Open Access Network (WOAN) and a potential reallocation of existing high demand spectrum usage rights of Mobile Network Operators (MNOs) before the expiry of existing licences. The Bill also introduces a number of other institutional and regulatory changes.

In light of this, Frontier Economics has been asked to provide an economic assessment of the Bill. Our assessment is composed of two parts:

- **Part I:** An assessment of the economic impact that the package of Bill amendments will have on the mobile sector and wider economy; and
- **Part II:** An assessment of the economic basis for the amendments:
 - can they achieve what they are purporting to aim to achieve;
 - do they have a reasonable analytical or economic basis; and
 - are they consistent with one another and can work practically?

This report covers Part II, but drawing on evidence from Part I (the "Impact Assessment"), where relevant. In the rest of this report we:

- assess the overall package of Bill amendments against each of the above criteria; and
- consider the extent to which amendments in two key areas – spectrum allocation and cost-oriented access obligations – are consistent with economic principles and regulatory best practice.

2 ASSESSMENT OF THE PACKAGE OF AMENDMENTS AGAINST KEY CRITERIA

2.1 The ability of the Bill to achieve its main objectives

The main objective of the Bill³ is to support the Government's long-term policy objectives for the ICT sector. Our assessment of the impact of the Bill amendments in Part I indicates that the Bill is unlikely to support a number of objectives that relate to the development of the mobile market in South Africa. This is shown by **Figure 2** below which summarises the impact of the Bill against these objectives.

Figure 2 Assessment of the Bill against Government objectives

Objective	Impact of the Bill
Increase broadband coverage in rural and underserviced areas	Lower coverage due to: <ul style="list-style-type: none"> ▪ Limited access to additional spectrum (including low frequency) during the transitional period until WOAN is functional (which will likely take longer than the expected release of 700 MHz and 800 MHz spectrum from broadcasters by 2021). ▪ Lower ability for existing operators to invest in new sites due to: <ul style="list-style-type: none"> □ release of unassigned HDS delayed until the WOAN is functional; and □ majority unassigned HDS assigned to WOAN. ▪ Lower incentives for existing operators to invest due to: <ul style="list-style-type: none"> □ HDS to be assigned on a non-exclusive basis □ imposition of cost-oriented access obligations; and □ currently used spectrum to be returned.

³ The Bill, amendment 2a, p.12

<p>Reduce the costs of communications services to end-users, including the promotion of infrastructure sharing and access</p>	<p>Higher prices due to:</p> <ul style="list-style-type: none"> ▪ Slower migration to new technologies in both the transitional period and long-term due to lack of competitive pressure on the WOAN and limited ability/incentives of existing operators to invest. ▪ More inefficiencies at the network level due to lack of competitive pressure on the WOAN. ▪ Higher margins at the network level due to lack of competitive pressure on the WOAN and imperfect regulation. ▪ Potential impact of offsetting factors (possibility of greater service-based competition, less network duplication and spectrum aggregation) very unlikely to counter negative impact on prices.
<p>Promoting investment and innovation in the sector</p>	<p>Less investment and innovation due to</p> <ul style="list-style-type: none"> ▪ Lower ability and incentives for existing operators to invest (see above). ▪ Lower incentives for the WOAN to make efficient and timely investments in the long-run due to lack of competition at the network level. ▪ Limited ability of downstream service providers to innovate due lack of control over underlying network.
<p>Enhancing service-based competition, to increase consumer choice</p>	<p>Likely limited impact relative to “no Bill” scenario:</p> <ul style="list-style-type: none"> ▪ retail competition would be promoted via the competitive WOAN which would compete alongside existing operators, and would also be wholesale-only; and ▪ retail competition would be strengthened through MVNO obligations under the ICASA ITA, and additional measures following the ICASA priority markets inquiry. <p>Potentially less effective retail competition due to:</p> <ul style="list-style-type: none"> ▪ Limited competition at wholesale level means that retail providers will be limited in the extent to which they can differentiate their product offerings from competitors, resulting in less diversity and consumer choice.
<p>Redressing market dominance and control</p>	<p>Significant risk of establishment of a dominant WOAN which would increase in market concentration at the wholesale level.</p>

The Bill also runs contrary to the objective of encouraging deployment and use of high speed data services by depriving the MNOs of spectrum capacity until the WOAN becomes functional.

In terms of the materiality of the impact, quantitative modelling from our Impact Assessment (which estimates the impact of the Bill relative to a scenario in which

network competition is maintained) indicates that the negative impact on key consumer outcomes would be substantial:⁴

- **unit prices will decline at a slower pace** under the “Bill scenario” and as a result will end up more than **30% higher by 2030 than they would be under the “no Bill scenario”**;
- higher data prices together with lower data usage (resulting from higher prices) would lead to a **loss in consumer benefits** (surplus) under the “Bill scenario” of **ZAR153bn** in net present value terms; and
- even once the potential positive effect in terms of reduced network costs is taken into account, the net impact on consumer surplus is still large and negative – in the region of **ZAR107-153bn**.

In addition, Northstream has estimated that by 2025:

- the average speed is **68% lower** under the “Bill” scenario; and
- Vodacom’s **4G population coverage is 10 percentage points lower** and its **4G area coverage is 39 percentage points lower** compared to the “no Bill scenario”. The impact of the Bill on other operators is even greater because they are less advanced with their 4G roll-out relative to Vodacom.

Overall, the Bill will likely lead to consumer outcomes that are inconsistent with the Government’s long-term policy objectives for the mobile sector. In particular, we would expect the Bill to lead to higher prices, slower transition to next generation mobile technologies (with higher mobile broadband speeds), and less innovation, compared to what would be achievable in its absence.

2.2 Considering the economic justification of specific measures within the Bill

The Bill introduces a series of measures and ‘remedies’ without clear justification.

In particular, in relation to spectrum allocation, the Bill sets out that:

- unassigned high-demand spectrum will be awarded first to the WOAN, with the Minister determining the spectrum to be assigned⁵ (though the White Paper sets out that the WOAN will be allocated all unassigned HD spectrum);⁶
- any remaining unassigned HD spectrum to be released only after the WOAN is functional⁷;
- already assigned spectrum is to be returned to ICASA, with the terms and timeframe subject to review;⁸ and

⁴ The key assumption underpinning this analysis is that, as a result of the Bill, migration to newer technologies takes place at a slower pace between 2020 and 2025, such that it takes 5 years in the “Bill scenario” to achieve the same progress in terms of transition to next generation technologies as 1 years’ worth of progress in the “no Bill scenario”.

⁵ Bill, Section 31E, p.51

⁶ The WP, p.91

⁷ Bill, Section 31E, p.51

⁸ Bill, Section 31E, p.51

- HD spectrum is to be assigned on a non-exclusive basis.

In addition, the Bill includes a number of significant ex-ante interventions:

- the requirement that all operators that are “deemed entities” (as defined under the Bill) provide cost-oriented wholesale access to their networks and facilities;⁹
- the requirement that all licensees that are vertically integrated must undertake accounting separation;¹⁰ and
- incorporating into the ECA the SADC Roaming Policy Guidelines which include the requirement that prices for all roaming services (i.e. wholesale and retail) should be cost-based (the Bill also sets out that these principles should also apply mutatis mutandis to international roaming to any other jurisdiction).¹¹

Regarding the first three measures relating to the allocation of spectrum, we understand that these are intended to facilitate the establishment and longer-term viability of the WOAN. However, as we explain in our Impact Assessment (and in Section 3.1 below), the Bill’s proposed measures for spectrum allocation carry significant downside risks. In particular:

- by constraining operators’ access to spectrum and undermining certainty of tenure for licenses, the Bill is likely to have a significant negative impact on investment during the transitional period, before the WOAN has become established; and
- by granting unassigned HD spectrum to the WOAN first and requiring that all assigned spectrum is returned to ICASA, the Bill will undermine the ability of other MNOs to compete and will facilitate the establishment of the WOAN as a dominant operator.

At the same time, the government has not demonstrated that the above measures will deliver material benefits that will justify these risks.

Similarly, as we explain in more detail in Section 3.1, the assignment of spectrum on a non-exclusive basis would cause significant issues. In particular, it would make it difficult for network operators to manage interference and would most likely lead to a reduction in quality of service. It also goes against international best practice. It is vital that before any proposal or decision is made to move away from the well-established practice of exclusive spectrum assignment, which has a clear economic and technical basis, is backed up by robust analysis which clearly demonstrates that the benefits outweigh the potential costs and sets out how/if this would work in practice.

In terms of the ex-ante interventions made by the Bill, the importance of conducting market reviews prior to imposing remedies such as these is well-established. Indeed, Chapter 10 of the ECA requires that ICASA carry out a detailed assessment of the relevant market before imposing any pro-competitive

⁹ Bill, amendment 29(b), p.60

¹⁰ Bill, Section 43(1A)

¹¹ Bill, Section 42A, p.57

measures, in line with international best practice (see ANNEX A). This is because regulatory interventions of this sort can give rise to market distortions which could lead to worse outcomes for consumers.

Before implementing any regulatory remedies, it is therefore important to conduct a detailed market review to first identify any market failures and then assess the likely impact of any potential remedies that could be used to address them. This is particularly important when considering imposing cost-oriented open access, which is regarded as one of the most intrusive regulatory interventions as it can negatively affect investment incentives and therefore longer-term consumer benefits.

An important element of the market analysis is identifying whether any parts of the supply chain are likely to act as economic bottlenecks in the long-term – that is, essential facilities that are difficult to replicate. Indeed, the existing facilities leasing regime, as defined in Chapter 8 of the Act, specifies that leasing obligations only apply to facilities that “cannot feasibly (whether economically, environmentally or technically) be substituted or duplicated in order to provide a service...” Contrary to this, the Bill extends these obligations to “broadband infrastructure in the International Standardisation Organisation Open Systems Interconnect model layer 2 or layer 3 as prescribed by the Authority”, without demonstrating that these represent genuine bottlenecks in the supply chain.

Even before conducting a detailed market review, it is best practice to first establish whether the market is likely to be susceptible to ex-ante regulation. For example, the EC applies a “three criteria test” which considers whether i) there are high and non-transitory barriers to entry, ii) the market structure does not tend towards effective competition and iii) ex-post competition law would not address concerns. Indeed, identifying markets that are susceptible to ex-ante regulation is the express purpose of ICASA’s Priority Markets review that is currently underway. The Bill undermines this important process by introducing significant ex-ante interventions before the relevant set of markets has been identified.

In addition to lacking an analytical basis, certain aspects of the proposed remedies appear **entirely arbitrary**. In particular, the Bill specifies that open access obligations will apply to any licensee that (among others):¹²

- has more than 25% of the total electronic communication infrastructure in such a market; or
- controls a scarce resource, such as exclusively assigned radio frequency spectrum.

Whilst a substantive market share may, in certain circumstances, be indicative of market power, there is **no clear basis for the 25% market-share threshold**. Further, aside from being entirely arbitrary, international precedent would suggest that the proposed market-share threshold is most likely too low – for example, the majority of mobile markets within the EU have only three or four players (and

¹² The Bill, amendment 31d, p.63

hence MNOs with market shares of above - and in many cases well above - 25%,) yet wholesale access regulation is rarely observed in EU Member States.

Furthermore, exclusive access to spectrum does not imply the possession of market power. On the contrary, it is rare for MNOs in telecoms markets to be found to have market power, despite having exclusive access to spectrum. Thus making exclusive access to spectrum an automatic trigger for imposing access remedies is also arbitrary.

The decision to apply cost-based regulation to international roaming is similarly arbitrary and unjustified. International roaming is a highly complex area of regulation, not least due to the fact that it applies in relation to services provided in other jurisdictions and is likely to give rise to significant distributional impacts between consumers in different countries. In particular, regulating retail roaming charges at “cost” is, to our best knowledge, unprecedented and could result in higher domestic call charges due to the “waterbed effect.” Further, it would limit operators’ ability to design tariffs in response to consumers’ needs. As such, it is important to carefully consider the likely impacts before imposing regulations of this sort.

Furthermore, applying cost-oriented roaming obligations unilaterally is unjustified and, according to our best knowledge, unprecedented. A key reason for this is that unilateral price regulation will essentially result in domestic users facing a higher share of network costs in South Africa, without benefitting from similar cost reductions when using their mobile phones abroad.

In addition to the direct impact that interventions of this sort, which are not backed up by sound economic analysis, would have on the sector, they also leave open the possibility of similarly arbitrary interventions in the future. Further, the changes run directly counter to the good principles and intentions set out in the Government’s 2016 White Paper.¹³ This will undermine trust in the regulatory/legislative framework, increase regulatory uncertainty and reduce confidence more broadly.

2.3 Considering the practicality and consistency of specific measures within the Bill

In addition to the above issues with the Bill, we have identified a number of areas of internal inconsistency and impracticality relating to the implementation of specific measures:

- There is a **contradiction** in the fact that the Bill seeks to improve the market review process, whilst at the same time circumventing it by applying ex-ante regulation in certain areas automatically (as set out above).
- There is a further **contradiction** within the Bill between the aim of promoting the establishment of a WOAN, and the requirement of existing MNOs to provide cost oriented wholesale access to their network assets. Whilst

¹³ The WP, p.12

imposing cost-oriented access obligations should, in principle, make it attractive for MVNOs to enter the retail market before the WOAN becomes fully functional, it will also result in the dilution of MVNO demand across multiple networks, rather than it being concentrated on the WOAN. Lower network utilisation for WOAN will lead, all else the same, to it having higher unit costs, which would make WOAN less sustainable.

- By circumventing the market review process and imposing access obligations without any supporting analysis, the Bill goes against the principles set out on page 12 of the Government's 2016 White Paper, which form the basis for any market assessment and intervention. This includes the principles that "*any interventions must be proportionate, consistent and evidence-based and determined through public consultation*", that "*[t]he policy maker and regulator must consider the least intrusive mechanism to achieve the defined public interest goal/s*", that "*[t]he socio-economic and regulatory impacts of any action will be assessed and considered before imposing regulations, rules and/or conditions*" and that "*[t]he policy maker and regulator will act fairly and ensure regulatory parity in defining markets and deciding on interventions.*"
- By imposing ex-ante remedies via the Act, the Bill makes amending such remedies complicated and **impractical**. This is because any changes to the Act would need to go through a lengthy and complicated parliamentary process. In contrast, imposing these remedies instead through the existing market review process would allow changes to be made more quickly, in response to market developments.
- As well as being unjustified economically, the non-exclusive assignment of spectrum is **impractical** since it would be extremely challenging (most likely impossible) to co-ordinate usage under a non-exclusive licensing regime in such a way that avoids significant interference.
- Following from above, the Bill stipulates that ICASA can assign to mobile operators currently unassigned HD spectrum following the functioning of the WOAN – this **contradicts** the principle of assigning spectrum in the future on a non-exclusive basis.

3 DETAILED ASSESSMENT OF SPECIFIC MEASURES

This section considers in detail the specific measures contained within the Bill in relation to two key areas, which display a number of significant issues and are likely to have significant negative implications for consumer outcomes:

- Spectrum allocation; and
- Wholesale access and international roaming.

For each of these, we first summarise our understanding of the measures within the Bill and then set out how they go against fundamental economic principles and regulatory best practice

3.1 Allocation of spectrum

3.1.1 Our understanding of the Bill

Section 31E of the Bill sets out a number of measures relating to the allocation of unassigned HD spectrum¹⁴ - in particular, spectrum in the 700MHz, 800MHz, and 2.6GHz bands, suitable for 4G deployment.

As mentioned above, the Bill proposes that HD spectrum will first be allocated to the WOAN. Any remaining HD spectrum will then only be made available to other operators once the WOAN has become functional. At the moment, it is not clear how much HD spectrum will be assigned to the WOAN. Rather, the Minister will determine, within 6 months of the commencement of the Bill, which spectrum is to be earmarked for the WOAN.

The assignment of the HD spectrum that has not been assigned to the WOAN will be subject to a number of pre-conditions, which will apply to all operators:

- We understand that individual operators must first have to commit to renting at least 30% of the WOAN's capacity;¹⁵
- Operators must meet certain USO targets (covering rural and under-serviced areas) before they can use additional spectrum;
- New HD spectrum will be subject to principles of open access and non-exclusivity; and
- The Bill also introduces an amendment specifying that spectrum licences will be renewable annually, regardless of licence duration.¹⁶

¹⁴ The DB defines High Demand Spectrum as spectrum for which demand exceeds supply; or which is already fully assigned. This would most likely include all spectrum suitable for use by mobile operators. (See DB amendment 1(h))

¹⁵ 31(E)5 of the Bill sets out that licensees must acquire "a minimum of 30% capacity or such higher capacity, as determined by the Authority, in the wireless open access network" but it is not clear whether this refers to 30% of the WOAN's capacity or 30% of the licensee's capacity

Furthermore, the Bill sets out that all HD spectrum (including already released and as yet unreleased spectrum) is to be returned to ICASA at some point in the future, with the timeframe and terms and conditions for the transfer of this spectrum to be determined within two years of the commencement of the Bill.

3.1.2 Consistency with economic principles and regulatory best practice

Spectrum is a scarce resource and to maximise the benefits from its use for consumers and businesses, it needs to be allocated between uses (i.e. mobile, broadcasting, military etc.) and users (e.g. different mobile network operators or broadcasters) in a way that will maximise the value of the production of the goods or services where spectrum is used as an input. Below, we set out how measures within the Bill undermine this economic principle:

Delaying the release of spectrum would be detrimental for consumers

Awarding HD LTE spectrum for mobile use, including the 2.6GHz spectrum which is available to be deployed immediately, would bring significant benefits to consumers in South Africa.

- It would enable faster deployment of new technologies (4G/5G), allowing consumers to enjoy the benefits sooner;
- The release of more low frequency spectrum will help to extend coverage and bring high quality data services to remote / rural areas. This would help to achieve the Government's vision for a "*widespread communication system that will be universally accessible across the country*", as set out in South Africa Connect; and
- The release of more high frequency spectrum will help operators to increase capacity to meet growing demand for data, especially in urban areas.

As set out in Section 2 above, the Bill would result in a delay in the release of high demand spectrum compared to the alternative scenario, where the spectrum would be expected to be released imminently through an auction process, as set out by ICASA's ITA. As such, the Bill would delay the delivery of the above benefits, to the detriment of consumers.

Allocating the majority of HD spectrum to the WOAN would most likely be inefficient

A spectrum award process would be expected to lead to an efficient outcome, as long as:

- spectrum is awarded to operators who can put it to the most productive use and deliver services to end users in a cost efficient way; whilst

¹⁶ Bill, amendment 21c, p.45

- at the same time, competition and the incentive to invest and innovate are not hampered as a result of the award process.

Under such a process, the three criteria of economic efficiency (productive, allocative and dynamic) are balanced in a way that maximises overall welfare. Auctions are the preferred method for the allocation of scarce resources such as spectrum, since they allocate resources to the bidders who value them the most and, therefore, will be able to use them most efficiently. In addition, there are a number of mechanisms that can be used to promote or maintain competition through an auction (such as spectrum caps, the reservation of spectrum for a new entrant and the pre-packaging of spectrum into lots).

The Bill is expected to result in a large share of the spectrum being directly allocated to the WOAN, at terms that are not necessarily reflective of the market value of spectrum. This is highly unlikely to represent an efficient allocation - whilst we recognise that it is important that the WOAN is granted sufficient spectrum to make it viable, this needs to be weighed against the fact that existing operators are currently well-placed to use this additional spectrum and would be able to put it to productive use relatively quickly (in particular, by expanding capacity and coverage of 4G services).

Further, it is important to consider the potential harm to competition - as we have set out in our Impact Assessment, allocating the majority of unassigned HD spectrum to the WOAN would undermine MNOs' ability to compete (particularly in the provision of high-speed mobile broadband services) and facilitate the establishment of the WOAN as dominant operator.

Further, as Martin Cave sets out in his expert report (submitted with Vodacom's response), it is generally preferable for a technical implementing body (such as ICASA), rather than a government department, to be responsible for managing the allocation of a valuable scarce resource such as spectrum

"Access to such a valuable resource is often very contentious, and the assignment is often better done by a technical implementing body than by a government department, which is inevitably subject to pressure from applicants and other interested parties."¹⁷

Long licences, with certainty of tenure are important drivers of investment

Licence duration is an important driver of investment incentives, since it determines the length of time for which operators are able to earn a return. It is highly desirable that licences are of sufficient duration to ensure that operators are confident that they will be able to recover the costs of associated network investments, which are likely to have long payback periods. This is reflected by the fact that many countries including Canada, New Zealand and the UK have adopted minimum terms of 20 years. Furthermore, the European Commission has proposed to introduce a requirement that spectrum licences granted by Member States have a minimum term of 25 years, noting that *"long-term licence*

¹⁷ Martin Cave, The South African Government's Draft Bill: some high level comments, p. 6

durations... will increase stability and certainty of investments as well as innovation requirements.”¹⁸

It is also important that operators have certainty of tenure for the duration of the licence. Revoking licences early and making future licences subject to an annual renewals process is likely to counteract the potential dynamic efficiency benefits associated with long licence periods, by undermining certainty of tenure.

The Bill creates significant uncertainty regarding the duration of spectrum licences, which will undermine investment incentives. In particular, there is a risk that measures relating to the return of all high demand spectrum will result in existing spectrum licences being revoked prior to the end of the current licence period (2029). Additionally, the Bill sets out that new licences will be renewable on an annual basis, regardless of licence duration and it is unclear at this stage what the conditions of renewal will be.

The Bill states that compliance for universal service obligations is a condition of renewal but not that this would guarantee it.¹⁹ ICASA will be responsible for prescribing renewal procedures and criteria and that licences will be required to submit an annual report detailing, amongst a number of other things “*alignment of its network plans with national objectives and targets*” and “*achievement of spectrum licence obligations*”²⁰ Uncertainty around renewals will further undermine licensees’ incentives to invest in their networks. This is reflected in the fact that licence regimes in a number of other countries operate on a “presumption of renewal” basis.²¹ For example, in the UK, licences can only be revoked after a minimum period on spectrum management grounds and subject to a minimum notice period.

Exclusive use of mobile spectrum is supported by economic and technical reasons

As we set out below in Section 3.2, cost-oriented open access obligations are likely to further undermine the ability of operators to make a return from network investments. It is not clear from the measures as they are currently drafted, how open access would apply to spectrum – in particular, whether licensees would be required to offer spectrum to other operators directly, through some form of spectrum leasing agreement, or only indirectly through active wholesale access products such as roaming agreements.

Either way, this is likely to create uncertainty around the ability to make a return on the network investments that make use of this spectrum, which will negatively impact investment incentives. In addition, the Bill provides no clarity on how licensees might make use of spectrum that has been returned to the authority for use on an open access basis, which will further contribute to uncertainty around operators’ ability to make a return. For example:

¹⁸ European Commission (2016), Proposal for a Directive of the European Parliament and of the Council establishing the European Electronic Communications Code, Impact Assessment, p.104

¹⁹ The Bill, Section 31A(b)

²⁰ The Bill, Section 30(1)(i)

²¹ https://www.gsma.com/spectrum/wp-content/uploads/2016/11/spec_best_practice_ENG.pdf

- Will access be based on the demand for its use on a daily, weekly, or other time basis?
- Will any licensee have the right to use it at any time, in any area?
- How will open access measures impact on current arrangements which allow licensees to offer roaming on its network build utilising exclusively assigned spectrum?

Further, the proposed non-exclusive assignment of spectrum under the Bill would make it extremely difficult for operators to guarantee service delivery and quality. As Vodacom sets out in its submission that, *“until there are global standards that enable interference management and spectrum efficient optimisation under conditions of non-exclusive assignment, and widespread adoption of the technology, non-exclusive assignment of spectrum will create technical problems for any licensee, including the WOAN”*²² and as such *“spectrum needs to be assigned on an exclusive basis to avoid interference, achieve effective use and allow for proper network planning and setup of device and radio equipment.”*²³ It is for this reason that it is standard practice around the world for the high demand spectrum frequencies used by mobile networks to be assigned on an exclusive basis.

At the same time, Vodacom notes that network operators already employ sophisticated techniques that allow the same frequency to be used fully in all adjacent mobile cells, without interference²⁴ and that the opportunity to realise any further gains through sharing is therefore likely to be limited. Further, it is much easier to manage the usage of a particular frequency band across multiple adjacent cells when it is controlled by a single operator.

Thus by removing the right to exclusive use of spectrum, the Bill would significantly increase the risk of interference (which would have a detrimental impact on service quality and reliability) and encourage inefficient use of spectrum. In doing so, it diverges from a well-established and universally adopted practice, which has a clear economic and technical basis.

3.2 Wholesale access and international roaming

3.2.1 Wholesale open access

Our understanding of the Bill

The new section 43(1) sets out that

“(1) All electronic communications network service licensees must provide wholesale open access to their electronic communications networks and facilities, upon request, to any other person licensed in terms of this Act and persons providing services pursuant to a licence exemption in accordance with

²² Vodacom response, Section 5.4

²³ Ibid

²⁴ Ibid

the terms and conditions of a wholesale open access agreement entered into between the parties, in accordance with the general open access principles.”

The definition of “*electronic communications networks*” in this context is extremely broad and covers “*any system of electronic communications facilities (excluding subscriber equipment).*” This represents a significant change relative to the current access provisions within Chapter 8 of the ECA, which are confined to passive infrastructure.

The Bill introduces further obligations for “deemed entities” that are defined under the new section 44(3A) as follows:

“(3A) For purposes of the determination of deemed entities as contemplated in subsection (3), the Authority must—

- (a) following the definition of markets as contemplated in section 67(3A), determine in respect of infrastructure markets, which electronic communications network service licensee, if any, has significant market power in such market or has an electronic communications network that constitutes more than twenty-five percent of the total electronic communication infrastructure in such market, following which such electronic communications network service licensee is regarded as a deemed entity;*
- (b) determine which electronic communications network service licensee, if any, controls an essential facility or a scarce resource such as exclusively assigned radio frequency spectrum, following which such electronic communications network service licensee is regarded as a deemed entity.”*

“Deemed entities” are required under section 43(1) to provide access to their networks at “cost-based” prices and to offer “*active infrastructure sharing that includes but not limited to national roaming, radio access network sharing and enabling mobile virtual network operators, for voice and data based on the latest generation of technologies.*”

In addition to significantly expanding the scope of the existing leasing arrangements under Chapter 8, and imposing cost-based pricing obligations for certain communications providers, the Bill removes the right of operators to refuse access on technical and economic feasibility grounds.

Consistency with economic principles and regulatory best practice

Access obligations can be a way of trying to promote competition, by making it easier for operators that may not possess certain key infrastructure assets to offer retail services – for example, passive remedies can make it easier to deploy backhaul, by giving operators access to duct and pole infrastructure which, due to its high sunk costs, represents a potential bottleneck in network deployment.

However, access remedies are also a particularly intrusive form of regulation that can undermine the incentives of operators to invest. In particular, where there is mandated access to all services (including active services based on new technologies) any competitive advantage that an investment might bring would also be available to access seekers, whilst the risks would be borne exclusively

by the host MNO. The potential harm to investment incentives is especially acute where access is required at “cost-based” pricing, as is the case for “deemed entities” (which includes spectrum licensees and hence all MNOs) under the Bill.

As such, cost-based access obligations are typically regarded as a “last resort” measure for regulating markets with significant, non-transitory barriers to effective competition. Below we set out that:

- Extending the scope of access obligations to cover all network facilities is unjustified;
- Requiring “cost-based” pricing will significantly undermine the ability of operators to recover the costs of investments in new technologies; and
- International precedent does not support the imposition of wholesale access in mobile networks in markets with the same characteristics as South Africa.

Any broadening of the scope of access obligations should be justified by careful market analysis

Given the significant dampening impact that access regulation can have on investment, it is vital that regulators take into account the specific characteristics of the market and products in question when deciding whether access obligations are appropriate.

An important first step in this analysis is an assessment of the relevant retail market. If, absent regulation upstream, the retail market is delivering good outcomes, then there is no need to further intervene in wholesale markets, as it would be unclear what the purpose of further intervention would be, whilst it would risk undermining the positive outcomes already present in the retail-market. In its recent proposals for reforming the regulatory framework, the EC highlighted that ex-ante regulation should only be used when there is a lack of effective competition in the retail market absent that regulation:

“The amendments also ensure that access obligations are imposed only where in the absence of those obligations one or more retail markets would not be effectively competitive and to assure positive end-user outcomes. In other words, wholesale access regulation is not an end in itself, but should only be imposed only if end-user markets cannot function effectively without it (Article 65(4)).”²⁵

If competition concerns are identified at the retail level, an important next step is to identify any bottle-neck facilities, that is, parts of network infrastructure, which are difficult to replicate, either for financial, technical, regulatory or legal reasons. It is important to focus regulation on these parts of the supply chain, in order to minimise the potential distortionary effects. Indeed, the OECD has stated that *“it is typically considered that regulation should focus on ensuring access to bottlenecks in order to facilitate development of competition in downstream markets”²⁶*

²⁵ European Commission (2016), Review of the Electronic Communications Regulatory Framework Executive Summary 1: Access to networks, p. 2

²⁶ OECD (2014), Defining the relevant market in telecommunications, Chapter 2, p.14

Thus, by extending the scope of access obligations to essentially cover communication providers' entire networks, systems and services without first identifying the relevant bottlenecks that would justify such a wide-ranging intervention, the Bill diverges from a core principle of regulatory best practice. In reality, the fact that mobile operators in markets around the world compete at all levels of the supply chain and that network access regulation is not widely observed internationally, indicates that genuine bottlenecks (that would justify such an intervention) are rare in mobile networks.

We also note that many of the potential benefits of wholesale network access - in particular, maximising the use of scarce resources, reducing asset duplication, increasing availability and enhancing retail competition, can be achieved through commercially negotiated leasing agreements and network sharing arrangements. In many countries around the world, including South Africa, operators have voluntarily entered into commercially negotiated agreements to share certain parts of their network infrastructure, without the need for regulatory intervention.

Requiring “cost-based” pricing could undermine the ability of operators to recover the costs of investments in new technologies

As we set out above, the Bill imposes even more onerous obligations on “deemed entities” (which covers all spectrum licensees) without justification. Requiring such entities to provide access at “cost-based” pricing would impact on their ability to recover the costs associated with major new investments, particularly those based on next generation technologies that carry considerable risks. This is because standard cost-based regulation would reduce the potential returns that operators can make from these investments if they are successful, but may not compensate them for the risk of failure (i.e. if demand turns out to be lower than expected or costs higher than expected).

In addition, setting appropriate price controls also relies on the regulator being able to make accurate forecasts of volumes and costs, which is particularly difficult in fast moving sectors, such as telecoms. This will be especially problematic in South Africa if the Bill is introduced, since it contains a number of measures that will have a profound impact on the evolution of the market and create significant uncertainty.

There is, therefore, a substantive risk of regulatory error, which could further undermine investment incentives if prices are set at a level that does not allow operators to recover efficiently incurred costs (e.g. if volumes turn out to be lower than expected). Further, even if the regulator is able to estimate costs with reasonable accuracy, setting the level of the price control with reference to the costs of large/established MNOs would harm the ability of smaller/ new entrant MNOs to compete, since they will not enjoy the same economies of scale and scope and will therefore have higher unit costs.

The EC recognised the importance of allowing a fair return on network investments in its 2013 recommendation for the regulation of next generation access (i.e. fibre broadband). The EC noted that “*due to current demand uncertainty regarding the provision of very-high speed broadband services it is*

*important in order to promote efficient investment and innovation to allow those operators investing in NGA networks a certain degree of pricing flexibility...*²⁷ It also noted that *“Reliance on cost-orientation with minimal consideration of investment risk would depress NGA wholesale prices, drive down retail prices through arbitrage-oriented entry, and thereby prevent the investing undertaking from realizing profits commensurate with the original investment case.”*²⁸ As such, the EC recommended that NRAs should not set price caps, provided certain safeguards were in place.

International precedent does not support the imposition of wholesale access in mobile markets with the same characteristics as South Africa

In terms of international precedent, we note that a wide range of jurisdictions do not impose access obligations (cost-based or otherwise) on MNOs, on the basis that retail markets are generally found to be competitive. In particular, the European Commission removed the market for wholesale access to mobile operators’ networks²⁹ (covering active products such as MVNO access and national roaming) from its list of relevant markets susceptible to ex-ante regulation in 2007 because:

“The degree of competition generally observed in this market at the retail level indicates that ex ante regulatory intervention at a wholesale level may not be warranted. In addition, in most Member States the wholesale mobile access and call origination market is effectively competitive as mobile network operators conclude access agreements on commercial terms.”

The EU concluded this even though at the time of the decision, there were 14 Member States who had operators with market shares in excess of 40%.³⁰

Furthermore, despite the fact that the market for wholesale access to mobile networks was included in the EC’s 2003 list of relevant markets, the vast majority of Member States found it to be competitive and therefore did not impose ex-ante regulations in this market.

We also note that open access obligations are rare outside the EU – the OECD recently noted that *“in most countries with MVNOs, regulators have refrained from mandating that MNOs give MVNOs open access to their networks.”*³¹

In contrast, it is far more common for incumbent *fixed* operators to face ex-ante regulation in the form of a requirement to offer access to its network, often at cost based terms. This can be explained by the fact that the deployment of fixed local access networks involves more extensive civil works (e.g. digging trenches and installing ductwork) than the deployment of RANs, and there is typically much less facilities-based competition as a result.

²⁷ European Commission (2013), Commission recommendation on consistent non-discrimination obligations and costing methodologies to promote competition and enhance the broadband investment environment, para. 49, p.10

²⁸ EC Recommendation on access to Next Generation Access Networks, p.25

²⁹ Referred to by the EC as “access and call origination on mobile networks”

³⁰ TeleGeography

³¹ OECD (2013), Broadband Networks and Open Access, p.25

Even if there were evidence to suggest that some form of access regulation was necessary, there is no clear basis for the 25% market-share threshold. Again, in order to limit the potential harm from imposing burdensome ex-ante regulation unnecessarily, it is important that any remedies are carefully targeted at relevant concerns identified by detailed market analysis. For example, the European Commission's guidelines for the regulation of electronics communications markets set out that ex-ante remedies should only be imposed on operators that are found to possess significant market power (SMP) within the relevant market, following a detailed market power assessment. Furthermore, aside from being entirely arbitrary, international precedent would suggest that the proposed market-share threshold is most likely too low – for example, the majority of mobile markets within the EU have only three or four players (and hence MNOs with market shares of above - and in many cases well above - 25%) yet wholesale access regulation is rarely observed in EU Member States.³²

Finally, the potential harm is exacerbated by the fact that the obligation is drafted in very broad terms. In particular, it appears to apply to all requests for access, regardless of whether these requests are reasonable, and removes the ability of operators to deny access where it is not technically or economically viable. This leaves operators open to the possibility of being forced to accommodate requests that are unreasonable, giving rise to inefficient investment. For example, an access seeker may request access where there is currently no capacity available. In this case, the operator would need to incur significant fixed costs to add capacity in order to accommodate the request. By removing the reasonableness requirement, the Bill creates the risk that the operator would have to fully bear these costs, whilst the incremental demand (and hence revenues) it receives from the access seeker may not be sufficient to justify the investment.

Removing a reasonableness clause also goes against regulatory best practice. For example, section 87(4) of the UK Communications Act sets out that the regulator (Ofcom) must take into account technical and economic viability when imposing access obligations. Similarly, paragraph 19 of the EU Access Directive sets out that requests may be refused “*on the basis of objective criteria such as technical feasibility or the need to maintain network integrity*”.

3.2.2 International roaming

Our understanding of the Bill

Chapter 7A of the Bill incorporates into the ECA international roaming regulations that follow the SADC Roaming Policy Guidelines agreed to by the SADC Ministers responsible for Telecommunications, Postal Services and ICTs. These include the requirement that prices for all roaming services - wholesale and retail - should be cost-based. The Bill also sets out that these principles should also apply *mutatis mutandis* to international roaming to any other jurisdiction.³³ This

³² https://ec.europa.eu/commission/commissioners/2014-2019/vestager/announcements/competition-telecom-markets_en

³³ The Bill, Section 42A, p.57

appears to extend the Guidelines and Regulations that apply to SADC countries, unilaterally, to the rest of the world.

Consistency with economic principles and regulatory best practice

International roaming is a particularly complex area of regulation as it involves the regulation of services spanning multiple jurisdictions and is likely to have significant distributional effects. Properly assessing the impacts and co-ordinating the detailed design and implementation of regulation with other jurisdictions will require a significant amount of time and thought. This is illustrated by a recent example from the EU – Roam Like at Home (RLAH) was fully implemented across EU Member States, **11 years** after the European Commission launched its first consultation on roaming regulation, following a number of gradual changes to the regulation (e.g. phasing in price caps for specific services).

Below we set out that:

- Regulating retail roaming prices at cost is highly unusual and could result in consumers facing higher charges for domestic services, to offset the reduction in roaming revenues;
- Cost-based wholesale roaming charges could undermine investment incentives;
- Given the potential negative impacts on consumers and distributional impact, it is vital that market analysis is conducted that demonstrates the need for such remedies and assesses the likely impact on consumers; and
- Unilateral roaming regulation benefits consumers in other countries, to the potential detriment of consumers in the domestic market.

Regulating retail roaming charges at cost could lead to higher domestic charges

Regulating retail roaming prices at cost is highly unusual³⁴ and would mean that a higher share of network costs need to be recovered from domestic tariffs, which will most likely result in higher prices for domestic customers. This is a widely recognised phenomenon known as the “waterbed effect.” Indeed, an empirical study on mobile termination rates by Genakos and Valetti (2007) found that this effect exists under a wide range of competitive conditions and noted that “A reduction in roaming charges may cause a similar waterbed phenomenon, whereby prices of domestic calls may increase as operators seek to compensate for their lost revenue elsewhere.”³⁵

The increase in domestic charges faced by consumers in South Africa could be offset to a certain extent by a reduction in the retail prices that they pay when travelling abroad. However:

³⁴ The ITU noted in an analysis of international mobile roaming services that “Retail price capping is not a common measure in telecommunication markets, outside of universal service provisions mostly related to fixed line telephony.” (ITU (March 2014), Regulatory analysis of international mobile roaming services, p.16).

³⁵ <http://cep.lse.ac.uk/pubs/download/cp238.pdf>

- Reductions in retail charges are constrained by the level of wholesale charge in foreign countries; and
- Customers that do not use their phones abroad frequently will not benefit from the reduction in retail roaming charges.

Further it is important to consider that retail price caps reduce operators' ability to tailor services to meet customer needs – for example, customers that do not intend to use their mobile abroad frequently would benefit from tariffs with higher roaming charges but lower domestic charges.

Cost-based wholesale roaming charges could undermine investment incentives

In terms of cost-based wholesale regulation, the key issues relating to cost-based wholesale access obligations set out above also apply in this context. In particular, there is a risk that cost-based roaming remedies could reduce operators' incentives to invest, by undermining their ability to earn a fair return on network investment. The potential impact is exacerbated by the fact that a reduction in wholesale roaming charges would most likely give rise to an increase in the volume of roaming traffic on domestic operators' networks, which may in turn require investment in extra capacity in order to maintain network quality.

There is also the further risk that a reduction in wholesale roaming charges (by allowing foreign operators to make corresponding reductions to retail roaming charges in South Africa) would distort competition by encouraging “permanent roaming.”

In addition, a reduction in wholesale prices would result in reduced revenues for South African operators. As with retail charge reductions, this could lead to a corresponding increase in domestic prices in those markets as operators seek to compensate for the lost wholesale revenues.

Any decision to regulate international roaming charges should be based on market analysis

We recognise that certain characteristics of the international mobile roaming market, including poor price transparency and low demand elasticity, may mean that some form of intervention to protect consumers is justified. However, given the potential negative impacts on investment and the distributional effects, it is vital that a market analysis is conducted that demonstrates the need for such remedies and assesses the likely impact on consumers³⁶ Such an assessment would need to take into account, amongst other factors, the impact of the increasing prevalence of OTT services such as Skype and WhatsApp, which serve as important substitutes for roaming services.

Furthermore, as we set out above, cost-orientation is one of the most intrusive forms of regulation and remedies that seek to improve the functioning of

³⁶ <https://ec.europa.eu/digital-single-market/en/roaming-charges-what-has-european-commission-done-so-far>

competition should be explored first. Indeed, the ITU sets out in its International Mobile Roaming (IMR) guidelines that:³⁷

*“Although prices may decrease temporarily, price regulation should only be an interim measure. In the long-term, sustainable competition in the IMR market is required if prices are to achieve efficient levels. Without the development of effective competition in the IMR market there is a risk that there will be a continued, long-term, need for price regulation **which is not a desirable outcome.**”*

Regulating retail roaming charges at cost could lead to higher domestic charges

Finally, whilst there is some precedent for introducing bi-lateral or multilateral price regulation in international roaming markets (for example, RLAH regulations in the EU) we are not aware of any such remedies being applied unilaterally. This is because the distributional impact of unilateral remedies will primarily be to the benefit of consumers in other countries, and to the detriment of consumers in the domestic market. In particular, it is likely that operators would have to raise the price of domestic tariffs in order to offset the reduction in wholesale charges for roaming customers from abroad. Indeed, the ITU has noted that *“According to the experiences from EU regulation an **essential premise for lower retail roaming prices is a mutual/common wholesale price regulation covering more than one country**”*³⁸.

Thus, until other SADC countries implement regulations that are aligned with those set out in the Bill (in particular – cost-orientation for wholesale and retail charges) it may result in asymmetrical distributional impacts, to the detriment of South Africa.

Cost-based international roaming regulations carry material downside risks for consumers that need to be carefully assessed

Overall, there is a risk that imposing the international roaming regulations as set out in the Bill would have a material negative impact on consumers:

- **Distributional impacts:** Regulating roaming charges could have significant distributional impacts, if operators need to raise domestic prices in order to offset the loss of revenues from i) lower retail roaming charges and ii) lower wholesale charges paid by operators from visitor countries. This could mean certain consumers – in particular, those that do not frequently make calls when abroad – would face higher costs overall.
- **Investment:** Further, as with cost-based access remedies more broadly, requiring operators to set wholesale charges at cost could undermine their incentives to invest. This would in turn mean worse outcomes for consumers. In particular, and so it is vital that operators’ have sufficient incentives to invest in additional capacity to meet rising roaming traffic volumes, in order to maintain quality of service for all users (i.e. domestic as well as international).

³⁷ ITU (June 2017), International Mobile Roaming: Strategic Guidelines (draft for discussion), p.16

³⁸ Ibid.

ANNEX A COMPARISON OF CHAPTER 10 PROCESS WITH INTERNATIONAL BEST PRACTICE

A.1 Introduction

To help assess the extent to which the process set out in Chapter 10 of the ECA, for determining whether to introduce pro-competitive measures, is consistent with international best practice, we have conducted a high-level comparison of the ex-ante regulatory frameworks in five other jurisdictions spanning high income and middle-income regions, as well as other African countries:

- The EU (high income);
- Malaysia and Singapore (middle income); and
- Kenya and Nigeria.

Below, we set out that:

- The steps that each of the NRAs in the countries considered are required to follow are broadly in line with the Chapter 10 process for imposing pro-competitive measures; and
- International precedent indicates that (with sufficient funding and resourcing) ICASA should be able to implement the market review process within a reasonable timeframe and with sufficient regularity to ensure that the regulations are appropriate for the prevailing market conditions.

A.2 General approach to ex-ante regulation

Within each of these countries, the steps that NRAs are required to follow when imposing ex ante regulations in any telecommunications market are broadly in line with the process set out in Chapter 10. In particular, the key steps are:

- to define the relevant economic market – at a geographic, product, temporal or functional level;
- to set out the methodology used to determine the effectiveness of competition in these markets;
- to undertake analysis of the relevant market using the above methodology, and to identify undertakings that have significant market power; and
- where significant market power is identified, to impose appropriate ex-ante measures and monitor their implementation.

The exact methodology to be used to determine the effectiveness of competition and the need for ex-ante regulation is set out in detail in the regulatory

communications guidelines of the various countries we have considered. We have summarised the key features of the various methodologies in **Figure 3** below. In all cases, NRAs are required to conduct a detailed analysis that extends well beyond a simple assessment of markets shares, and considers a range of factors that might contribute towards an undertaking having significant market power within the relevant market.

For example, the SMP guidelines for the EU³⁹ set out that NRAs should undertake a thorough and comprehensive analysis of the economic characteristics of the market before concluding on significant market power, taking into account several factors including the overall size of the undertaking, control of infrastructure not easily duplicated, technology advantages or superiority, economies of scale, economies of scope and vertical integration.

³⁹ As defined in the *Regulatory framework for electronic communications in the European Union, 2009*

Figure 3 Factors for consideration while assessing market power in telecommunications markets

South Africa	EU	Malaysia	Singapore	Kenya	Nigeria
<i>Electronic Communications Act</i>	<i>SMP Guidelines</i>	<i>MCMC – Guideline on Substantial Lessening of Competition</i>	<i>Info-communications Development Authority of Singapore</i>	<i>Kenya Information and Communications (Fair competition and equality of treatment) Regulations</i>	<i>Nigerian Communications Act</i>
<p>When conducting an analysis of the effectiveness of competition the Authority must take the following factors, among others, into account:</p> <p>(i) An assessment of relative market share of the various licensees in the defined markets or market segments; and</p> <p>(ii) A forward looking assessment of the market power of each of the market participants over a reasonable period in terms of, amongst others:</p> <p>(a) actual and potential existence of competitors;</p> <p>(b) the level, trends of concentration, and history of collusion, in the market;</p> <p>(c) the overall size of each of the market participants;</p> <p>(d) control of essential facilities;</p> <p>(e) technological advantages or superiority of a given market participant;</p> <p>(f) the degree of countervailing power in the market;</p> <p>(g) easy or privileged access to capital markets and financial resources;</p> <p>(h) the dynamic characteristics of the market, including growth, innovation, and products and services diversification;</p> <p>(i) economies of scale and scope;</p> <p>(j) the nature and extent of vertical integration;</p> <p>(k) the ease of entry into the market, including market and regulatory barriers to entry</p>	<p>NRAs should undertake a thorough and overall analysis of the economic characteristics of the relevant market before coming to a conclusion as to the existence of significant market power... the following criteria can also be used to measure the power of an undertaking to behave to an appreciable extent independently of its competitors, customers and consumers:</p> <p>(a) overall size of undertaking</p> <p>(b) control of infrastructure not easily duplicated</p> <p>(c) technology advantages or superiority</p> <p>(d) absence of low or countervailing buyer power</p> <p>(e) easy or privileged access to capital markets/financial resources</p> <p>(f) product/services diversification (e.g. bundled products or services),</p> <p>(g) economies of scale,</p> <p>(h) economies of scope,</p> <p>(i) vertical integration,</p> <p>(j) a highly developed distribution and sales network,</p> <p>(k) absence of potential competition,</p> <p>(l) barriers to expansion.”</p>	<p>Proposed analytical process:</p> <p>-define the context</p> <p>-define the market</p> <p>-assessment of conduct</p> <p>The guidelines may specify the matters which the Commission may take into account, including—</p> <p>(a) the relevant economic market;</p> <p>(b) global technology and commercial trends affecting market power;</p> <p>(c) the market share of the licensee;</p> <p>(d) the licensee's power to make independent rate setting decisions;</p> <p>(e) the degree of product or service differentiation and sales promotion in the market; and</p> <p>(f) any other matters which the Commission is satisfied are relevant.</p>	<p>In assessing whether a Licensee has Significant Market Power (SMP) in a telecommunication market in Singapore, IDA will generally</p> <p>(a) determine the relevant service, geographic and functional markets within which the Licensee provides its service or equipment.</p> <p>(b) conduct a competitiveness assessment, including assessing the level of existing competition, the extent of barriers to entry, the existence of supply substitutability and countervailing buyer power.</p>	<p>The Commission shall from time to time develop and publish guidelines to be followed when determining whether a licensee in a dominant market position in a specific communications market. The criteria shall among others include:</p> <p>(a) the current degree and development of market concentration or the market share of the licensee, determined by reference to revenues, numbers of subscribers or volumes of sales;</p> <p>(b) the degree to which a licensee's prices vary over time;</p> <p>(c) the ability of the licensee to maintain or erect barriers to entry to the market, including, by means of control of essential facilities, access to superior technology, privileged access to resources or capital markets or superior buying or negotiating position, amongst others;</p> <p>(d) the ability of the licensee to earn supernormal profits;</p> <p>(e) the global technology and commercial trends affecting market power;</p> <p>(f) the licensee's power to make independent rate setting decisions;</p> <p>(g) the degree of product or service differentiation and sales promotion in the market;</p> <p>(h) the ability to materially raise prices without suffering a commensurate loss in service demand to other licensees; and</p> <p>(i) any other matters which the Commission may consider relevant.</p>	<p>In determining whether a Licensee is in a dominant position, the Commission may, consider a range of market circumstances or criteria, but shall consider one or more of the following :</p> <p>(a) the market share of the Licensee, determined by reference to revenues, numbers of subscribers or volumes of sales;</p> <p>(b) the overall size of the Licensee in comparison to competing Licensees particularly any resulting economies of scale or scope that permit the larger Licensee to produce products or services at lower costs ;</p> <p>(c) control of network facilities or other infrastructure, access to which is required by competing Licensees and that cannot, for commercial or technical reasons, be duplicated by competing Licensees</p> <p>(d) the absence of buying power or negotiating position by customers or consumers, including substantial barriers to switching service providers;</p> <p>(e) ease of market entry, and the extent to which actual or potential market entry protects against the exercise of market power such as raising prices ;</p> <p>(f) the rate of technological or other change in the market, and related effects for market entry or the continuation of a dominant position.</p>

Source: Regulator websites

A.3 Implementation of the market review process

A review of the implementation of similar market review processes in other jurisdictions suggests that a reasonably resourced and capable regulator can be expected to implement the Chapter 10 process effectively.

At a regional level, NRAs have completed market reviews within a relatively short period, whilst making use of tools and methods similar to those defined in Chapter 10. For instance, the Nigerian Communications Commission (NCC) conducted a market study on dominance in selected markets between 2009 and 2010, which examined the potential existence of dominance in two markets:

- Mobile Telephony Services; and
- International Internet Connectivity (and related leased data line connectivity).

As part of the review, a consultation on Dominance in Selected Communications Markets was formally initiated on 23rd October 2009, inviting submissions from stakeholders and other market participants.⁴⁰ The NCC published a determination on dominance in these markets in March 2010, concluding that no licensee held a position of market dominance in either market.⁴¹ Thus, the entire process took six months.

The market analysis began with establishing the relevant market, which the Commission did by looking at the products and geographic scope of the market, demand-side and supply-side substitutability. The Commission then undertook a detailed market analysis, which considered factors such as the market shares of the major players, their relative size, any control of essential facilities, the negotiating position of customers, ease of market entry and rate of technological change in the market. Another similar review by the NCC on the entire mobile and fixed markets in June 2012 took nine months to complete.⁴²

In the EU, the SMP Guidelines set out that NRAs are required to carry out market assessments for all markets that are susceptible to ex-ante regulation every three years (though there are plans to extend this to five)⁴³, to assess whether to impose new obligations or continue with existing obligations.

Arcep, the French Telecommunications Regulatory Authority, generally takes between 12-24 months to conduct a thorough review of relevant markets, from the consultation phase up to the adoption of the final decision.⁴⁴ Market reviews by the NRAs in Italy and the UK are also typically 12-24 months in duration.⁴⁵ Thus, whilst the process may in some cases take longer than 12 months to complete, precedent from the EU further demonstrates that Chapter 10 is not

⁴⁰ <https://www.ncc.gov.ng/docman-main/legal-regulatory/legal-determinations/426-consultation-paper-on-dominance-in-selected-communications-markets/file>

⁴¹ <https://www.ncc.gov.ng/docman-main/legal-regulatory/legal-determinations/280-determination-of-dominance-in-selected-markets-in-nigeria/file>

⁴² <https://www.ncc.gov.ng/docman-main/legal-regulatory/legal-determinations/365-determination-of-dominance-in-selected-communications-markets-in-nigeria/file>

⁴³ http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=comnat:COM_2016_0590_FIN

⁴⁴ <https://www.arcep.fr/index.php?id=13298>

⁴⁵ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/482870/Response_to_ECF_consultation.pdf; <https://www.agcom.it/consultazioni-pubbliche>

overly burdensome in terms of what it requires of ICASA and should allow it to conduct robust market analyses with sufficient regularity to ensure that the regulations imposed are appropriate for the prevailing market conditions.

