



Responses to the Market Review of the Electronic Communications Sector

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Comments on the Market Review of the Electronic Communications Sector

1. Declaration of Interest

Consultation Title: “Comments on the Market Review of the Electronic Communications Sector”

Name of Respondent: Mr. Meredith Sharples
Chief Executive Officer

Organisation(s): Bermuda Telephone Company Limited/
Telecommunications (Bermuda & West Indies) Limited
(Digicel Bermuda Limited)

Signed by:

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MEREDITH SHARPLES



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2. Opening Remarks

Digicel is pleased to express its interest in participating in the public consultation on the Market Review of the Electronic Communications Sector 2025 published by the Regulatory Authority of Bermuda (RA).

As a leading telecom operator in Bermuda, Digicel is committed to fostering an environment that promotes innovation, competition, and consumer choice. We believe that our insights and experiences can contribute meaningfully to the discussions surrounding the future of telecommunications in Bermuda.

Digicel is eager to collaborate with the RA and other stakeholders during this consultation process. We look forward to contributing our perspectives and working together towards a more efficient regulatory framework that fosters investment, innovation and growth while keeping the strongest possible competition in telecommunications markets.



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3. Introduction

The telecommunications market in Bermuda has undergone significant transformation since the last regulatory review,¹ marked by intensified competition across all sectors. This evolution is driven by a combination of new entrants, technological advancements, and competitive decisions of incumbent operators, all of which have reshaped the competitive dynamics of the industry. As Digicel navigates this new landscape, it is essential to recognize the implications of these changes for competition analysis and decision-making on whether extant regulatory obligations are justified or fit for purpose.

Service quality has increased, and prices have reduced in the recent evolution of Bermuda's communications market. Similarly, in broadband and mobile services, the current offerings contradict the evidence used in previous SMP assessments in earlier ECMRs. Specifically, there is no high symmetry in pricing between incumbents.

The mobile market has become increasingly competitive with the presence of a new player (Paradise Mobile) and the recent commercial entry of two mobile virtual network operators ("MVNOs") in mobile services (B-Mobile and LiveNet). The changes in the number of market players have affected market share conditions that were previously used as justification for SMP assessments in earlier ECMRs. There is no longer symmetry in market shares between incumbents. This new market structure has not only diversified the offerings available to consumers but has also prompted us to rethink our services and pricing strategies to match its inroads into our customer segments. Additionally, the potential presence of satellite provider Starlink, with its footprint covering Bermuda, which offers mobile services in other geographies, poses a potential threat to our mobile services, as it can enter the market at any time².

In the fixed broadband sector, competition has similarly increased as the wider deployment of fibre networks by OneComm and Digicel has improved service quality, accessibility and availability. Also, TeleBermuda has carved a niche in the market with its repurposed fixed wireless services. The anticipated entry of Starlink into this market in 2026, a global provider with

¹ The Regulatory Authority of Bermuda's last regulatory review culminated in the publication of the RA's 2020 Market Review: General Determination dated 1st September 2020.

² According to map availability in Starlink's websites (Result for Bermuda is "Starting in 2026"), Available at <https://www.starlink.com/map>



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significantly higher financial resources compared to incumbents, is expected to further disrupt the status quo, providing consumers with more choices and putting additional pressure on prices. As can be seen in various jurisdictions in the Caribbean region (Jamaica, Barbados, Trinidad and Tobago), the rapid advancement of satellite providers such as Starlink with low barriers to entry offering Low-Earth Orbit satellites will undoubtedly expand competition in the markets and further negate any perceived market monopolisation by dominant players.

Furthermore, the fixed voice market has experienced increased competition from over-the-top (OTT) providers; in addition, OneComm has intensified its pressure and won market share. The usage of fixed voice services has declined due to the development of OTT voice services and the presence of mobile services. This decline in fixed voice usage has been identified in the RA's Initial Consultation. Those changes have forced Digicel to adapt to remain relevant in a mature market.

Lastly, the business connectivity market has also become more competitive, as the expanded fibre deployment levels the playing field for incumbent providers, allowing them to compete more effectively.

In summary, the telecommunications landscape in Bermuda is evolving rapidly, characterized by heightened competition across mobile, fixed broadband, fixed voice, and business connectivity markets. Those developments highlight the fact that market forces are doing their job to the benefit of users and the Bermuda economy, and that regulatory obligations imposed under the SMP regime are no longer justified.

In the remainder of this document, we respond to each of the questions posed by the RA in the public consultation, and finish with a summary of our conclusions.



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4. Digicel responses to RA consultation questions

Question 1: Do you agree with the RA's initial conclusion that the merger control conditions imposed in 2014 and 2015 on OneComm and Digicel are no longer fit for purpose and should be removed (Section 4 paragraphs 48 and 49 of the Consultation Document)?

Digicel agrees that the merger control conditions are no longer relevant as the market circumstances have changed very much since that time, and the rationale for those conditions is no longer present. It is standard practice of competition authorities in most jurisdictions when they impose behavioural remedies such as the ones imposed on OneComm and Digicel in 2014 and 2015, that those remedies apply usually for a limited time defined in the authority's decision. At the end of the defined period, either those remedies expire automatically, or the authority revisits the competitive situation to assess if those remedies should be extended by another period. In many cases, the number of additional extensions is also limited.

More specifically, as referenced in paragraphs 48 and 49 of the Consultation Document, Digicel has made considered representations to the RA which have provided a comprehensive overview of its intention to decommission its existing copper network. To date, Digicel continues to work with the RA to advance its position that it is simply unfeasible to continue to operate an end-of-life network where there are increasing operational and financial constraints. Digicel has successfully launched its fiber network which provides a viable and sustainable option where customers who previously accessed to BTC's copper network are in no worse position than previously had with service from the copper network.

Digicel has ensured that in its continued drive to decommission its legacy network, to adhere to the obligations set out by the RA, in particular ensuring that any other provision of electronic communications services is done through a technology-neutral basis, thereby ensuring that access seekers who uptake services on our new/alternative network are no worse off than on the copper network.³ Therefore, Digicel thinks that the expiration of the remedies mentioned on Section 4, paragraphs 48 and 49 is long due.

³ Section 314 of the Market Review of the Electronic Communications Sector, Final Report, Decision & Order, Date: 1 September 2020
https://cdn.prod.website-files.com/62670c93ceef61f2e8acc1ce/62fe985a63e52b8158f39b5a_2020%2009%2001_Market%20Review%20of%20the%20Electronic%20Communications%20Sector%20Final%20Report%20Decision%20and%20Order.pdf



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Question 2: What are your views on the RA's preliminary identification of relevant product and geographic market contained in Section 6?

Digicel sets out its main views for each service on the RA's initial conclusions regarding its definition of markets in Bermuda's electronic communication sector.

1. Fixed Broadband Services

In general, Digicel partially agrees with RA's initial conclusions about the definition of two relevant markets for this service:

- Retail provision of fixed broadband, provided over any technology, and for any speed, on an island wide basis
- Wholesale provision of fixed broadband Internet connectivity, provided over any technology, and for any speed, on an island wide basis.

Digicel agrees with the following: (i) the limited demand-side substitutability between fixed broadband services and mobile data services; (ii) the absence of separate markets based on different speeds or technologies; (iii) the likelihood that Fixed Wireless Access services form part of the chain of substitution linking fixed broadband products, which implies that TeleBermuda International Limited is a current competitor of Digicel; and (iv) that the relevant geographic market is island-wide.

Digicel partially agrees with RA's market definition on account for the non-inclusion or analysis of the impact of Low Earth Orbit (LEO) satellite broadband services as part of the relevant market. Whilst LEO satellite broadband services are not currently offered, Digicel notes that Bermuda is one of the countries earmarked for the launch satellite service by the likes of Starlink in 2026.⁴ This aligns with the trends being evidenced in the sector where, in addition to Starlink, other satellite providers are getting ready to enter the broadband business, like Project Kuiper from Amazon which expects to start providing services by the end of 2025. With Bermuda being poised geographically and commercially as a viable jurisdiction for satellite services, such entities may eventually see the launch of such services in Bermuda.⁵ Therefore, considering that the

⁴ According to map availability in Starlink's websites (Result for Bermuda is "Starting in 2026"), Available at <https://www.starlink.com/map>

⁵ See, e.g. <https://www.aboutamazon.com/news/innovation-at-amazon/what-is-amazon-project-kuiper>



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market review should be performed under a forward-looking analysis,⁶ it is necessary to evaluate the substitutability between LEO satellite broadband services and fixed access broadband services. We consider that retail provision of the fixed broadband market should include LEO satellite broadband services because these services offer the same benefits as fixed broadband and FWA from the user perspective, providing island-wide coverage and similar speeds. Additionally, the prices offered by Starlink would be competitive compared to the current offerings in Bermuda.

On the other hand, although we agree that mobile and fixed broadband services are not in the same market, we would like to highlight that mobile services could exert some competitive pressure on fixed broadband services. This is due to the presence of mobile services in Bermuda that offer unlimited high-speed data, which may incentivise some consumers to replace their broadband services with mobile services (using data sharing). We are not suggesting that users will fully replace fixed broadband with mobile services; however, this could eventually be the case for a certain group of consumers with lower data needs at home.

Consequently, Digicel suggests that: (i) The RA should include or at least analyse the inclusion of LEO satellite broadband services in the retail fixed broadband market; and (ii) The RA should consider the competitive pressure exerted by mobile services when assessing the need of *ex-ante* regulation on these markets (specially, retail market). Moreover, when this market review analysis should be forward-looking.

2. Mobile Services

In general, Digicel agrees with RA's initial conclusions about the definition of three relevant markets for this service:

- The island wide provision of retail mobile services (i.e. voice, text and data).
- The island wide provision of wholesale mobile services.
- Wholesale voice call and messaging (SMS/MMS) termination services on each mobile sectoral provider's network.

⁶ Section 22 of Electronic Communication Act (2011) states:

"The Authority shall issue a notice that identifies any relevant product and geographic market which in its view appears to be susceptible to the imposition of ex ante remedies, based on a forward-looking assessment"



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Digicel agrees with the following:

- (i) the mobile services market includes both access and voice calls, as well as voice, text and data services;
- (ii) the mobile services market includes both business and residential customers;
- (iii) prepaid and postpaid services are in the same market;
- (iv) there are no separate markets by technologies (2G, 3G, 4G and 5G);
- (v) the retail mobile market is separate from the fixed voice retail market;
- (vi) there exists a wholesale mobile services market, corresponding to the retail services market, which includes MVNO access, service provider access and self-supply; and that the relevant geographic market is island-wide (due to providers' 4G coverage).

Nonetheless, we have some comments regarding the market definition analysis made by the RA.

Firstly, we want to highlight that the RA correctly recognizes that OTT apps running over mobile data can functionally substitute traditional mobile voice and SMS services. Although, we agree that OTT apps do not belong to the same market as mobile services because they do not include data packages; we believe RA's analysis should further develop the expected impact of OTT apps on mobile services concerning competition among operators.

Regarding competition analysis, we highlight that the European Commission, in its Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services, suggests that National Regulatory Authorities should assess whether OTT services may provide partial or full substitutes for traditional telecommunication services, as OTT services have emerged as a potential competing force to retail communication services.⁷ Similarly, the Body of European Regulators for Electronic Communications, in its 2016 Report on OTT services, concludes that in the future, National Regulatory Authorities will need to address new challenges in assessing the competitive dynamics of the market and the relationship between OTT services and electronic communications services.⁸

⁷ Communication from the European Commission 2018/C 159/01 "Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services". Paragraph 36, Available at: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018XC0507\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52018XC0507(01))

⁸ Body of European Regulators for Electronic Communications (BEREC) "Report on OTT services". January 2016. Page 30,



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In the Caribbean region, the Telecommunications Authority of Trinidad and Tobago (TATT), in its consultation document published on 30th October 2024, committed to undertaking market assessments aimed at classifying OTT services as public telecommunication or broadcasting services, as well as providing further commitment to adapting its legislative and regulatory frameworks as required.⁹

Secondly, we have the following comments on RA's substitution analysis between the retail mobile market and the fixed voice retail market-

- Digicel is aligned with the RA's statement that demand-side substitutability is limited to one way only. Mobile voice services are used as substitutes for fixed voice service. We agree that fixed voice services cannot be a substitute for mobile services because of the mobility attribute, but also because mobile services include SMS and data.

However, the limited substitution observed between mobile and fixed voice services is also observed between OTT and mobile services. We define as limited substitution because the substitution occurs between mobile voice services and fixed voice and OTT voice services. The substitutability between these services relies on voice call services. We consider that the RA should take into account the consumer perspective on the substitutability between these services when assessing market definition.

- Additionally, the RA considers fixed voice services and mobile services to be complementary because a substantial number of consumers maintain access to both. We believe this is not a robust argument for considering both services as complementary. It is not enough justification that two products are bought at the same time to be considered as complementary products.

This could be occurring due to the presence of bundles where both services are included. To analyse a possible substitution between both services, the RA should examine the evolution of minutes used by consumers, differentiated by both services. For example, the RA's data suggests that between 2019 and 2022, there was a reduction in the number of

Available at: https://www.berec.europa.eu/sites/default/files/files/document_register_store/2016/2/BoR_%2816%29_35_Report_on_OTT_services.pdf

⁹ Framework on Over-the-Top (OTT) Services in Trinidad and Tobago, Available at: <https://tatt.org.tt/wp-content/uploads/2024/12/Framework-on-OTTs-for-publication.pdf>



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fixed line subscriptions (from 30,329 to 28,609), while, in the same period, the number of mobile line subscriptions slightly increased (from 52,316 to 53,278). This evolution suggests that both services are perceived as substitutes rather than complements.

In conclusion, although we are aligned with the RA's market definition, it would be prudent for the RA to consider the following:

- (i) the RA should analyse the impact of a higher use of OTT apps on the expected competition in the retail mobile market; and
- (ii) the RA should perform a thorough analysis of substitutability between mobile voice services, fixed voice services and OTT voice services. Regarding the RA's contemplation of these suggestions, Digicel finds it reasonable to emphasize that it is crucial to consider not only the current scenario but also the expected scenario, as the analysis should be forward-looking.

3. Fixed voice services

Digicel does not agree with the RA's initial conclusions about the market definition for this service:

- The island wide provision of retail voice services (i.e. voice call origination) from a fixed location; and
- Wholesale voice call termination services on each fixed voice sectoral provider's network.

On one hand, Digicel agrees with the following: (i) the market including both fixed access and fixed voice call services; (ii) the market including residential and business users; and (iii) mobile services and fixed voice services not being in the same market. On the other hand, Digicel does not agree with the assertion that market does not include Unmanaged VoIP Services (OTT voice services).

Regarding the analysis of OTT voice services, the RA recognizes that OTT voice services can provide similar functionalities as fixed voice services. However, the RA has decided to exclude OTT voice services from this market because there are requirements that prevent standalone fixed voice subscribers from viewing these OTT voice services as direct substitutes. Specifically, the RA mentions the following requirements for both users (those who make and those who receive the call):



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- Have a fixed broadband connection or mobile data connection;
- Own a compatible device;
- Have installed the relevant application on the device;
- Have the device turned on; and
- Be logged in to the service.

The RA did not conduct a proper evaluation of the capability of devices and users to meet these requirements. In other words, the RA has not provided an explanation of how the devices used for OTT voice services fail to meet these requirements.

In this regard, we note that these requirements could be partially met by some devices such as laptops, desktops or even tablets. However, there is one device that definitely meets each and every requirement (i.e., smartphones). See the considerations relative to same:

- Smartphones have a constant connection to the internet through mobile data or Wi-Fi networks. Considering that mobile data coverage is island-wide, we can say that the people of Bermuda are constantly connected to the internet through smartphones. Ninety-two percent of the population has a mobile data connection
- Most OTT apps are compatible with smartphones (iOS or android). There are only a limited number of OTT apps that are restricted to certain smartphones, such as FaceTime (iOS). Nonetheless, the most widely used app, WhatsApp, is compatible with all smartphones.
- There are no difficulties in installing OTT apps (most are free to use). In fact, some smartphones include these OTT apps by default. In any case, most mobile users have WhatsApp installed on their smartphones.
- Nowadays, smartphones have long battery life, and users tend to keep their devices turned on at all times. This is because smartphones meet any user needs, such as providing a clock, alarm, messaging, video streaming, etc.
- Finally, all smartphones' users are, by default, logged into their OTT apps. These apps do not require users to log in every time they open them; this is specifically the case with WhatsApp.

Therefore, we consider there is no justification to exclude OTT voice services from the fixed voice market. In fact, the evolution of the fixed voice minutes used in recent years is a clear signal that users are substituting fixed voice services with other, more useful services, such as mobile services



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and, especially, OTT voice services, which allow users to make not only calls but also high-quality video calls.

As mentioned before, Digicel holds the position that the RA should conduct a proper substitutability analysis regarding voice calling services. As stated earlier, there is a clear change in the market dynamic for this service, particularly, after the COVID-19 pandemic, which boosted the use of OTT apps for video calls, texting and voice calls.

In conclusion, Digicel does not agree with RA's market definition because OTT's voice services are not included in the same market as fixed voice services.

4. Business connectivity services

In general, Digicel partially agrees with RA's initial conclusions about the definition of two relevant markets for this service:

- A single, island-wide, retail business connectivity market regardless of the speed of transmission.
- A single, island-wide market for wholesale terminating segments.

Digicel agrees with the following:

- (i) the business connectivity market being distinct from the fixed broadband services market;
- (ii) the absence of separate market based on different transmission speeds or technologies; and
- (iii) the consideration of an island-wide market due to the limited evidence for evaluation a separate subnational market (both in and outside Hamilton).

Digicel holds a position of partial agreement with the RA's market definition because RA's non-inclusion nor analysis of LEO satellite broadband services as part of the retail business connectivity market. In this regard, Digicel considers that retail business connectivity market should include LEO satellite broadband, as LEO satellite broadband services could offer a similar existing solution in Bermuda's market. For instance, Starlink (who is expected to enter Bermuda's market in 2026) offers business solutions on its website.¹⁰ Also, other initiatives like Project

¹⁰ Information about business services provided by Starlink is available at <https://www.starlink.com/business>



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Kuiper by Amazon, who announced that they are preparing service offerings specifically aimed at business customers.¹¹

In addition, in a forward-looking analysis, the RA should examine how the expected market entry of Starlink would affect the competitive dynamic in this market. In particular, it should consider that satellite providers such as Starlink amongst others could negotiate and enter into contracts to provide worldwide internet coverage to multinational companies, many of which have offices or subsidiaries in Bermuda. Likewise, LEO satellite broadband providers can offer business connectivity in different environments at similar speeds (land mobility, maritime, aviation).

Consequently, although we partially agree with market definition, Digicel suggests that the RA should include or at least analyse the inclusion of LEO satellite broadband services in this market.

5. General Comments

Finally, we want to highlight some general comments regarding RA's preliminary identification of the relevant product and geographic market.

Firstly, RA's identification of the relevant product does not broadly discuss the expected impact of market evolution. In other words, RA does not consider how the market definition could change if certain foreseeable market developments occur. For instance, RA does not analyse the impact of LEO satellite services on the market definition of broadband and business connectivity services. Similarly, RA does not analyse how the development of OTT services has impacted and will continue to impact the market definition of mobile and fixed voice services.

The fact that RA does not consider these aspects in its market definition assessment is contrary to the guidelines mentioned in RA's ECMR Initial Consultation, which states as follows:

81. In both cases, the analysis should be forward-looking across the ECMR period considering market and technology trends and dynamics and expected or foreseeable market and technology developments.

Secondly, we find it prudent to seek clarification on how the RA applied the hypothetical monopolist test to arrive at its findings. Guided by Clause 84 and 89 of the RA's ECMR Initial Consultation which states as follows:

¹¹ See, e.g. [What is 'Project Kuiper,' Amazon's New Satellite Internet Initiative?](#)



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“84. A key tool for assessing demand and supply-side substitutability is the hypothetical monopolist test. The test considers what would happen if a hypothetical monopolist supplying the focal product were to make a Small but Significant and Non-transitory Increase in Price (SSNIP), while holding the prices of all other products and services constant. A price increase of 5-10% on the current price level is typically used to conduct the test.

89. Note that it can be challenging to apply the hypothetical monopolist test empirically. This would require detailed market data on customer behaviour in response to price changes, which are often not available. Instead, the test is often applied as a theoretical exercise, drawing upon available market data, historic trends and likely future developments. Relevant evidence from other jurisdictions may also be used to provide guidance on customer behaviour and/or market boundaries.”

It was observed that no mention was made of any customer surveys to ground the findings of the SSNIP test in market realities. A customer survey involving Bermudian respondents in the Electronic Communication sector could have provided insights into their usage of telecommunications services, covering both their current consumption of these services (including volumes and prices paid, as well as other factors they deem most important when making rational consumption decisions) and their perceived behaviour in the event of variations to the product characteristics of those services. For example, whether respondents would change providers or adjust their usage following changes in prices.

Rather, the market analysis is primarily driven by SSNIP assumptions regarding demand/supply-side substitutability that are not representative of the market dynamics intrinsic to the Bermuda EC sector. If this was the approach undertaken by the RA, it stands to reason that its findings should be considered theoretical in nature and not representative of the market realities prevalent in Bermuda's electronic communications sector. The aforementioned customer survey represents an opportunity missed by the RA to ground its assumptions in present market realities, and the lack thereof significantly erodes the veracity of the findings of the RA's market review exercise.



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Question 3: Do you agree with the RA's initial assessment of the SMP sectoral providers set out in Section 7?

Digicel does not agree with the RA's initial assessment to maintain its previous conclusion that Digicel and OneComm have SMP jointly. We understand that this initial assessment is based on the position that the RA has not found evidence of any material changes in the market share of the relevant markets. Below, we explain the reasons why Digicel is of the view that, in recent years, significant market changes have occurred in the relevant markets, suggesting a more competitive context that should lead to a different conclusion regarding the RA's SMP assessment.

Additionally, we provide some comments on the analysis performed by the RA in identifying relevant markets susceptible to *ex-ante* regulation. Specifically, we highlight certain aspects of the RA's analysis with which we do not agree.

1. Fixed Broadband Services

Digicel considers that the three criteria set out in Section 22(2) of the ECA 2011 have not been met for fixed broadband services. Similarly, Digicel does not agree with the RA's statement that there is no evidence of any material changes in the market shares of fixed broadband services, which is used to support its conclusion that Digicel and OneComm jointly have SMP (as reached in the 2020 market review). Below, we explain the reasons that justify our statements.

➤ Section 22(2a) of the ECA 2011

Firstly, Digicel does not agree with the RA's conclusion regarding the presence of high and non-transitory barriers to entry. The RA supports its conclusion with the argument that the small size of Bermuda's market itself represents a barrier due to an insufficient scale, making market entry an unattractive proposition.

However, the assumption that the small size of Bermuda market by itself makes entry unprofitable is inconsistent with the economics of the fixed broadband business and evidence from the Bermuda market.



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Firstly, the RA looks at fixed broadband operators in Bermuda as standalone operators. However, Digicel is a multinational company that operates telecommunications networks in many countries other than Bermuda. There are many technical, commercial and administrative functions that can be shared across different operations. Therefore, economies of scale for those functions should be measured at the group level, not the Bermuda one, especially, when there are many potential entrants to the Bermuda market which are telecommunications groups much bigger than Digicel.

The main activity which has economies of scale at the national level is the fixed access network. However, the size of the market is only one of the drivers of profitability of a fixed network. There are other drivers such as ARPU, user density, market share, etc. that can turn a small operation profitable (see, e.g. Soria and Hernández-Gil (2010)¹²). All of those drivers other than size are especially favourable to competition in Bermuda, a high-income country with high population density and short distances.

Also, the small size of the market lowers entry barriers. Deploying a fixed broadband network requires a large upfront investment which is roughly proportional to the number of potential and actual customers. In small markets, capital requirements are a lower barrier, because there are many more potential investors that can invest a relatively small sum.

The RA has also not acknowledged or considered the fact that economies of scale have a very different impact on different technologies. Fixed broadband operators use two different types of technologies: wireline networks and fixed wireless access networks (FWA). The RA implicitly assumes FWA economics to be like those of wireline networks. However, this assumption is not correct. FWA display very different cost functions than wireline networks. Specifically, economies of scale have a much smaller importance in FWA, so that FWA can achieve the minimum efficient size with a very small market share (see, e.g. Soria and Hernández-Gil (2008)¹³).

¹² Soria, Bruno and Hernández-Gil, Félix, Do NGAN Economics Allow for Network Competition? (June 15, 2010). Communications and Strategies, No. 78, pp. 23-78, June 2010, Available at SSRN: <https://ssrn.com/abstract=1810477>

¹³ Soria, Bruno and Hernández-Gil, Félix, Exploring Potential Natural Monopoly Properties of Broadband Access Networks (September 20, 2008). 19th European Regional ITS Conference, Rome, Italy, Available at SSRN: <https://ssrn.com/abstract=1557843>



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Furthermore, FWA services have strong economies of scope with mobile services. In this regard, recent market developments in the U.S. demonstrated that mobile services providers have expanded into broadband services using FWA.^{14 15} In fact, the fastest-growing home broadband provider in the U.S. is T-Mobile using FWA.¹⁶ Giving this, high barriers to entry should not be expected for mobile operators wishing to enter the broadband services market in the future. This recent market development must be taken into consideration in a forward-looking analysis, especially considering that the current mobile services market in Bermuda has five providers.

Finally, the RA assumption that Bermuda fixed broadband operators are operating at below minimum efficient scale is based on the findings of a report by Plum (2017)¹⁷. However, those findings are based on anecdotal evidence from countries much larger than Bermuda and with lower income. As shown in Soria and Hernández-Gil (2010), *ceteris paribus* operators in high income countries have lower minimum efficient sizes, and the same happens for countries with relatively small and smooth rural areas. That means that the minimum efficient scale of operators in Bermuda should be much lower than in the countries mentioned in the report. Therefore, absent a rigorous statistical analysis that cannot be found in the Plum report, its conclusions cannot be applied to Bermuda fixed broadband markets. Also, the fact that Bermuda operators are profitable is an additional and strong piece of evidence against the RA assumption.

We also consider that the evaluation of barriers of entry was not conducted with a forward-looking analysis; otherwise, the RA would have considered the potential competition other companies could exert on incumbents.

For instance, the expected entrance of Starlink is a clear indication of the absence of barriers to entry for LEO satellite broadband services. This is because LEO satellite broadband services operate on a global scale, where the small size of Bermuda does not diminish the incentive to enter this market.

¹⁴ See: <https://www.ericsson.com/en/reports-and-papers/mobility-report/articles/dualplay-broadband-strategies-us>

¹⁵ See: <https://www.ctia.org/news/5g-home-broadband-continues-to-bring-real-competition-to-cable?>

¹⁶ See: <https://cordcuttersnews.com/t-mobile-is-the-fastest-growing-home-internet-provider-in-the-united-states-as-cord-cutting-2-0-grows/>

¹⁷ Plum, Effective telecoms regulation in the island states of the Caribbean, 2017. <https://plumconsulting.co.uk/effective-telecoms-regulation-island-states-caribbean/>



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➤ **Section 22(2b) of the ECA 2011**

Secondly, Digicel does not agree with the RA's conclusion on section 6.1.4 that a technological change is unlikely to significantly disrupt the broadband service market within the time horizon of the market review. The RA arrives at this conclusion by suggesting that (i) new entry by FWA operators is likely to fail, and (ii) that LEO satellite broadband services may not affect current competition because no applications have been submitted, or licences issued to any potential sectoral providers for satellite broadband services. We believe that the evaluation of technological changes was not conducted with a forward-looking approach. Specifically, the RA does not analyse the expected evolution of broadband service market over the next four-year regulatory period, as stated in the RA's ECMR Initial Consultation.

“104. In addressing this criterion, the level of competition in the market should be assessed on a forward-looking basis over the ECMR period. This assessment should cover expected developments in the market, technological developments and market trends, and consider if the market is tending to effective competition (and if so, how soon). The period over which the forward view should be taken is the period for which the ECMR will remain current before it is reassessed (i.e. 4 years). The further into the future effective competition is expected to materialise, the more likely it is that the second criterion will be fulfilled.”

The RA analysis is incorrect in both its statements. First, because the fact that Wave/Horizon failed to consolidate as a viable FWA operator after its entry in 2021 and finally exited the market by 2024 does not necessarily mean that another new entrant cannot do so. Actually, there was another case of successful deployment of FWA services in this period: TeleBermuda International acquired the assets of World on Wireless which were on liquidation and used them to launch its own FWA network.

Also, if we consider the next four-year period as the relevant timeframe for the analysis, it is clear that a significant technological change will occur in the Bermuda's broadband services market due to the expected entrance of Starlink in 2026. Starlink's likely entry will increase the number of network-based providers from 3 to 4, a number that is considered as equivalent to effective competition in European Union countries which are leaders in fibre network deployment, such as Spain¹⁸ or Portugal.

¹⁸ Comisión Nacional de los Mercados y de la Competencia (CNMC), RESOLUTION APPROVING THE DEFINITION AND



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Furthermore, a potential entrant needs not to actually enter a market to disrupt market dynamics and deprive incumbent operators of SMP. Economic theory states that, in a contestable market, the credible threat of entry by a potential new entrant forces incumbent providers to act as if they were in a competitive market. Baumol, Panzar and Willig (1982) explained this as follows:

“We define a perfectly contestable market as one that is accessible to potential entrants and has the following two properties: First, the potential entrants can, without restriction, serve the same market demands and use the same productive techniques as those available to the incumbent firms. Thus, there are no entry barriers in the sense of the term used by Stigler. Second, the potential entrants evaluate the profitability of entry at the incumbent firms’ pre-entry prices.”¹⁹

They also conclude that incumbents in a contestable market do not have market power:

“However, here, the traditional welfare problems of monopoly behavior are solved by the pressure exerted by the presence of potential entrants. To achieve sustainability, even a natural monopolist must operate in an efficient manner and must earn no more than a normal rate of return on its capital investments. That is, in contestable markets a monopoly firm can only earn zero economic profit and must operate efficiently.”²⁰

As a provider of fixed broadband services, Starlink meets in Bermuda all the properties of a potential entrant in a contestable market:

- Starlink can serve the same customers that incumbent fixed broadband providers do without any restriction. It has the network already in place, has developed the services and

ANÁLISIS DE LOS MERCADOS DE ACCESO LOCAL AL POR MAYOR FACILITADO EN UNA UBICACIÓN FIJA Y ACCESO CENTRAL AL POR MAYOR FACILITADO EN UNA UBICACIÓN FIJA PARA PRODUCTOS DEL MERCADO DE MASAS, LA DESIGNACIÓN DEL OPERADOR CON PODER SIGNIFICATIVO DE MERCADO Y LA IMPOSICIÓN DE OBLIGACIONES ESPECÍFICAS, Y SE ACUERDA SU NOTIFICACIÓN A LA COMISIÓN EUROPEA Y AL ORGANISMO DE REGULADORES EUROPEOS DE COMUNICACIONES ELECTRÓNICAS), ANME/DTSA/002/20/MERCADOS ACCESO LOCAL CENTRAL, 6 October 2021.

¹⁹ Baumol, William J., Panzar, John C. and Willig, Robert D., Contestable Markets and The Theory of Industry Structure, Harcourt Brace Johanovich Inc., New York, 2002 Page 5.

²⁰ Baumol, William J., Panzar, John C. and Willig, Robert D., Contestable Markets and The Theory of Industry Structure, Harcourt Brace Johanovich Inc., New York, 2002 Page 6.



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has an active distribution channel in its website.²¹ Its network covers the whole Caribbean area, including Bermuda.²² Also, Starlink packages are comparable with those in the Bermuda fixed broadband market: it offers unlimited data for monthly prices that range from \$99 in Puerto Rico and the US Virgin Islands to \$120 in the US. Those prices fall in the low range of fixed broadband prices in Bermuda: \$80 - \$300 for OneComm, \$80 - \$315 for Digicel, and \$79 - \$209 for TeleBermuda (**Table 2**).

- Starlink would face no exit barriers if its market entry resulted unprofitable, because they need not to incur in any sunk investment.
- Starlink can also evaluate the profitability of its entry based on current market prices, since those prices are publicly known.

Therefore, even under the current situation when Starlink has not entered the market, the RA should include in its analysis the impact of the potential thread of Starlink's entrance on competition. In other words, while it is highly likely that Starlink will enter Bermuda's broadband market within the four-year regulatory period, the mere possibility of its potential entrance itself deprives incumbent operators of SMP.

Furthermore, Starlink is the most advanced but not the only broadband LEO satellite initiative with other providers showing concerted interest in advancing their networks in the region before 2029. That would add additional pressure on incumbent providers and render the market even more competitive.

➤ **Section 22(2c) of the ECA 2011**

Thirdly, Digicel does not agree with the RA's conclusion that *ex post* competition rules are insufficient to promote or preserve effective competition in the event of market failure resulting from the existence of SMP. In particular, we do not agree with the assumption of the existence of SMP, as we explain below; there is no evidence to support that the broadband services market is experiencing the presence of SMP. Therefore, considering that there are not high barriers to entry and that an expected technological change will improve competition, it is unlikely that a

²¹ See <https://www.starlink.com/service-plans>

²² Starlink offers its services now in Bahamas, Barbados, Canada, Dominica, Grenada, Guadeloupe, Haiti, Jamaica, Martinique, Puerto Rico, República Dominicana, Saint Martin, Trinidad and Tobago, the US and the US Virgin Islands. See <https://www.starlink.com/pr/map>



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market failure will occur without a competitive response from providers other than Digicel and OneComm.

➤ **RA's initial assessment of SMP**

Finally, the RA states that there is no evidence of any dramatic change in the market share of the fixed broadband market, which suggests that the SMP assessment made in the previous market review is likely still accurate.

Digicel does not agree with the RA's conclusion and its basis because the fixed broadband market has experienced changes that contradict the arguments supporting the RA's conclusions in the previous market review regarding the SMP assessment. Specifically, it is not observed that OneComm and Digicel have symmetric market shares, nor is it observed that the prices of OneComm and Digicel are very closely aligned.²³

Regarding the evolution of market shares, we found that, when comparing 2019 and 2022, OneComm's market share increased from 53% to 62%, while Digicel's market share decreased from 44% to 36%. This change in market shares clearly contradicts any argument for the presence of symmetric market shares; furthermore, it affects the conditions that sustain a fixed broadband market with a hypothetical joint SMP. We believe that it is difficult to support an eventual joint SMP when the companies have significant differences in market shares (61.8% compared to 36% in 2022). In addition, Digicel highlights the presence of a third player (Tbi), which has nearly tripled its market presence from 0.6% to 1.7% over four years.

Table 1. Evolution of broadband services market shares by company, 2019-2022

Company	2019	2020	2021	2022	22 vs 19
OneComm	53.46%	52.56%	55.21%	61.81%	8.35%
Digicel	44.43%	44.43%	44.06%	36.03%	-8.40%
Link	1.11%	1.06%	0.73%	0.45%	-0.66%
Tbi	0.60%	1.53%	0.00%	1.71%	1.11%
FKB	0.41%	0.43%	0.00%	0.00%	-0.41%

Source: *Electronic Communications Annual Market Analysis Report 2022*.²⁴

Regarding current tariffs, we observe that the main players in the market offer different prices, along with variations in download and upload speeds. This contradicts any argument for the

²³ Market Review of the Electronic Communications Sector (1 September 2020). Paragraph 416.

²⁴ Available at: <https://www.ra.bm/reports/electronic-communications-annual-market-analysis-report-2022>



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presence of aligned prices between Digicel and OneComm, as stated in the previous market review. Additionally, it is difficult to sustain a joint SMP context in this market, considering the differences in prices, the presence of a current third player (TBi), the expected fourth player (Starlink), and the variations in offerings in terms of speeds and other benefits. Below, we present tariffs for residential broadband services according to the companies’ websites as of February 2025.

Table 2. Tariffs for residential broadband services in Bermuda, as of February 2025

Download speed (Mbps)	Upload speed (Mbps)	OneComm Fibrewire	Digicel Home Fibre	TBi Internet
25	10		\$80	
50	n.d.			\$79
50	10	\$80		
75	15	\$115		
100	30		\$100	
150	20	\$130		
200	n.d.			\$109
200	50		\$140	
300	n.d.			\$129
300	50	\$170 (\$120)		
450	n.d.			\$169
450	50	\$205		
450	200		\$192	
600	n.d.			\$209
650	75	\$235 (\$150)		
650	200		\$230	
1024	75	\$300		
1024	200		\$315	

Note: It does not include temporal offers. In parenthesis, tariffs with contract duration commitment. TBi’s website does not provide information about upload speeds. Source: Companies websites.

In conclusion, the RA’s determination of the fixed broadband market as one susceptible to *ex ante* remedies is incomplete and inconsistent with the forward-looking approach required in Section 22(1) of the ECA 2011. The market evidence shows that there are not high barriers to entry in this market, and it is expected that a technological change will improve competition in the near future. Likewise, the RA’s conclusion that the previous SMP assessment is still accurate does not take into account the significant changes observed in recent years in the fixed broadband market. These significant changes now contradict the previous justifications used by the RA to



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support its conclusion regarding the presence of joint SMP in this market. Specifically, there are no symmetric market shares between OneComm and Digicel, and our prices and offers are not aligned.

2. Mobile Services

Digicel considers that the three criteria set out in Section 22(2) of the ECA 2011 are not met for mobile services. Similarly, Digicel does not agree with the RA's statement that there is no evidence of any material changes in the market shares of mobile services, which is used to support its conclusion that Digicel and OneComm jointly have SMP (as reached in the 2020 market review). Below, we explain the reasons that justify our statements.

➤ Section 22(2a) of the ECA 2011

Firstly, Digicel does not agree with the RA's conclusion regarding the presence of high and non-transitory barriers to entry. The RA supports its conclusion with the argument that the small size of Bermuda's market itself represents a barrier due to insufficient scale, making market entry (even for retail-only players) an unattractive proposition. In this regard, we want to highlight that the mobile services market has experienced the entry of new players, which demonstrates that the assertion of high barriers to entry is unrealistic.

Specifically, the mobile services market has seen the entry of a new player (i.e., Paradise Mobile), which has been operating since December 2023, along with two recent MVNO entrants (i.e., LiveNet and B-Mobile). The entrance of Paradise Mobile is strong evidence of the absence of high barriers to entry, given that its offerings have competitive prices compared to incumbents, with similar levels of coverage, speeds, and benefits.

Additionally, the recent entry of MVNOs into the Bermuda market is evidence that the retail mobile market is competitive, or at least perceived as a market where competition could develop. We highlight that for MVNOs have reduced barriers to entry as there are no costs towards capital expenditure required for entry into the mobile services market. With costs being low, the possibility for quickened profitability is higher²⁵. For example, an MVNO would only incur marketing and commercial costs, which could be lower when considering that marketing and commercial cost centres may vary across the different countries where MVNOs operate.

²⁵ Walden, I. (2015). Telecommunications Law and Regulation (5th ed.). Oxford University Press., Page 609



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➤ **Section 22(2b) of the ECA 2011**

Secondly, Digicel does not agree with the RA's conclusion that a technological change or other foreseeable developments are unlikely to significantly disrupt the mobile service market within the time horizon of the market review. The RA arrives at this conclusion by noting that all mobile market players are in the process of deploying 5G services and that no other changes are anticipated.

Digicel does not agree with the RA's assessment because, although a significant technological change is not expected, there are foreseeable developments in the mobile services market due to the increase in the number of players, especially considering the entrance of MVNO providers, which could improve the competitive dynamics in this market, apart from the expected consolidation of the third player (Paradise Mobile).

Furthermore, if we consider the next four-year period as the relevant timeframe for the analysis, it is clear that a significant technological change is likely to occur in the Bermuda's mobile services market due to the likely entry of Starlink in 2026. Starlink's likely entry will increase the number of network-based providers from 3 to 4, a number that the European Commission has considered as equivalent to effective competition in many merger cases in the European Union.

Even if Starlink does not eventually launch services in Bermuda, a potential entrant needs not to actually enter a market to disrupt market dynamics and deprive incumbent operators of SMP. Economic theory states that, in a contestable market, the credible threat of entry by a potential new entrant forces incumbent providers to act as if they were in a competitive market. Baumol, Panzar and Willig (1982) explained this as follows:

*"We define a perfectly contestable market as one that is accessible to potential entrants and has the following two properties: First, the potential entrants can, without restriction, serve the same market demands and use the same productive techniques as those available to the incumbent firms. Thus, there are no entry barriers in the sense of the term used by Stigler. Second, the potential entrants evaluate the profitability of entry at the incumbent firms' pre-entry prices."*²⁶

²⁶ Baumol, William J., Panzar, John C. and Willig, Robert D., Contestable Markets and The Theory of Industry Structure, Harcourt Brace Johanovich Inc., New York, 2002 Page 5.



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They also conclude that incumbents in a contestable market do not have market power:

“However, here, the traditional welfare problems of monopoly behavior are solved by the pressure exerted by the presence of potential entrants. To achieve sustainability, even a natural monopolist must operate in an efficient manner and must earn no more than a normal rate of return on its capital investments. That is, in contestable markets a monopoly firm can only earn zero economic profit and must operate efficiently.”²⁷

As a provider of mobile services in other countries nearby, Starlink meets in Bermuda all the properties of a potential entrant in a contestable market:

- Starlink can serve the same customers that mobile providers do without any restriction. It has the network already in place, has developed the direct to cell and direct to device²⁸ services and has an active distribution channel in its website.²⁹ Its network covers the whole Caribbean area, including Bermuda.³⁰ Also, Starlink packages are comparable with those in the Bermuda mobile market: it offers unlimited data for monthly prices that range from \$124 in Puerto Rico and the US Virgin Islands to \$165 in the US,³¹ and a 50 GB package in the US for \$50. Those prices fall in the low range of mobile prices in Bermuda, where tariffs with data caps similar to 50GB start at \$135 and those for unlimited data range from \$147 for Paradise and \$200 for OneComm (**Table 3**).
- Starlink would face no exit barriers if its market entry resulted unprofitable, because they need not to incur in any sunk investment.
- Starlink can also evaluate the profitability of its entry based on current market prices, since those prices are publicly known.

Therefore, even under the current situation when Starlink has not entered the market, the RA should include in its analysis the impact of the potential thread of Starlink’s entrance on competition. In other words, while it is highly likely that Starlink will enter Bermuda’s mobile market within the four-year regulatory period, the mere possibility of its potential entrance itself

²⁷ Baumol, William J., Panzar, John C. and Willig, Robert D., Contestable Markets and The Theory of Industry Structure, Harcourt Brace Johanovich Inc., New York, 2002 Page 6.

²⁸ Direct to device technology allows a mobile phone user to connect to the mobile satellite service using the same terminal it uses to connect to conventional, land-based cellular networks.

²⁹ See <https://www.starlink.com/service-plans>

³⁰ Starlink offers its services now in Bahamas, Barbados, Canada, Dominica, Grenada, Guadeloupe, Haiti, Jamaica, Martinique, Puerto Rico, República Dominicana, Saint Martin, Trinidad and Tobago, the US and the US Virgin Islands. See <https://www.starlink.com/pr/map>

³¹ See <https://www.starlink.com/vi/roam>



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deprives incumbent operators of SMP. The competitive pressure from LEO satellite providers, also, will surely increase when other initiatives now under deployment to enter the market in the next few years.

➤ **Section 22(2c) of the ECA 2011**

Thirdly, Digicel does not agree with the RA's conclusion that *ex post* competition rules are insufficient to promote or preserve effective competition in the event of market failure resulting from the existence of SMP. In particular, we do not agree with the assumption of the existence of SMP, as we explain below; there is no evidence to support the claim that the mobile services market is experiencing the presence of SMP. Therefore, considering that there are no high barriers to entry and that a foreseeable development in the market (new players) will improve competition, it is unlikely that a market failure will occur without a competitive response from providers other than Digicel and OneComm.

➤ **RA's initial assessment of SMP**

Finally, the RA states that there is no evidence of any dramatic change in the market share of the mobile services market, which suggests that the SMP assessment made in the previous market review is likely still accurate.

Digicel does not agree with the RA's conclusion and its basis because the mobile services market has experienced changes that contradict the arguments supporting the RA's conclusions in the previous market review regarding the SMP assessment. Specifically, it is not observed that OneComm and Digicel have almost perfect symmetry in market shares, nor is it observed that the prices of OneComm and Digicel are very closely aligned.³²

Regarding market shares, it is expected that there is currently no observed symmetry between OneComm and Digicel due to the presence of new players. In this sense, it is striking that the RA considers there is no evidence of any dramatic change in the market when it has evolved from two (2) to five (5) operators, and one of the new operators (Paradise Mobile) has been operating in the market for almost a year. This timeframe should be sufficient to evaluate whether the entrance of Paradise Mobile has changed the symmetry in incumbents' market shares, reduced the level of concentration in this market, and impacted incumbents' offers (i.e., lower prices).

³² Market Review of the Electronic Communications Sector (1 September 2020). Paragraph 423.



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Additionally, we want to highlight that the entrance of Paradise Mobile is clear evidence that there are no economic barriers to entering the domestic retail mobile market, which would affect the stability of any potential tacit collusion theory to sustain a joint SMP in this market. In this regard, if OneComm and Digicel do not have any incentives to engage in tacit collusion, then consumers will not hesitate to migrate to Paradise Mobile, as its offerings include national coverage and unlimited data packages at competitive prices. In other words, the mere presence of Paradise Mobile restricts any potential joint SMP behaviour.

Regarding tariffs, similar to fixed broadband services, in the mobile services market, our prices and OneComm’s prices are not aligned, and our services have different attributes regarding data offered, device discounts, loyalty discounts, etc. In the same vein, Paradise Mobile offers different tariffs than OneComm, and Digicel and B Mobile (i.e., an MVNO that uses the OneComm network) offer different prices than OneComm. This scenario complicates any potential tacit collusion or coordination and, consequently, a joint SMP definition for this market. Below, we present tariffs for postpaid mobile services according to the companies’ websites as of February 2025.

Table 3. Tariffs for mobile services (postpaid) in Bermuda, as of February 2025

Data package	Data roaming	OneComm	Digicel	Paradise mobile	B mobile
Unlimited - 10gb at full speed	Not included			\$67	
Unlimited	Not included			\$97	
15gb	Not included	\$115 (\$100)			\$105
20gb + 60gb (selected apps)	Not included		\$120		
30gb	Not included	\$130 (\$115)			
30gb	\$13/day				\$120
30gb + 60gb (selected apps)	Not included		\$135		
50gb	\$13/day				\$140
60gb + 60gb (selected apps)	2gb		\$155		
Unlimited	Unlimited - 12gb at full speed			\$147	
Unlimited - 50gb at full speed	\$13/day	\$150 (\$125)			
Unlimited - 100gb at full speed	\$13/day	\$175 (\$150)			
100gb	\$13/day				\$175
150gb + 60gb (selected apps)	4gb		\$185		
Unlimited	Unlimited - 30gb at full speed			\$187	
Unlimited - 200gb at full speed	Unlimited	\$200 (\$175)			
200gb	\$13/day				\$200
250gb + 60gb (selected apps)	6gb		\$210		
500gb + 60gb (selected apps)	8gb		\$310		



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Note: Tariffs do not include regulatory fees. Source: Companies websites.

In conclusion, the RA's determination of the mobile services market as one susceptible to *ex ante* remedies is inconsistent with the current market situation, where there are five (5) retail mobile service providers. The current market context shows that there are no high barriers to entry in this market, and it is expected that foreseeable market developments (new players in the market) have improved and will continue to improve competition in the near future. Likewise, the RA's conclusion that the previous SMP assessment is still accurate does not take into account the significant changes observed in recent years in the mobile services market. There is clear evidence that the mobile services market has experienced substantial changes. It is not reasonable to assume that the retail market has the same characteristics when it has evolved from two (2) to five (5) operators. Additionally, the evidence contradicts any suggestion of alignment in prices, as well as symmetry and stability in market shares.

3. Fixed voice services

Digicel considers that the three criteria set out in Section 22(2) of the ECA 2011 are not met for fixed voice services. Similarly, Digicel does not agree with the RA's statement that there is no evidence of any material changes in the market shares of fixed voice services, which is used to support its conclusion that Digicel has SMP (as reached in the 2020 market review). Below, we explain the reasons that justify our statements.

➤ Section 22(2a) of the ECA 2011

Firstly, Digicel does not agree with the RA's conclusion regarding the presence of high and non-transitory barriers to entry. The RA supports its conclusion with the argument that the small size of Bermuda's market represents a barrier due to insufficient scale, making market entry (even for retail-only players) an unattractive proposition. Additionally, the RA highlights the fact that the usage of fixed voice services in Bermuda is in long-term decline.

In this regard, we want to highlight that the RA's analysis is biased because it does not take into account the relevance of OTT services as substitutes for fixed voice services. Thus, under a proper market definition that includes OTT services, there are no high barriers to entry in the fixed voice services market due to the presence of a significant number of OTT players.



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Furthermore, the evidence presented by the RA regarding the decline in the usage of fixed voice services³³ serves as a signal of the presence of substitutes for these services. In that sense, it is striking that the RA did not use this evidence in its assessment of the market definition for fixed voice services.

➤ **Section 22(2b) of the ECA 2011**

Secondly, Digicel does not agree with the RA's conclusion that a technological change or other foreseeable developments are unlikely to significantly disrupt the fixed voice service market within the time horizon of the market review. The RA arrives at this conclusion by stating that this market segment is likely to be less engaged and less able to identify or switch to alternative service offerings.

Once again, we note that the RA's assessment is incomplete because it does not consider the relevance of OTTs and mobile voice services in this market segment. Considering this, we believe that the fixed voice market will continue to experience changes due to the presence of OTTs and mobile voice services. Specifically, the fixed voice market will continue to face competitive constraints exerted by OTTs and mobile voice services, where the former group consists of extremely competitive global providers (Skype, Zoom, Teams, Meet, WhatsApp, FaceTime, and others).

➤ **Section 22(2c) of the ECA 2011**

Thirdly, Digicel does not agree with the RA's conclusion that *ex post* competition rules are insufficient to promote or preserve effective competition in the event of market failure resulting from the existence of SMP. In particular, we do not agree with the assumption of the existence of SMP, as we explain below; the market evidence shows dramatic market changes that contradict the previous conclusion regarding the existence of SMP (Digicel). Therefore, considering these dramatic market changes, we do not agree with the necessity of applying *ex ante* competition rules.

➤ **RA's initial assessment of SMP**

Finally, the RA states that there is no evidence of any dramatic change in the market share of the fixed voice services market, which suggests that the SMP assessment made in the previous market review is likely still accurate.

³³ Consultation Document. Paragraph 183.



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Digicel does not agree with the RA’s conclusion and its basis because the fixed voice services market has experienced changes that contradict the arguments supporting the RA’s conclusions in the previous market review regarding the SMP assessment. Specifically, it is not observed that the fixed voice market has been largely served by Digicel, with sectoral providers.³⁴

One the one hand, it is striking that RA considers Digicel to still have SMP in the fixed voice market when there is a clear and observable evidence of competitive dynamics at play in this market. In particular, the evolution of market share from 2019 to 2022 clearly shows how we have been losing market share due to the presence of OneComm. Thus, between 2019 and 2022, our market share decreased from 83.8% to 69.5%, while OneComm’s market share increased from 12.7% to 27.8%. This market evidence contradicts RA’s statement that there have been no dramatic changes in this market.

Table 4. Evolution of fixed voice services market shares by company, 2019-2022

Company	2019	2020	2021	2022	22 vs 19
OneComm	12.67%	16.43%	24.61%	27.81%	15.14%
Digicel	83.83%	79.58%	72.33%	69.49%	-14.34%
Link	3.49%	3.37%	3.06%	2.70%	-0.79%

*Source: Electronic Communications Annual Market Analysis Report 2022.*³⁵

Additionally, it would not be consistent with the previous market review, if the RA decides to consider this market with a joint SMP definition. This is because the evolution of market shares contradicts any suggestion of symmetric market shares; in fact, these market shares suggest the presence of strong competition between OneComm and Digicel.

On the other hand, the fixed voice services market has experienced another material change: which is the increase in the use of OTT voice services. The improvement in video call quality, the higher penetration of smartphones, and the increased volumes of data offered in mobile services (including unlimited data) have affected the demand for fixed voice services. This market change can be observed in the drastic reduction of fixed line subscriptions following the Covid-19 pandemic.

³⁴ Market Review of the Electronic Communications Sector (1 September 2020). Paragraph 429.
³⁵ Available at: <https://www.ra.bm/reports/electronic-communications-annual-market-analysis-report-2022>



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Table 5. Evolution of number of subscriptions of fixed lines, 2019-2022

	2019	2020	2021	2022
# subscriptions	30,329	28,772	28,617	28,609

Source: *Electronic Communications Annual Market Analysis Report 2022*.³⁶

In conclusion, the RA’s determination of the fixed voice services market as one susceptible to *ex ante* remedies is inconsistent because it relies on the assumption that OTTs are not part of this market. As we explained, OTTs should be included in this market because they are perceived as substitutes from the consumer perspective. Additionally, the RA’s conclusion that the previous SMP assessment is still accurate does not take into account the significant changes observed in recent years. There is clear rivalry between OneComm and us, as evidenced by the evolution of market shares in previous years. Furthermore, the presence of OTT voice services exerts competitive pressure on this market. These two market changes are not consistent with an SMP definition, nor with a joint SMP definition.

4. Business connectivity services

Digicel considers that the three criteria set out in Section 22(2) of the ECA 2011 are not met for business connectivity services. Similarly, Digicel does not agree with the RA’s statement that there is no evidence of any material changes in the market shares of business connectivity services, which is used to support its conclusion that Digicel has SMP (as reached in the 2020 market review for high-speed leased lines in the City of Hamilton). Below, we explain the reasons that justify our statements.

➤ **Section 22(2a) of the ECA 2011**

Firstly, Digicel does not agree with the RA’s conclusion regarding the presence of high and non-transitory barriers to entry. The RA supports its conclusion with the argument that the small size of Bermuda’s market represents a barrier due to insufficient scale, making market entry an unattractive proposition. Similarly to the fixed broadband services market, we consider that the evaluation of barriers to entry was not conducted with a forward-looking analysis; otherwise, the RA would have considered the expected entrance of Starlink.

³⁶ Available at: <https://www.ra.bm/reports/electronic-communications-annual-market-analysis-report-2022>



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This is relevant if the RA takes into account that Starlink could arrange contracts to provide worldwide internet coverage to multinational companies, many of which have offices or subsidiaries in Bermuda. All of this is considering that LEO satellite broadband allows Starlink to offer business connectivity in different environments at similar speeds (land mobility, maritime, aviation).

➤ **Section 22(2b) of the ECA 2011**

Secondly, Digicel does not agree with the RA's conclusion that a technological change is unlikely to significantly disrupt the business connectivity service market within the time horizon of the market review. Similarly to the fixed broadband services market, we believe that the evaluation of technological changes was not conducted with a forward-looking approach.

Therefore, if we consider the next four-year period as the relevant timeframe for the analysis, it is clear that a significant technological change will occur in the Bermuda's broadband services market due to the expected entrance of Starlink in 2026, and the eventual entry of other LEO providers later in the four-year period.

➤ **Section 22(2c) of the ECA 2011**

Thirdly, Digicel does not agree with the RA's conclusion that *ex post* competition rules are insufficient to promote or preserve effective competition in the event of market failure resulting from the existence of SMP. In particular, we do not agree with the assumption of the existence of SMP, as we explain below; the current market definition supported by the RA contradicts the existence of SMP reached in the previous market review. Additionally, considering that there are not high barriers to entry and that an expected technological change will improve competition, it is unlikely that a market failure will occur without a competitive response from providers other than Digicel.

➤ **RA's initial assessment of SMP**

Finally, the RA states that there is no evidence of any dramatic change in the market share of the mobile services market, which suggests that the SMP assessment made in the previous market review is likely still accurate. Digicel does not agree with the RA's conclusion and its basis because the market definition related to business connectivity services has changed.



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Specifically, it is concerning that the RA considers Digicel to still have SMP in the business connectivity market when it is changing the geographic market definition from a separate sub-national market differentiated by speed to a single island-wide market. We believe that it is neither coherent nor reasonable to assert that Digicel would still have SMP in this market when, in the previous market review (i.e., 2020 Market Review General Determination), the SMP definition applied only to a sub-national market (high-speed leased lines above 25 Mbps outside of the City of Hamilton).

In other words, it is neither coherent nor reasonable to assert that Digicel would still have SMP in the single national market when this market is the result of the combination of three market segments that do not have the presence of SMP, along with one market segment that does have the presence of SMP.³⁷ Therefore, it is striking that the RA maintains the SMP assessment made in the previous market review for the business connectivity market when the market definition has changed.

5. General Comments

Finally, we would like to highlight some general comments regarding the RA's initial assessment of the SMP sectoral providers and the identification of relevant markets susceptible to *ex ante* rules.

Firstly, concerning competition fairness between incumbents and OTT providers, Digicel notes the RA's stated position, as articulated in Clause 194 of the RA's ECMR Initial Consultation (see below), on the observed regulatory and market imbalance prevalent in the domestic internet market of Bermuda.

194. While there is an international discussion about "Fair Share" ongoing (particularly in Europe, South Korea, Brazil and the United States), it is not yet clear what practical options are available to a microstate such as Bermuda. It is generally accepted that smaller jurisdictions such as Bermuda do not have significant leverage over major multinational entities that are not even domiciled in Bermuda. The RA intends to continue to monitor this area for additional developments.

³⁷ Market Review of the Electronic Communications Sector (1 September 2020). Table 8.2



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Digicel wishes to point out to the RA that, as the regulator, it is charged with ensuring fair competition for all operators similarly situated in the same market, as stated in Section 5 (1e) and (1f) of the Electronic Communications Act (2011). It has been observed that OTT services do impact operators, and it would be reasonable for the RA to provide some regulatory certainty that this matter will receive the level of attention it warrants.

Digicel has made its position clear on several occasions at both international and regional fora regarding the deleterious impact of OTT providers on its networks, particularly due to net neutrality must-carry obligations and market inefficiencies. Furthermore, OTT service providers bear no regulatory requirements, tax obligations, or licence fee obligations, among others.

As such, Digicel seeks concrete assurances that this matter will be treated with the urgency it deserves.

Secondly, the RA does not broadly discuss the expected impact of foreseeable market developments, despite the RA's ECMR Initial Consultation mentioning the relevance of analysing the market from a forward-looking perspective. The RA's ECMR Initial Consultation states the following:

*100. To determine the existence of such barriers, it is necessary to examine if market entry could occur at sufficient scale and speed to constrain an undertaking abusing its market power. If so, **the prospect of market entry can act as a competitive constraint on existing market players and the market would not be susceptible to ex ante regulation.***

*101. **Market barriers are analysed considering existing market conditions, expected or foreseeable market developments, and regulation in related markets (such as upstream wholesale markets).** This is because some of the barriers listed above might be reduced by regulation in related markets, for instance through the existence of a wholesale access obligation.*

*102. **Changes over time – including technological, behavioural or economic changes – can affect the level of actual and prospective competition within a market.** One example of this is technological change eroding structural barriers to market entry over time. Another is the convergence of separate markets due to changing user behaviour.*



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Therefore, we believe that the RA should include in its analysis the foreseeable market developments for the next four years, which are: (i) the entry of LEO satellite services and their impact on fixed broadband and business connectivity services; (ii) the consolidation of a third player (Paradise Mobile) in mobile services; (iii) the emergence of new players in retail mobile services, specifically MVNO providers; and (iv) the impact of OTT services as an alternative to fixed voice services.

Considering the impact of these expected developments on Bermuda's communications market is critical before implementing any *ex-ante* regulation. Otherwise, the implementation of *ex ante* regulation could create a scenario where Digicel faces stringent regulatory requirements that could affect its capacity to compete with the anticipated new players who will not face these regulations. Digicel believes that the RA should conduct a thorough evaluation of foreseeable market developments before implementing *ex ante* regulation, which could lead to a market lacking regulatory parity for its players.



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Question 4: Do you agree with the RA's initial proposed SMP ex ante remedies contained in Section 7.5?

Under section 20 (1) of the ECA, the RA may impose *ex-ante* remedies on a communications provider in a relevant market or markets only if the communications provider has significant market power (SMP) in this market or markets.

Digicel has shown in our response to question 3 that no communications provider has SMP in any of the relevant markets defined by the RA. Therefore, the RA must not impose any *ex-ante* remedy in any market.



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Question 5: Do you agree with the RA's initial position that any anchor product should have the same price and definition for any provider that has been found to have SMP in that particular market.

Under section 20 (1) of the ECA, the RA may impose *ex-ante* remedies on a communications provider in a relevant market or markets only if the communications provider has significant market power (SMP) in this market or markets.

Digicel has shown in our response to question 3 that no communications provider has SMP in any of the relevant markets defined by the RA. Therefore, the RA must not impose any *ex-ante* remedy in any market. Because of this, no anchor product regulation can be imposed.



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Question 6: What are your views on whether one or two anchor products are required in the retail fixed broadband market?

Under section 20 (1) of the ECA, the RA may impose *ex ante* remedies on a communications provider in a relevant market or markets only if the communications provider has significant market power (SMP) in this market or markets.

Digicel has shown in our response to question 3 that no communications provider has SMP in the retail fixed broadband market. Therefore, the RA must not impose any *ex-ante* remedy in that market. Because of this, no anchor product regulation can be imposed.



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Question 7: In the event that only one anchor product is considered for the retail fixed broadband market, do you agree with the RA's initial position that the anchor product should be targeted at an entry level service priced at no more than \$80 per month for a 50 Mbps download/10 Mbps upload?

Under section 20 (1) of the ECA, the RA may impose *ex ante* remedies on a communications provider in a relevant market or markets only if the communications provider has significant market power (SMP) in this market or markets.

Digicel has shown in our response to question 3 that no communications provider has SMP in the retail fixed broadband market. Therefore, the RA must not impose any *ex-ante* remedy in that market. Because of this, no anchor product regulation can be imposed.



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Question 8: Do you believe that the RA should consider an anchor product ex ante remedy in the retail mobile market to protect consumers against ongoing price increases? If so, what should be the component parts of such a product? The RA's initial position is that the anchor product for retail mobile should be set at no more than \$50 for unlimited local talk & texts and 10 Gigabytes of data per month. This is an existing "Student Bundle" offering from Digicel.

Under section 20 (1) of the ECA, the RA may impose *ex ante* remedies on a communications provider in a relevant market or markets only if the communications provider has significant market power (SMP) in this market or markets.

Digicel has shown in our response to question 3 that no communications provider has SMP in the retail mobile market. Therefore, the RA must not impose any *ex- ante* remedy in that market. Because of this, no anchor product regulation can be imposed.

Furthermore, the offer you refer to is a specific package aimed at students so that they got familiar to Digicel services when they purchase their first mobile service, with the idea that they will become loyal customers on regular packages when they finish their studies. As this offer is not intended to the general public, it would not make sense to take it as a reference for this or any other purpose.



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Question 9: Do you agree that the price for relevant service products should be cross checked by international benchmarking?

Under section 20 (1) of the ECA, the RA may impose *ex ante* remedies on a communications provider in a relevant market or markets only if the communications provider has significant market power (SMP) in this market or markets.

Digicel has shown in our response to question 3 that no communications provider has SMP in any of the relevant markets defined by the RA. Therefore, the RA must not impose any *ex-ante* remedy in any market.

Digicel also posits that international benchmarking would not provide meaningful results in any of the RA's analysis. Therefore, international benchmarking should not be used by the RA in telecommunications markets.

International benchmarking is an economic analysis technique that consists in comparing the value of one economic parameter in one country with the value of that parameter in other "comparable" countries. When properly applied, international benchmarking helps the analyst identify unexpected differences among countries, as a first step to identifying the reasons that cause that difference.

For international benchmarking to deliver valid results, it is critical that the countries employed as a benchmark are truly comparable with the analysed country in the relevant dimensions under study.³⁸ Therefore, for an international benchmark of telecommunications prices to be valid, it should include only countries in which the drivers of telecommunications prices are equal (or, at least, sufficiently close) to those in Bermuda.

In our experience with setting our prices for telecommunications services across many countries, the main drivers of prices are the cost of providing the service, customers' willingness and ability to pay, and the competitive conditions. Any benchmark that intends to measure the effect of

³⁸ The importance of using sufficiently comparable references is highlighted, for instance, in the International Valuation Standards. On para. 30.11., relative to asset valuation through comparables, they state:
 30.11. The method *should* be used only when the subject *asset* is sufficiently similar to the publicly-traded comparables to allow for meaningful comparison. - International Valuation Standards Council, *International Valuation Standards* 2017.



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competitive conditions on prices must make sure that all other relevant factors have been duly considered and found to be comparable.

Cost of provision and willingness to pay are in turn driven by several factors. We can summarize the main ones as:

- Income per capita and inequalities, which drive user's willingness and ability to pay;
- Total country GDP, which drives the potential size of the market;
- Total country population, which also drives the potential size of the market and economies of scale;
- Total country surface, which drive coverage costs;
- Population density, which drive local economies of scale;
- Orography, the proportion of rural population, which drive the coverage costs and revenue.

As the public consultation correctly states, Bermuda is a high-income microstate archipelago, with an economy focused on financial services and tourism. Therefore, countries in an eventual benchmark should share most of those traits alongside the price drivers listed above.

We have tried to build a potential benchmark for Bermuda, and have identified the following small states, which are either financial centres or Caribbean small countries:

- Luxembourg
- Singapore
- Monaco
- Malta
- British Virgin Islands
- Jamaica
- Turks and Caicos
- Curaçao
- Mauritius



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We have then measured the relevant price drivers in Bermuda and those countries as illustrated in Table 6 below:

Table 6: Price drivers in Bermuda and potential benchmark countries

Country	GDP (USD)	GDP/Capita (USD)	Population	Surface (km ²)	Population density (hab/km ²)
Bermuda	8.141.700.000	125.842	64.698	53	1.221
Luxembourg	85.755.006.124	128.678	666.430	2.590	257
Singapore	501.427.500.080	84.734	5.917.648	728	8.129
Jamaica	19.423.355.409	6.840	2.839.786	10.990	258
British Virgin Islands	1.581.000.000	40.561	38.985	150	260
Curaçao	3.281.419.347	22.192	147.862	444	333
Malta	22.328.640.242	40.396	552.747	320	1.727
Turks and Caicos	1.402.054.391	30.349	46.198	950	49
Mauritius	14.644.524.819	11.613	1.261.041	2.010	627
Monaco	9.995.350.547	256.581	38.956	75	520

Source: World Bank, United Nations trade and developments

To identify countries that are sufficiently similar to Bermuda, we divided the values of price drivers in each candidate country by the value in Bermuda. We considered a value to be comparable when it ranged between 0.5 (a half of the Bermuda value) and 2.5 (two and a half times the value of Bermuda).

The results are shown in Table 7 below:

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Table 7: Comparison between Bermuda price drivers and candidate countries (candidate value/Bermuda value)

Country	GDP (USD)	GDP/Capita (USD)	Population	Surface	Population density
Bermuda	1,0	1,0	1,0	1,0	1,0
Luxembourg	10,5	1,0	10,3	48,9	0,2
Singapore	61,6	0,7	91,5	13,7	6,7
Jamaica	2,4	0,1	43,9	207,4	0,2
British Virgin Islands	0,2	0,3	0,6	2,8	0,2
Curaçao	0,4	0,2	2,3	8,4	0,3
Malta	2,7	0,3	8,5	6,0	1,4
Turks and Caicos	0,2	0,2	0,7	17,9	0,0
Mauritius	1,8	0,1	19,5	37,9	0,5
Monaco	1,2	2,0	0,6	1,4	0,4

Source: World Bank, United Nations trade and developments

The results show clearly that the only country which is similar to Bermuda in more than two drivers is the principality of Monaco. And since Monaco's telecommunication market is closely intertwined with France because French mobile operators have coverage in the city-state, it is doubtful that prices in Monaco are driven by national drivers only.

Thus, we conclude that it is not possible to define any rigorous price benchmark for Bermuda, and therefore this tool must not be applied by the RA in its decision-making.



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Question 10: Do you agree that it is important that the RA monitor the median price across all products in each of the fixed broadband and mobile services markets in addition to the use of anchor product pricing?

Under section 20 (1) of the ECA, the RA may impose *ex ante* remedies on a communications provider in a relevant market or markets only if the communications provider has significant market power (SMP) in this market or markets.

Digicel has shown in our response to question 3 that no communications provider has SMP in any of the relevant markets defined by the RA. Therefore, the RA must not impose any *ex-ante* remedy in any market. Because of this, no anchor product regulation can be imposed.

Also, the use of median prices does not provide useful information on competition in a market. Competition in a free market happens at the margins. Companies usually employ their lowest price, and their highest performance offers to set the terms on which they address the customers, especially those already subscribing to a competitor. Therefore, we do not think median prices are representative of price levels in the market. As such, they should not be utilized in the RA's market assessments of the fixed broadband and mobile services markets.



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Question 11: Do you agree with the RA’s provisional opinion that implementation of costly cost orientation/separated accounting obligations may not be in the best interest of end users in the Bermuda market? If not, what alternatives should the RA consider to ensure that a balance is maintained between “developing or maintaining effective and sustainable competition for the benefit of consumers with regard to price, innovation and choice” and “promoting investment in the electronic communications sector”?

Digicel agrees with the RA’s provisional opinion because, as we demonstrated in our response to Question 3, no communications provider has SMP in any of the relevant markets defined by the RA. In other words, Digicel considers that there is no need to impose any *ex ante* regulatory remedies in Bermuda’s communications market. Additionally, as we explain further in our response to Question 12, there is no *ex ante* regulatory remedy that ensures a balance between “developing or maintaining effective and sustainable competition for the benefit of consumers with regard to price, innovation, and choice” and “promoting investment in the electronic communications sector.”

The best way to ensure a balance between competition and investment in a competitive market is to remove any barriers to fair competition among players. Those barriers could be general disincentives to investment (i.e., custom and excise duty waivers for telecommunication equipment, simplification of the equipment certification process etc), and also regulatory asymmetries between market players that give unfair competitive advantage to unregulated players relative to regulated operators. This is the case now with operators and OTT providers, and Terrestrial and Non-Terrestrial ICOL Holders. Terrestrial Operators operate within a robust legal and regulatory regime with rigorous licensing obligations including the remittance of licence fees et al. Together with the capital investments, operational costs and the need to innovate to compete, the preservation of competition in the Bermuda market is crucial to ensure that entities are commercially viable. Digicel thinks that the best way to promote both competition and investment is to lessen the regulatory burden and ensuring that there is regulatory parity among all players in the market.



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Question 12: Do you agree with the RA's provisional opinion that any retail minus X% cap should be set by international benchmarking? If not, what alternatives (aside from costly cost orientation/separated accounting obligations) should the RA consider to ensure that a balance is maintained between "developing or maintaining effective and sustainable competition for the benefit of consumers with regard to price, innovation and choice" and "promoting investment in the electronic communications sector"?

Under Section 20(1) of the ECA, the RA may impose *ex ante* remedies on a communications provider in a relevant market or markets only if the communications provider has significant market power (SMP) in this market or markets.

Digicel has demonstrated in our response to Question 3 that no sectoral provider has SMP in any of the relevant markets defined by the RA. More specifically, Digicel does not have SMP in any of the relevant market defined by the RA. Therefore, the RA must not impose any *ex-ante* remedies in any market.

Consequently, no price cap regulation can be imposed. Additionally, as we explained in our response to Question 9, the economic analysis shows that it is not possible to define a rigorous international benchmark for Bermuda's telecommunications prices.

Digicel points out that, under the current and expected conditions in Bermuda's communications market (competitive markets without the presence of SMP), there are no *ex ante* regulatory remedies that ensure a balance between developing or maintaining effective and sustainable competition for the benefit of consumers and promoting investment in the electronic communications sector.

This is because if the RA decides to impose *ex-ante* regulatory remedies on Digicel, then Digicel will face regulatory and cost constraints that would diminish its capacity to compete with other providers. The imposition of *ex ante* regulatory remedies will lead to a market situation lacking regulatory parity among market players, be it because of more stringent license obligations, higher tax rates, or more demanding reporting obligations. All those asymmetries will affect the incentives of incumbents to invest in the electronic communications sector and, consequently, reduce the quality of services provided to consumers, hindering any competitive benefits expected from foreseeable market developments.



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Finally, Digicel is of the view that imposing *ex ante* regulatory remedies in a market that has no presence of SMP could be *ultra vires* the stated objects under, *inter alia*, section 5 of the 2011 ECA as follows:

*“5(a) ensure that the people of Bermuda are provided with **reliable and affordable access to quality electronic communications services***

*5(b) **enhance Bermuda’s competitiveness in the area of electronic communications** so that Bermuda is well-positioned to compete in the international business and global tourism markets*

*5(c) encourage the development of an **electronic communications sector that is responsive to the requirements of users (both individuals and businesses) and provides them with choice, innovation, efficiency and affordability***

*5(d) **encourage the development and rapid migration of innovative electronic communications technologies** to Bermuda*

*5(f) **encourage sustainable competition** and create an invigorated electronic communications sector that will lay the groundwork for the further development of communications-reliant industries...*

*5(h) **promote investment in the electronic communications sector and in communications-reliant industries, thereby stimulating the economy and employment**” (emphasis added).*



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Concluding Remarks

Digicel is of the considered view that the electronic communications markets have become increasingly more competitive since the last ECMR 2020 conducted by the RA. This is evidenced through the entry of new players, investment in new technologies and product diversification by incumbents, and the threat of entry of satellite providers such as Starlink in fixed broadband, mobile (i.e direct to cell or direct to device) and business connectivity markets have turned those markets fully competitive.

We consider that the proposed market definitions should be enlarged to include satellite providers such as Starlink as being (at least potentially) in the broadband, mobile and business connectivity markets. We also think that OTT players must be included in the fixed voice and mobile services markets.

Digicel has shown that it does not hold SMP in any of the relevant markets. Therefore, all *ex-ante* remedies that have been applied on Digicel should be removed.

In addition, we do not think that international benchmarking can be applied in the Bermuda telecommunications markets for lack of truly comparable countries.

Finally, we conclude that the best way to promote and preserve competition in the electronic communications sector would be to remove all regulatory barriers and burdens that now handicap sectoral providers thereby ensuring regulatory parity in all dimensions: sectoral regulation, taxation, and reporting obligations.



February 27, 2025

Via E-mail: consultation@ra.bm

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**Re: 2025 Market Review of the Electronic Communications Sector – LinkBermuda
Comments**

1. LinkBermuda (“Link”) hereby provides our response to the Regulatory Authority’s (“RA”) consultation document dated 22 January 2025 regarding the Market Review of the Electronic Communications Sector Consultation Document (the “Consultation”). The RA published the Consultation as part of its 2025 review of the Electronic Communications Sector (“EC Sector”) market. The RA has invited interested parties to respond to the Consultation questions.
2. Link appreciates the opportunity to provide comments on this matter. Link recognizes the RA’s function to forward the goals of ensuring the people of Bermuda are provided with reliable and affordable access to quality electronic communications services, encourage the orderly development of the EC Sector, encourage sustainable competition in the sector, and promote investment and innovation. These are important goals which can be achieved through careful, transparent, and practical implementation of regulation in the EC Sector and the RA’s continued support of electronic communications service providers in Bermuda.
3. Link is a telecommunications provider who has been operating in Bermuda for over 100 years, serving business customers utilising our own physical facilities and infrastructure in Bermuda. Link has invested significantly in infrastructure and facilities in order to provide our customers with access to robust and secure telecommunications services. In addition to

our own facilities, we also rely on wholesale access from larger providers to serve our business customers.

4. As a relatively small operator, Link's comments herein are focused on only a specific number of issues. Link's failure to comment on any specific issues should not be interpreted in a manner which would be contrary to our interests. Should the RA have any questions or wish to discuss our views further we would be pleased to arrange to do so.

Question 3: Do you agree with the RA's initial assessment of the SMP sectoral providers set out in Section 7?

5. Link agrees with the RA's preliminary assessment regarding those entities found to have significant market power ("SMP") in the wholesale broadband and business connectivity markets. We also agree with the RA's finding of no SMP in the off-island connectivity market.

Question 4: Do you agree with the RA's initial proposed SMP ex ante remedies contained in Section 7.5?

6. Link limits its comments at this time to the proposed SMP *ex ante* remedies in the wholesale sector. Regarding these remedies generally, Link submits that access to and pricing of wholesale services should be fair and reasonable. As wholesale service providers providing access to their underlying networks, while also competing directly with these very same wholesale customers, the SMPs have both the opportunity and the incentive to price their services in such a manner as to limit the ability of other service providers to compete in a fair and reasonable fashion. To prevent unfairness or discrimination that ultimately harms end-users in Bermuda, we agree it is important for the RA to impose *ex ante* remedies.
 - a. Continue with the existing obligations to supply wholesale services to access seekers.
7. Link agrees that the existing obligations to supply wholesale services to access seekers must stay in place. Prior to the implementation of these measures, Link experienced challenges in obtaining wholesale access from the two major providers.

- b. Make the existing obligations to supply subject to a requirement from the access seeker to demonstrate reasonable demand.
8. Link submits that this proposed condition to the existing wholesale supply obligations is unnecessary and harmful to competition. An access seeker would have no reason to request access if they did not anticipate demand. Further, the Consultation includes this proposal in response to the following issues identified in the market: an SMP's refusal to supply wholesale inputs or SMPs placing onerous terms on accessing those services such as undue bundling. However, Link submits that adding limitations onto the ability to access wholesale services would only further the market issues the Consultation identified.
9. Link seeks clarification from the RA regarding the term of "reasonable demand". This is a subjective requirement with no proposed definition. This uncertainty leaves wholesale access contingent upon an unclear condition that is open to different interpretations by each party. It is also unknown what types of evidence would be acceptable to demonstrate that demand exists, and that it is at a "reasonable" level. Link submits it is not reasonable to require an access seeker to demonstrate that specific customers (or potential customers) have indicated a desire for service in a particular area, when the access seeker has no control over whether access will be granted by the SMP.
10. Link submits that our greatest concern with the requirement for an access seeker to demonstrate reasonable demand is that it could be used in an anti-competitive manner to delay or deny access to wholesale services. As "reasonable" is a subjective term, an SMP could refuse to grant access on the basis the demonstrated demand has not reached what the SMP deems a "reasonable" level. The access seeker would then need to seek intervention from the RA, resulting in substantial delays to access wholesale services, to the benefit of the very company which denied access.
11. Link urges the Commission not to increase barriers to entry where it is already extremely difficult to compete in the market and there are only a limited number of competitors.
- c. Impose an obligation on the wholesale SMP sectoral provider not to supply wholesale products that are unwanted by the access seeker unless the SMP sectoral provider can demonstrate that the unbundling is technically infeasible or generates disproportionate costs.

12. Link agrees it is important that a wholesale SMP provider cannot require wholesale access seekers to purchase a specific bundle of services in order to receive wholesale access. This is particularly important for small providers such as Link, who do not conduct business in all areas of Bermuda's EC Sector.

13. However, similar to our concerns above for proposed remedy (b), Link is concerned that the proposed ability for SMPs to require bundling where it is "technically infeasible or generates disproportionate costs" to unbundle is unclear and creates an opportunity for anti-competitive behaviour.

14. The meaning of "disproportionate costs" is undefined, unclear, and open to subjective interpretation. It is unknown which costs these unbundled costs are measured against, and what the appropriate threshold is for costs to be considered "disproportionate". There is no guidance on what evidence would be required to provide in order to demonstrate that the costs of unbundling are disproportionate, or that unbundling would be technically unfeasible. This lack of clarity again creates an opportunity for SMPs to delay or deny access to wholesale access seekers, to the SMP's own benefit.

- d. Require wholesale SMP sectoral providers to supply wholesale inputs at a price that is capped at retail minus X%, where X is set at a level to enable efficient competition in retail markets. The RA notes that the current retail minus obligation is 25% but in the absence of cost derived figures, this % should be set based on international benchmarking and could be higher than 25%.

15. Please see Link's response to Question 12 below.

- e. Require the wholesale SMP sectoral provider to supply the RA with KPIs (which should also be available to access seekers) on the supply of the wholesale product to both access seekers and its own downstream retail business so that the RA can detect any discrimination in non-price supply conditions.

16. Link agrees with this *ex ante* remedy proposed by the RA. Providing Key Performance Indicators ("KPIs") supports transparency, particularly in the case of vertically integrated companies such as the SMPs. There is an inequality of information between SMPs and

access seekers, which creates the risk that SMP could provide services to their own downstream providers on more favourable terms than for independent wholesale access seekers. A requirement to make these KPIs available to both access seekers and the RA allows for more effective oversight of the SMPs' compliance.

17. In addition to this proposed *ex ante* remedy, Link submits that it would benefit both wholesale and retail customers to clarify the existing requirement for the SMPs to publish retail and wholesale KPIs. In our experience, we are unaware of where the SMPs are publishing the required KPIs. We believe it would further the purpose of this *ex ante* remedy if SMPs are required to publish these KPIs in a way that is clear and readily accessible, or alternatively, for the RA to publish these KPIs on its own website. An inability to locate the required KPIs frustrates the goal of this requirement, which is to increase transparency for the benefit of improved competition.

Question 11: Do you agree with the RA's provisional opinion that implementation of costly cost orientation/separated accounting obligations may not be in the best interest of end users in the Bermuda market? If not, what alternatives should the RA consider to ensure that a balance is maintained between "developing or maintaining effective and sustainable competition for the benefit of consumers with regard to price, innovation and choice" and "promoting investment in the electronic communications sector"?

18. Link submits that it is not in the best interest of end users in the Bermuda market to remove the SMPs' cost orientation/separated accounting obligations. We are concerned that the lack of costing information will frustrate the ability of SMPs to meet their obligation to provide wholesale access on fair, reasonable, and non-discriminatory ("FRAND") terms. As outlined in the RA's Wholesale Access: FRAND and Margin Squeeze – Guidance Note, these measures are important to promote competition and protect consumers from harm:

13. Market players with SMP can have the ability and incentive to refuse or restrict access to their networks to other operators who would wish to use the SMP operator's network to provide services. This restriction can harm consumers by limiting the scope for competition. As a result, the RA requires SMP operators in certain markets (broadband, mobile and high speed leased lines outside of the City of Hamilton) to provide wholesale access to their networks and to do so on

14. The FRAND obligation has the objective of promoting efficient and sustainable competition by ensuring that SMP operators (i) offer access on price and non-price terms that are fair and reasonable; (ii) and do not discriminate between different access seekers, or between the SMP operator's own downstream arm and other sectoral providers.¹

19. As outlined by the RA, the cost orientation/separated accounting obligations address three important main objectives:

- i. protect consumers from excessive retail pricing arising from the exercise of market power;
- ii. protect the competitive process from anticompetitive behaviour in the form of below cost retail pricing by the SMP operator, i.e. excessively low (or predatory) pricing; and
- iii. allow SMP operators the opportunity to recover the operators' relevant costs and earn a reasonable rate of return.²

20. Link submits that the cost orientation/separated accounting obligations should remain in order to achieve these objectives. If the pricing for the wholesale services is not reasonable and tied to actual operating costs, it is difficult for wholesale customers to compete in a viable and sustainable manner.

21. The current cost orientation/accounting obligations result in cost and price monitoring by the RA. This creates a level of accountability to the SMPs' regulator, along with incentives to keep operating costs reasonable, and tie pricing to rational business costs. Without this measure of accountability, we are concerned that the SMPs will be able to set prices arbitrarily with less incentive to keep operating costs and prices low. This not only harms competition by pricing wholesale providers out of the market, but it directly harms Bermudians by increasing prices in the EC Sector.

¹ Regulatory Authority of Bermuda, *FRAND and Margin Squeeze – Guidance Note Version 1.0* (1 September 2020) at paras 12-14.

² Regulatory Authority of Bermuda, *Cost Orientation – Guidance Note Version 1.0* (1 September 2020) at para 10.

Question 12: Do you agree with the RA's provisional opinion that any retail minus X% cap should be set by international benchmarking? If not, what alternatives (aside from costly cost orientation/separated accounting obligations) should the RA consider to ensure that a balance is maintained between "developing or maintaining effective and sustainable competition for the benefit of consumers with regard to price, innovation and choice" and "promoting investment in the electronic communications sector"?

22. Link submits that international benchmarking is not appropriate for setting the retail minus X% cap as it is an arbitrary measure upon which to base pricing. There are too many factors influencing another country's retail pricing, some of which may be unknown, making comparison inappropriate. For example, another country may have aging network infrastructure, significant differences in population size or distribution, different regulatory interventions in place, or unique geography. Link submits that international benchmarking that has no basis in actual operation costs does not result in fair, reasonable, and transparent prices.

23. Link submits that international benchmarking is also inappropriate given the unique circumstances of providing electronic communications services in Bermuda. Link submits that with a small population base, spanning a fairly small geographic region, the economics of building multiple parallel networks can be difficult. Therefore, it is critical to have pricing that both reflects the actual costs of providing electronic communications services in Bermuda, and ensure wholesale pricing is sufficiently reasonable to promote effective competition. Smaller providers, even if they require access to some wholesale facilities to provide services, are capable of offering quality products and services while adding value in other ways through innovations and customer service, provided they can obtain reasonable pricing for the underlying access, and provided they are not competing against pricing strategies intended to squeeze margins or make it impossible to compete.

24. Link also has concerns with the use of a retail rate as the starting point from which wholesale prices are determined. There is a lack of clarity for wholesale customers regarding what retail rate the SMPs are supposed to use in setting wholesale access rates and these rates can be difficult to find, particularly for business services. SMP retail prices are often subject to change – and any changes to this pricing should result in a change to the prices paid by wholesale customers. Further, there is a real concern that the current use of retail rates does not reflect promotions or bundling discounts. Failing to account for this

discounted pricing significantly, or completely, negates the value of the current retail minus 25% wholesale price. With pricing tactics such as these compared to the current wholesale rates it becomes impossible for wholesale companies to compete. The SMPs' ability to offer discounts of more than 25% also suggests that retail minus 25% wholesale rate is not reflective of the SMPs' operating costs, and that a higher percentage discount would be appropriate for wholesale prices. Link submits that the only way for wholesale providers to compete is for SMPs to sell wholesale services at a reasonable, cost-based prices.

25. In light of these concerns, Link submits that if wholesale prices are set at retail minus X%, each SMP's retail prices for all wholesale services including business services must be published clearly and made readily available on the RA's website so that all wholesale purchasers and SMPs know what rate the 25% reduction should apply to. This should be updated regularly so all wholesale access seekers are paying reasonable prices and are not left unable to compete due to margin squeeze from SMP's offering discounts. To further address these concerns, Link proposes setting the retail rate for the purposes of determining wholesale access prices as the lowest rate an SMP is charging for a particular service.

26. Smaller operators like Link do not necessarily possess the ability, time or resources to fully monitor or observe SMP behaviours and whether they comply with existing rules and regulations. While market reviews such as this one do provide us with an opportunity to consider what we have been experiencing in the market and commenting on it, small operators are often so focused on simply running the business, trying to keep and grow customers and find ways to minimize the impact of higher costs that we can sometimes be unaware of whether any behaviour is offside with the rules in place. In this regard, we submit it may be worth considering whether there are other reporting methods or other types of reviews that can be established to ensure that the regulatory and pricing regime is being complied with by the SMPs.

Conclusion

27. Link appreciates the opportunity to comment on these matters and appreciates the RA's consideration of our submission.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Tim Repose', with a stylized, sweeping flourish extending from the end.

Tim Repose
Director of Operations

*****End of Document*****

Date: 27th of February 2025

Re: One Communications' Response to the Market Review of the Electronic
Communications Sector



One Communications' Response to the Market Review of the Electronic Communications Sector

Date of Submission: 27th of February 2025

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The contents of this document are provided by One Communications Limited (hereinafter referred to as 'OneComm') in response to the 2025 Electronic Communications Market Review Consultation issued by the Regulatory Authority

In this submission, OneComm reserves the right to address specific issues while also reserving the right to refrain from commenting on others. It is important to note that OneComm's decision not to comment on certain issues should not be construed as being in agreement, either wholly or partially, with the RA's position. Likewise, any stance taken by OneComm does not imply a waiver of its rights in any capacity. OneComm expressly reserves all its rights.

OneComm provides its responses, prefaced by the above position, and welcomes the opportunity to engage with the Regulatory Authority in constructive dialogue to foster effective competition in keeping with international best practices to the benefit of the people of Bermuda.

Any questions or remarks related to OneComm's submission may be addressed to:

Mr. Niall Sheehy

Chief Executive Officer

One Communications Limited

30 Victoria Street, HM 12, Bermuda

1. Introduction

Thank you for the opportunity to respond to the RA's Market Review of the Electronic Communications Sector. This submission outlines One Communications' perspectives and arguments, focusing on the evolving dynamics of Bermuda's telecom market and the implications for regulation.

Sections 3 to 11 contain our main viewpoints and arguments along with our full responses to the RA's questions 2 and 3 on market definitions and susceptibility to ex-ante regulation respectively. Section 12 contains our answers to the remaining questions from the RA.

Our response emphasises Bermuda's competitive landscape, technological advancements, and the need for a regulatory approach tailored to its unique context as a small, affluent island jurisdiction. We propose a streamlined framework to replace outdated and burdensome regulation, ensuring the RA can foster innovation and competition without stifling market progress.

2. Executive Summary

a. Competitive Breakthrough

Competition and market forces can now be relied on to deliver the best in terms of value for money and service reach. This can be demonstrated by the following:

- There is robust competition at all levels both retail and wholesale in Bermuda by means of fibre, fixed wireless and mobile. The level of competition is notable for a small island.
- Customers in Bermuda have access the latest fixed and mobile technologies including Gigabit to home and 5G, positioning the island at the head of technology availability in the Region.
- Coverage of services in Bermuda is island wide in most cases with 5G already accessible by the large majority of people.
- Pricing is shown to be competitive based on the RA's own analysis e.g. see the RA's consultation document, Figure 7.2 on fixed broadband.
- The market is vibrant with market entry and exit. There are 5 mobile providers on 3 networks (2 MVNOs), 5 fixed services providers with increasing fixed/mobile

convergence further increasing competition. Market churn is high or significant and therefore providers must provide value for money or lose customers.

- There are very few residential complaints to the RA about service delivery and no inter-operator disputes.

Bermuda has therefore passed beyond the era when there was a case for legacy regulation. We urge the RA to adopt a regulatory approach that supports competition without imposing unnecessary costs. Continued application of the existing detailed regulation designed for larger EU markets is inappropriate.

We propose, therefore, that the RA takes a pragmatic view of how to support competition in Bermuda going forwards that is customised for Bermuda. Accordingly, we have outlined a much simpler framework based on a **Rule of Three test**. This test is clear and simple for both the RA and operators, dramatically lightens the regulatory load on all parties, and still provides the RA with the assurance that it can regulate where absolutely necessary. It aligns with Bermuda's small size, competitive reality, and investment needs.

b. Administrative Issues

We respectfully believe that the RA has misinterpreted the language in the Act with respect to the meaning of barriers to entry as defined under the ECA. No barriers can be said to exist. The language differs from EU law. Therefore, there is no legal basis for ex ante remedies on that basis.

Furthermore, the RA's language with respect to barriers reflects that it has already taken a decision on this point for all the markets it has proposed. But the RA is required to be open minded with respect to the consultation. The ECA requires that it reaches decisions only after considering the comments it receives, providing justifications based on the evidence from the market.

We also note that the RA has not provided the market information that is required by stakeholders to respond properly to a market analysis and therefore the consultation is not compliant with the regulatory framework. The last Annual Market Analysis published was for 2022 only.

In other words, by the time the RA reaches decisions, the information made available to respondents to provide their views on regulation will be over two years old. That is over 50% of the duration of the permitted four-year market review cycle (section 23(6)(a), ECA). That does not meet the legal standard required.

3. Current Service Provision in Bermuda

The RA has not provided the Annual Market Analysis for 2023 or 2024. Therefore, respondents are forced to rely on out-of-date information. For example, Paradise Mobile launched in November 2023 and the value of any analysis of the mobile market that does not include them would be out of date and questionable. Our comments are therefore based mainly on the latest information provided to respondents from 2022 as well as any information in the public domain including the initial document in the consultation itself.

The industry, in conjunction with the RA and government, has already succeeded in meeting the demand for fixed and mobile service provision by residential and business users across Bermuda. Fixed and mobile voice and broadband provision is ubiquitous and near, or at, the cutting-edge of technology island wide. Universal service has been achieved. That can be seen from the RA's own statistics, including those shown in Figures 1 and 2 below.

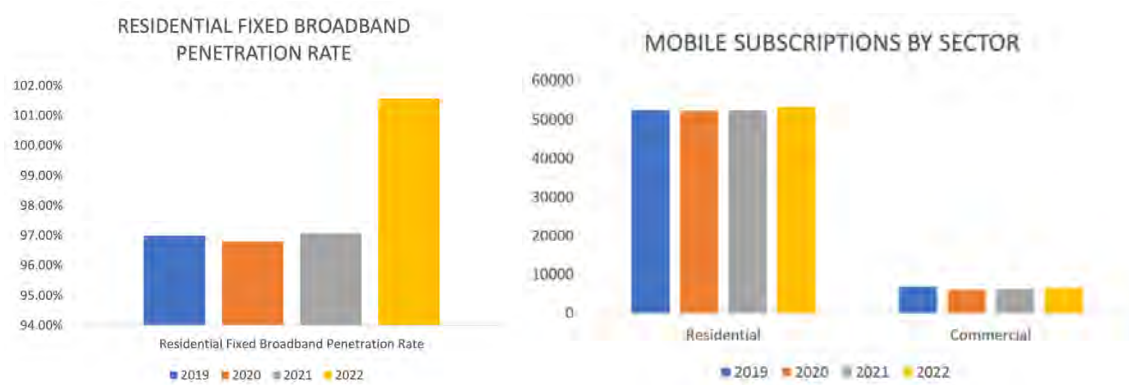


Figure 1: Residential Fixed Broadband Penetration, RA 2022

Figure 2: Mobile Subscriptions by Sector, RA 2022

Figures 1 and 2 show, respectively, that full fixed broadband coverage was achieved by 2022, and that full mobile coverage was achieved some time ago. In addition, there are now multiple competing providers in both markets. Consequently, the basis for regulatory intervention no longer exists. The market can deliver undisturbed by the most demanding regulation going forwards.

Despite the existing competitive market circumstances, out of the benchmarked island jurisdictions and Liechtenstein listed in in Figure 3 below, Bermuda has a significantly higher number of regulatory interventions based on SMP or dominance findings.

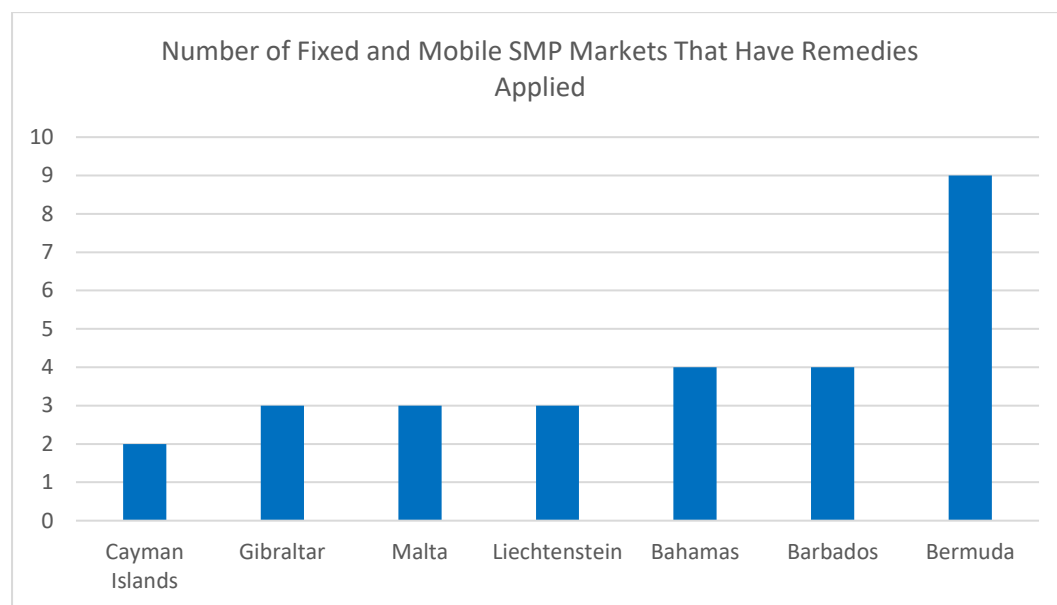


Figure 3: Benchmark of market specific remedies imposed based on SMP or Dominance. There appears to be some additional requirements in Gibraltar with respect to generic non-discrimination type requirements.

Given the progress made in Bermuda in terms of service delivery, most, if not all of those legacy measures are now simply increasing operating costs and therefore prices for customers. They will also hinder the deployment of next generation technologies by diverting engineering and management time into compliance with old regulation.

We note that there are virtually no customer complaints being made to the RA and no inter-operator disputes. Consequently, there is no indication of any problems at the retail or wholesale level that might otherwise have made a case for continued regulation.

Further, the latest available data from the RA in 2022 showed total nominal electronic communications sector revenues declining (ignoring the exceptional Covid reduction) – see Figures 4 and 5 below. Real term revenues, after inflation, would show an even steeper decline. That decline tells investors to be more cautious. That makes the case for the removal of legacy regulation which is increasing costs and diverting business resources.

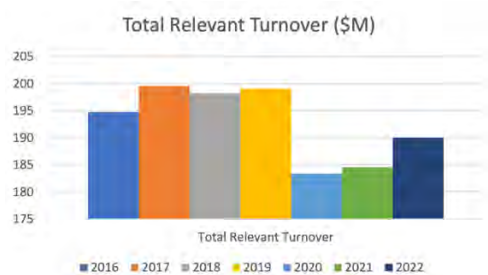


Figure 4: Total Revenue (Nominal), RA 2022

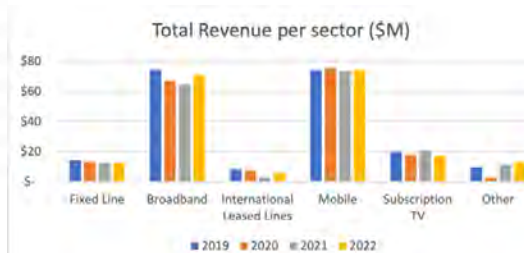


Figure 5: Total Revenue Per Sector (Nominal), RA 2022

In addition, markets are not static. There is tremendous volatility. Mobile annual net churn (which accounts for reactivations) is over 58% for consumer prepaid services and nearly 6% for consumer postpaid smartphone services. Fixed residential internet broadband access net churn is over 9% annually. Therefore, market shares could change rapidly if a provider was not meeting customer expectations.

Although market shifts are not necessary to prove that fierce competition exists, they contribute strongly to that argument. The volatility demonstrates that no operator can maintain its market shares without providing excellent value for money. As the RA is aware, market volatility is a factor to consider when deciding whether economic markets exist for the purpose of regulation.

4. Investment

As set out in section 21(b) of the ECA, one of the main objectives of market reviews is to

“promote investment in the electronic communications sector”

and the ECA states that the RA should seek to:

“rely on market forces and withdraw, reduce or limit ex ante remedies in circumstances where the Authority concludes that markets are effectively competitive or likely to become so within a reasonable period of time” section 21(e), ECA.

Price regulation is particularly harmful for investment prospects. In this respect we see that the RA has struck a note of caution with respect to price regulation, stating that such regulation is “costly” and can “depress investment incentives”. We agree with these concerns.

The RA has not identified any problems with the existing market in terms of the number of competitors or existing pricing. Indeed, the RA states that:

“in comparison with other micro-states, Bermuda has relatively strong infrastructure-based competition”¹.

Therefore, we see no basis for heavy handed and expensive pricing regulation of any sort, whether that be anchor based, retail minus or any kind of modelled costing regulation.

5. Market Definitions

The RA has to varying degrees based its position noted in the consultation on assertions and references to foreign markets to make its case for finding markets in Bermuda. Consequently, we do not think that all of the analyses pass the legally applicable test for the finding of a market. The RA must rely substantially on evidence gathered about the Bermuda market specifically to make its case. This has not been done and presents a basis for challenge if this statutory requirement is not met by the regulator.

a. Inappropriate Use of Large Country Regulation

The RA has to follow the procedure specified in the ECA when determining the procedure for undertaking market reviews. However, much of the ECA is based on outdated EU legislation. The noted legislation was drafted and brought into force for much larger jurisdictions with operators and regulators that have far more resources at their disposal to carry out such exercises. Those regulators and operators have scale economies that improve their chances of affording to pay for the volume of work that is associated with compliance and implementation.

The smallest EU country is Malta with a population of roughly 521,000 compared to Bermuda's 65,000. In other words, it has over 8 times Bermuda's population. Of course, the majority of EU countries are far larger than Malta and enable operators to exceed the 2 million minimum efficient customer numbers scale referred to by the RA. Put another way, the RA is trying to apply a complex regulatory framework to a jurisdiction for which it is not designed. There is no prospect in our view that the EU would have chosen its existing regulatory regime if all EU states were comparable in size to Bermuda.

Although we see that there is some recognition of these differences in the consultation, which is welcome, the RA still appears to be leaning towards excessive regulation and has not sufficiently taken into account local circumstances.

We believe that a more balanced approach to the market review exercise, given the circumstances in Bermuda, would be first to assess whether there are any clear issues

¹ Paragraph 257

regarding customer choice, service availability, or pricing. If no significant problems are identified, then the RA would step back from regulation. That would avoid the need to become involved in theoretical exercises about potential monopolistic behaviors or abstract concepts such as economic markets.

b. Burden of Proof

The burden of proof for proving a market exists under the ECA lies with the RA not the provider. It is only once an operator has been designated as having SMP that the ECA, contrary to best practice we note, passes the burden to the provider to show that remedies should not be imposed (section 24(6)). Therefore, the Authority has to provide a compelling evidence-based analysis for the existence of a market and not use loose and unsubstantiated assertions.

c. RA Question 2/ Relevant Markets

“What are your views on the RA’s preliminary identification of relevant product and geographic markets contained in Section 6?”

i. Fixed Broadband

The RA admits that it “*does not have information for Bermuda*”² in respect of households with only mobile internet access. It then proceeds to attempt to use data from foreign markets (Europe) to reach views about the market in Bermuda. There is no basis for the RA to conclude economically or legally that mobile and fixed broadband are not substitutes in Bermuda on this basis. 5G mobile, and even 4G in respect of most web use, can be a viable alternative. If the RA thinks otherwise it needs to base this on an analysis of Bermuda specific data. Bermuda has a high GDP per capita and is not obviously comparable with large European jurisdictions in particular. Replacing fixed with mobile is therefore more viable in Bermuda. Consequently, we disagree the RA has made its case that fixed broadband and mobile data are in different markets.

We note that the RA concludes that there is demand-side substitutability across different speeds and technologies for fixed broadband. Also, FWA services are likely to form part of the chain of substitution linking fixed broadband products, and part of the fixed broadband market. Finally, the RA concludes that the relevant geographic market is island wide. We agree with this, but 5G mobile, as a minimum, and also 4G in respect of some services, is substitutable for fixed broadband. This can be confirmed by surveying customers.

² Paragraph 114 of the consultation

Conclusions

- Insufficient Bermuda specific market data has been collected to reach decisions on market definitions.
- Product Market – this includes fixed broadband, FWA, 5G and to some extent 4G mobile.
- Not addressing the position sets the groundwork for challenge from the industry regarding the manner in which the market review is being conducted.

ii. Mobile Services

Product Markets

The small and wealthy nature of Bermuda dramatically increases the substitutability of mobile and fixed services in the jurisdiction. It is for example, much easier to get access to a networked computer to make a VOIP call in Bermuda. If you do not already have a computer to hand and many people will, you can get hold of one within a few minutes by walking or driving home or going to an office where you can also access a regular fixed line phone. This is not the United States where you may be 50 km or more removed from your computer or fixed line or other alternative to your mobile.

The RA is not correct to dismiss the competitive impact of the wide availability of dual SIM phones in the market. There are many phones on the market that have dual sim capability, including esim options. Therefore, customers can choose from more than one provider on a single device should they wish to do so and mix and match from whom they take mobile data and other services. That increases the intensity of competition in mobile markets and provides real broadband options from roaming data alternatives. In addition, there are OTT applications available that substitute for mobile voice calls both on mobile and fixed networks.

As an example, a Bermuda resident could simply buy the least expensive talk and text plan available in Bermuda today and use an esim from a foreign provider for data access. Or alternatively, a Bermuda resident could simply use a Paradise Mobile unlimited data plan. The existence of these options means that all fixed broadband providers (network owners and resellers alike) must provide better value and service to meet this cross-platform competition.

The RA appears to be relying mainly on the following statement to justify its separation of fixed and mobile markets

“...the available data indicates that substantial numbers of customers in Bermuda maintain access to both mobile and fixed voice services”.

However, the calculation that is being relied on is not provided in the consultation and therefore the statement is not a legal basis for reaching a conclusion. Respondents cannot comment meaningfully on information that is not supplied.

The authority goes on to refer to the SSNIP test. No evidence is provided to show that this test would not be passed. A survey of customers could have been carried out but that was not done³. There is only conjecture from the RA. In any event, we think that the RA would be incorrect to believe that the test could be applied in the same way as in many other jurisdictions.

That is because of the high GDP per capita in Bermuda. A price increase might have to be larger in Bermuda to be significant for the purposes of the SSNIP test. But, if prices did increase by more than the usual SSNIP test of 5% -10%, then we can imagine that there would be a substantial amount of substitution of fixed services for mobile at the retail level even if that were not the case below a 10% increase.

Mobile Termination

With respect to mobile termination, the RA does not have a legal or economically sound basis for recommending the definition of a mobile termination market on each operator's network. As the RA states, the operators use a bill and keep approach to mobile calls. Therefore, there is no market power in mobile termination. There is no legal basis for the RA to define a prospective market.

The ECA, section 23(1), allows only for the cancellation of an existing market definition based on possible future events, not the finding of a currently non-existent market based on possible future events. Moreover, the very idea of defining a market in this way runs contrary to the principle of light touch regulation and using market forces wherever possible (ECA, section 21(e)).

Conclusions

- Insufficient market data has been collected to reach market definition decisions
- Product Market – this variously includes fixed broadband, FWA, 5G and 4G mobile, fixed and mobile VoIP and Fixed Voice depending on the application or service you want e.g. voice or data, retail or wholesale, and is therefore not just a mobile services market. The RA has tried to define the market into several individual mobile only market components based on legal abstractions which we think is misplaced given the lack of evidence and research noted in the market consultation document.

³ This also reinforces our earlier argument about the fact that applying EU type regulation is disproportionate for Bermuda. That is because in order to carry out a proper market assessment would mean expending significant amounts on undertaking market research which would also be disproportionate to the market. Therefore, a simpler way forward needs to be found.

iii. Fixed Voice

Unmanaged VoIP

Unmanaged VoIP services are certainly within the same market as stand-alone voice services. However, the RA has presented five aspects of unmanaged VoIP services which it says means that standalone subscribers will not view them as a direct substitute. This does not withstand scrutiny in our opinion.

The RA's 5 requirements for making and receiving calls for users at both ends of the call (to make them substitutable) are shown below with our comments in blue:

- to have a fixed broadband connection or mobile data connection – the RA is operating on the premise most people if not everyone has such access or both we understand so this part of the RA's test is passed.
- to own a compatible device – we understand that the RA thinks everyone, or nearly everybody does own such a device
- to have installed the relevant application on the device – it takes a short time to install an application, and the applications may also come pre-loaded in any event
- to have the device turned on – if someone has a computer or mobile, it is probably going to be switched on most of the time or at least a significant amount of the time
- to be logged in to the service – with many VoIP apps the user is automatically logged in when a device is turned on

There is therefore plenty of reason to think that if fixed voice prices were raised significantly, taking account of what is significant in Bermuda in particular, that many customers would substitute unmanaged VoIP for stand-alone voice services.

Fixed Termination

For the same reasons as expressed in response to the suggestion that there should be a mobile termination market it is inappropriate and there is no legal basis to define a fixed termination market on each operator's network. Please refer to our response on mobile termination.

iv. Subscription TV

Pirated Content

We disagree that pirated content is outside the scope of the market review. That is because, regardless of its illegality, it affects the pricing and competition for paid content services in

Bermuda. It is unfortunate that there is documented evidence of the RA taking action in the past against operators providing illegal content. However, without explanation, the RA will not be taking further action in these matters. Furthermore, the RA has stated in the past that it is required to regulate all entities that are providing electronic communications in Bermuda.

The RA has to regulate based on reality as opposed to how it hopes the market would work. By way of an example, suppose that there was only one legal provider in Bermuda but 90% of the content consumed was delivered illegally from abroad via unlicensed entities. The RA could not economically or legally sustain a market definition of SMP for the Bermuda provider. Nor can it economically or legally sustain a market definition of any sort in this case without making an estimate of the amount of illegal content delivery.

In order to assess the impact of pirated content, the RA would need to ask the providers for information about the volume of pirated content being delivered. It might be possible to undertake an estimate of this based on applications that have been used to deliver content online by entities that have no license to operate in Bermuda.

However, it is already clear that there are multiple business openly selling highly suspect content access boxes in Bermuda with no consequences or regulation. This is not fair competition. One Communications has seen 10% year-on-year reduction on its revenue for its tv business driven primarily by the availability of low cost, illegal, unregulated TV content.

Conclusion

Consequently, illegal content providers are in the same market as legal content providers and the definition must include illegal content providers unless the RA can show they are de-minimis. It is One Communications' position that RA is mandated under the law to take action against such providers and should be conducting investigations into the market.

Moreover, if the RA chooses to not regulate illegal content providers (and unlicensed providers like Netflix et al.) it is effectively forbearing from regulating that market properly. This forbearance should extend equally to legal providers and should result in no regulatory taxes and fees being applied to the market.

To maintain the status quo, the RA is effectively discriminating against local legal providers and competitively handicapping them financially through application of the GAF and RAF. The status quo regulatory framework will inexorably ensure that local legal providers exit the subscription tv market.

v. Business Connectivity

The difference between the market review in 2013 and 2017 shows how inflexible and out of touch with reality legacy regulation rapidly becomes.

The market assessment in 2013 used a threshold for regulation in terms of leased line capacity of 1 Mbps, whereas in 2017 the threshold was raised to 25 Mbps. Clearly the markets defined did not suddenly switch in 2017 to being appropriate for 25Mbps. Therefore, there was up to a 25-fold discrepancy in terms of capacity over the course of the four years. Consequently, the original regulation imposed ineffective and inefficient outcomes and higher costs on the industry and customers. This is a lesson that needs to be taken into account. Static regulation should be avoided. Commerce needs to be left to operate freely.

Fixed broadband, point-to-point leased lines, point to multipoint leased lines and dedicated Internet access circuits form a clear chain of substitution. Many businesses will be content with the first of these and perhaps 5G mobile also, especially smaller businesses. So, these products all form part of the same market. The RA seems to recognize this partly where it states:

“...there are many businesses in developed countries that have migrated their smaller sites from leased lines to fixed broadband over the last few years, as the price-performance of fixed broadband has improved substantially”.

6. Markets Susceptible to Ex-Ante Regulation

Our response in respect of each of the markets purported by the RA as being susceptible to ex ante regulation is structured around the three-part test identified in section 22(1) of the ECA as follows:

1. Whether there are high and non-transitory barriers to entry.
2. Whether there is effective competition.
3. Whether ex-post competition rules will be sufficient.

Although not stated explicitly in the relevant section of the Act we interpret this to be relevant to the four-year period post a decision on the market review.

Effective competition is not defined in the ECA. Nor has the RA published guidelines about this to the best of our knowledge. That creates uncertainty for operators and investors in terms of potential regulation that might undermine the basis for future investment and service development. Faced with this uncertainty we have turned to market outcomes as the guide as

to whether there is effective competition. We believe that the key factors needed for effective competition is a market environment with a choice of providers that leads to value for money at the retail and wholesale levels either immediately or prospectively.

We note that the RA appears to have used methodologies from the EU to determine whether remedies should be applied. As the RA states, that should involve first testing whether there is effective competition in the relevant retail market. If there is effective competition, then no remedies are considered.

Factors such as high and stable market shares are referenced sometimes in the abstract field of competition law as possible diagnostic factors when considering whether there are circumstances which justify subjecting providers to regulatory intervention. However, that is usually, if not always, accompanied with the caveat that such factors are not determinative. In any event, as shown previously, market shares are not stable in Bermuda and any provider that did not provide value for money would rapidly lose market share.

RA Question 3/ SMP Assessment

Do you agree with the RA's initial assessment of the SMP sectoral providers set out in Section 7?

i. Fixed Broadband

High and non-transitory barriers to entry?

We disagree with the RA that there are high and non-transitory barriers to entry in the fixed broadband market. The RA has not used the statutory definition of "barrier". The ECA specifies that the type of barrier being considered is to a de jure or de facto barrier (section 23(2)(j) of the ECA). In plain language, a legal or physical barrier or a barrier in effect. There is no legal barrier. There is no physical barrier. Nor is there a barrier in effect. A barrier in effect would have to show some kind of impedance of competition. Impedance means some kind of interference with or slowing of the progress of market entry. There is no evidence of such impedance.

The fact that a provider could not instantly build a network or instantly win a substantial number of customers is not an impedance. Nor does competitive pushback in terms of better commercial offerings to customers amount to impedance for these purposes. There would have to be an unusual factor or deliberate and unreasonable action at play that limits the opportunity for competition. That constrains the scope of impedance in this context to other actions taken by competitors, the RA, government or other third parties.

Impedance could include laws that prevent or hold up rollout or winning of market share that are not faced by competitors. Withholding spectrum allocation or high licence fees would therefore be barriers. Changes to planning laws that make building infrastructure more difficult for a new entrant than existing operators had to face would be a barrier, although we submit in that case that the focus should be on planning laws and not regulating providers.

Actions that would be required and challenges that would be faced or would be expected in the normal course of building a network or providing services or winning market share are not barriers. The meaning of impedance must be so constrained otherwise every single action involved in providing a competing service would suffer from impedance and therefore constitute a barrier.

Given a lack of impedance, why might infrastructure entry not take place given that a well-funded infrastructure competitor could build a network across Bermuda because of its small, flat and wealthy nature? There are two main reasons we believe.

Firstly, it might not succeed because customers are happy with the services from their existing providers. Consequently, they might not switch to the new provider in sufficient numbers to make its business viable. But customer satisfaction is not a barrier to entry and cannot be used to justify regulation.

Secondly, if an existing provider had an advantage due to depreciated network costs relative to a new entrant's network, that would mean that market entry might be inefficient. But a lack of market entry due to inefficiency would not be a "barrier". The concepts of inefficiency and barrier cannot legally be conflated. Moreover, any such possible short term cost advantage would have to be weighed against the advantages of building a state of the art brand new network with possibly superior throughput, quality of service and lower costs of operation over time.

That new network would better enable it to win customers from existing providers. In any event, the RA has ruled out taking regulatory action based on network build cost inefficiencies⁴. That means the only cost advantages it may consider for regulatory purposes would relate to providing services using wholesale access. Those would be relatively modest at most. In other words, there is no barrier to wholesale access absent the behaviour of existing providers in respect of which we have provided a much simpler regulatory mechanism to reassure the RA and other operators⁵.

⁴ Paragraph 259 of the consultation

⁵ See our Rule of Three proposal

If short or even medium term inefficiencies, based on the continually varying cost advantages of wholesale providers relative to one another, are used to determine whether the RA should regulate then economic regulation will never end.

The RA has, however, provided no evidence in the consultation of existing barriers as defined in the ECA. Instead, the RA unequivocally makes the unsupported opening statement that:

“The market is characterised by high and non-transitory barriers to entry.”

This indicates that the RA has already reached a decision on this point. This amounts to fundamental analytical bias which is a breach of natural justice and the right to a fair hearing. It invalidates all parts of the consultation where this statement is used. In other words, all alleged economic markets deemed susceptible to ex ante regulation by the RA are voided where this statement is used.

Therefore, the *“high and non-transitory barriers to entry”* element of the three-part test identified in ECA section 22(1) is not passed. Consequently, the test has failed because it is an all or nothing assessment. Hence, there is no legal basis for ex-ante regulation. One Communications puts the RA to strict proof on this.

Effective competition?

Customers have a choice of fixed broadband service providers – One Communications, Digicel and TeleBermuda. In addition, Fort Knox/Live net resells One Communications' services. Fixed broadband entry prices are within the expected range based on the RA's entry analysis of prices illustrated in Figure 7.2 and when combined with a chain of substitution.

Further, One Communications believes that pricing would be at least as competitive without anchor pricing. However, the only way to prove that is to remove the existing anchor regulation. In addition, broadband is being delivered by 5G and 4G. We also note that service quality is a match for anywhere else in the world. This demonstrates that competition is working successfully.

The market is, therefore, effectively competitive. That means that this part of the three-part test is not passed either so, once again, there is no basis for ex-ante regulation.

Ex-post competition rules sufficient?

Given that there are no barriers to entry and the market proposed is effectively competitive, ex-post rules are more than sufficient to prevent anti-competitive conduct as defined. Once again, therefore, there is no basis for ex-ante regulation.

ii. Mobile Services

High and non-transitory barriers to entry?

We disagree with the RA in this respect for the same reasons as stated in our response on barriers to fixed broadband entry. The RA's analysis is, in our view, economically and legally unsustainable. We will not repeat the text here.

Effective competition?

It is remarkable that the RA has dismissed Paradise mobile as a further indication of effective competition at the network level for the future. Paradise launched in November 2023. That is over 15 months ago. Paradise will have had almost 2 years to establish its market position by the end of the market review process and it publicly stated that its entry has been such a success that they are now looking to launch in multiple other markets, including in the Cayman Islands.

In contrast, elsewhere, the RA has gone so far as to propose recommending the definition of a mobile [and a fixed] termination market when nonexists currently. This is based on the theoretical future possibility of such a market arising, we presume, if the operators switched to calling party pays termination in the future. Not taking into account the impact of Paradise's entry on the market, but attempting to take into account theoretical future changes to termination is highly inconsistent of the RA.

Existing mobile services are effectively competitive at all levels and competition is about to become more intense with five providers in all. Three of which will be providing network competition.

Ex-post competition rules sufficient?

Given the intense competition, especially so for such a small island, and pricing that is very competitive, ex post competition rules are certainly more than sufficient and no ex-ante rules are required in any way for mobile services of any description.

iii. Fixed Voice

High and non-transitory barriers to entry?

We disagree with the RA in this respect for the same reasons as stated in our response to whether there are barriers in relation to fixed broadband. The RA's analysis is, in our view, both economically and legally unsustainable. We will not repeat the text here.

Effective competition for 4 years post review?

Effective competition in fixed voice already exists from two island wide providers and Unmanaged VoIP. VoIP is a substitute because there would be significant substitution of retail fixed voice if the price increased significantly⁶. The RA confirms that fixed voice is being increasingly substituted by alternative services and providers because it has stated:

“...the available information on fixed voice traffic in Bermuda suggests that usage of fixed voice services (ie the number of fixed voice minutes) is also in a long-term decline.”

We do not believe there is any suggestion by the RA that people are talking less, therefore the traffic is going to mobile, mobile VoIP and fixed VoIP.

Ex-post competition rules sufficient?

Given the range of options open to users, and the movement of voice onto competing platforms, competition rules are certainly more than sufficient and no ex-ante rules are required in any way for mobile services of any description.

iv. Subscription TV

High and non-transitory barriers to entry?

The RA already recognizes there are no high and non-transitory barriers to entry for the provision of subscription TV.

The RA recognises that when any part of this three-part test fails there is no basis for regulation so it did not address effective competition or ex-post competition rules.

v. Business Connectivity

High and non-transitory barriers to entry?

We disagree with the RA in this respect for the same reasons as stated in our response to whether there are barriers in relation to fixed broadband. The RA's analysis is, in our view, both economically and legally unsustainable. We will not repeat the text here.

⁶ See our earlier comments about the need to take into account GDP per capita in Bermuda when considering the SSNIP test.

Effective competition?

As the RA recognises, Bermuda is served by 3 direct fibre networks with connectivity offered by OneComm, Digicel and Link Bermuda. In other words, there is already substantial competition therefore the market is effectively competitive.

Ex-post competition rules sufficient?

Given the absence of any competition problems and the ability for entrance to enter the market ex-post competition rules are more than sufficient for Bermuda in respect of business connectivity services no ex ante remedies are justifiable.

vi. Off-island Connectivity

The RA appears to have concluded that there is effective competition for international connectivity and that therefore there is no case for ex-ante remedies. We agree with that conclusion.

The RA recognizes that when any part of this three-part test fails there is no basis for regulation, so it did not address the remaining parts of the three-part test.

7. Pricing Regulation

Regulated pricing mechanisms, such as anchor pricing and retail-minus pricing are particularly detrimental in small jurisdictions, due to their tendency to stifle competition, innovation, and investment.

Anchor pricing discourages new entrants and competitors in general from offering competitive alternatives and reduces incentives for incumbents to innovate or improve efficiency. They also may distort the market by forcing inefficient service delivery.

Overall benefits to consumers are likely to be better served by letting competition determine which service levels should be made available. It would be more than sufficient for the RA just to monitor suitably adjusted benchmark prices to see if Bermuda seems to be in or around the expected range. That will reassure the RA about the reasonableness of local pricing.

Retail-minus pricing or modelled costing is particularly burdensome for smaller operators, and will lead to greater risk, less investment, slower technological advancements, and ultimately poorer service quality for consumers.

Instead of fostering a vibrant, competitive market, such pricing controls would risk creating a stagnant industry environment where consumer choice and service improvements are limited, ultimately harming the long-term development of the telecommunications sector.

8. Preventing Unauthorized Content Provision

We request consideration by the RA of a new proposal with respect to preventing pirated content from being used to compete illegally with licensed subscription audiovisual service providers in Bermuda. Illegal content provision is affecting the development of the audio-visual service market, and a solution needs to be found one way or the other.

As the RA knows, Section 12 of the ECA bans the provision of

“...an electronic communications service within the territorial limits of Bermuda or between Bermuda and another country, without a valid COL authorizing such activities...”.

Further, section 2 of the ECA states that

“electronic communications service” “...means a service ...which consists wholly or mainly of the conveyance of signals by means of electronic communications networks, including the distribution and provision of subscription audiovisual services”.

Therefore, anyone providing subscription audio-visual services without a licence does so illegally.

As the RA knows, there are applications owned and operated by organisations not licensed in Bermuda that provide access to audio-visual content that is normally paid for by subscriptions in Bermuda. The RA has taken action against such providers previously.

It can reasonably be assumed that a subscription is being paid in respect of such services, or, alternatively, that it is pirated content. Therefore, in One Communications' view it is reasonable to block the applications because they are competing unfairly with licensed subscription services in Bermuda. It is not practical to attempt to pursue copyright infringement worldwide.

The cooperation that One Communications seeks involves the creation by the RA of a non-binding list of audiovisual application services that the RA believes, but would not confirm, may legitimately be providing audio-visual services in Bermuda without a licence. This would amount to a form of non-binding co-regulation.

Applications that wanted to be made available in Bermuda could submit proof to the RA which could be shared with providers for consideration. In practice, that is likely to mean that only owners of applications that do not compete with subscription audio-visual services would provide submissions.

That would not stop an application provider from suing providers in Bermuda, because the regulator's endorsement is not required, but legal action is unlikely if the content is being pirated.

Alternatively, we believe that the law must be changed so that no licence is required to provide subscription audio-visual services.

9. Simplifying Regulation – The Rule of Three

We propose simplifying the regulatory approach to relieve the burden on the RA and operators whilst maintaining sufficient safeguards for Bermudian stakeholders by introducing a Rule of Three.

This rule would mean that if three wholesale providers and three retail providers of a service were present then no economic market regulation would be imposed unless certain conditions were met. In the latter case there would be an agreement that the RA could reimpose legacy regulation for the relevant service. Alternatively, a stepped approach could be taken where all retail regulation is withdrawn and if nothing untoward happens wholesale regulation could be removed later.

The Rule of Three would dramatically reduce the volume of market regulation, whilst guarding against total market consolidation. Why three? Because the existence of three operators creates sufficient uncertainty for existing operators to ensure that they will compete fiercely. Of course, however, many small jurisdictions have only two operators. While a Rule of Two might also be proposed therefore, we are keen to provide sufficient reassurance to the RA as a first step, using this kind of innovative approach.

Ofcom in the UK has, for example, indicated that it will not regulate incumbent network operator Openreach's broadband products where there is established competition⁷. Competition is shown to be established where there are at least two established rival networks⁸.

The Comisión Nacional de los Mercados y la Competencia (National Commission on Markets and Competition) in Spain also regulates differently based on whether there are 3

⁷ See Ofcom wftmr-statement-volume-1-overview, page 2

⁸ See Ofcom wftmr-statement-volume-2-market-analysis, paragraph 7.29

alternative infrastructure providers in the market. It is recognised that 3 networks can make markets effectively competitive although the extent of provision is also a factor⁹.

10. Unbundling

If unbundling is desirable overall, taking into account demand and the costs associated, then competition will continue to ensure that it is possible. In order for it to continue it would have to provide competitive advantage (because enough people want it), which outweighs the costs.

However, the RA has not carried out a financial cost benefit analysis of the unbundling requirement, nor a customer analysis about whether many customers would mind if there were no unbundling of mobile, fixed broadband and fixed voice. Therefore, the RA does not have a basis for stating that:

“...these remedies are not likely to result in significant additional cost for the sectoral providers and are necessary to prevent or deter anti-competitive effects.”

There is clearly a cost in terms of network and retail management and there is no basis for saying that it is not likely to be significant other than wishful thinking.

If the RA requires unbundling to continue regardless of whether it would do so in the natural course of things, then we think that it would have to be on the grounds of consumer protection. However, given the level of incomes in Bermuda we are unsure whether it is necessary.

We suggest that the RA asks consumers about what they desire in this respect rather than regulating by default, and as we see it, somewhat in the dark.

11. Lawfulness of the Consultation

In order to carry out this market review the RA says that it has relied on the information listed in paragraph 246. That included market analysis submissions from 2019-2023. However, the RA has not provided the information for 2023 therefore, respondents are responding in partial darkness. Moreover, the 2024 information has not yet been made available either.

⁹ Anme/Dtsa/002/20/Mercados Acceso Local Central (Anme/Dtsa/002/20/Markets Local Central Access)

In order to conduct the consultation in a manner that meets the standards required in the ECA, section 23, the data on the latest market conditions cannot reasonably be more than a few months old as it quickly becomes out of date. There also has to be a reasonable continuity of information up to that date to demonstrate trends because that is an important part of the analysis.

The providers and all other stakeholders in the consultation have a legitimate expectation that such information would be provided for the consultation. If we had believed that the RA would have commenced the consultation before doing so we would have objected. The RA cannot, therefore, fail to provide the information and then expect respondents to reply in partial darkness.

Therefore, the RA is not complying with section 23(4) of the ECA which requires it to

“..conduct a public consultation to review those markets identified in accordance with section 22 that in its view are susceptible to ex ante regulation”.

This cannot be a consultation in name only, or only a partial consultation because of incomplete and out-of-date information.

The last information that the RA appears to have published was the Electronic Communications Annual Market Analysis Report 2022. Although it is out of date it sets the standard in terms of the minimum level of market information required to be published in order for the RA to conduct a review. Therefore, the minimum up-to-date set of information that was required for each market that the RA has proposed, and as relevant dependent on the nature of the service, was:

- Total number of subscriptions
- Number of lines
- Minutes of traffic
- Penetration rates
- Market share by subscription
- Download subscriptions by speed
- Revenues
- Average revenue per user
- Market share by revenue

Since the Act requires the RA to consult on market reviews every four years (section 23(6)(a)) that invalidates any information that is more than four years old and proportionally decreases the relevance of information in accordance with its age. It is now over two years since the last market information was published. In other words, over 50% of the time has

passed. In One Communications view that invalidates the consultation. The consultation will have to be restarted to make it fair to respondents and legally sound.

12. RA Questions

Question 1: Merger Control Conditions

Do you agree with the RA's initial conclusion that the merger control conditions imposed in 2014 and 2015 on OneComm and Digicel are no longer fit for purpose and should be removed (Section 4 paragraphs 48 and 49 of the Consultation Document)?

Yes. We agree that these merger controls are now redundant.

Question 2: Relevant Markets

What are your views on the RA's preliminary identification of relevant product and geographic market contained in Section 6?

See answers provided [above](#).

Question 3: SMP Assessment

Do you agree with the RA's initial assessment of the SMP sectoral providers set out in Section 7?

See answers provided [above](#).

Question 4: Ex Ante Remedies

Do you agree with the RA's initial proposed SMP ex ante remedies contained in Section 7.5?

None of the proposed SMP remedies are appropriate on economic or legal grounds. We have provided the basis for this in our responses to the questions on market definitions and whether markets should be susceptible to ex ante regulation.

The analysis is also invalidated based on a failure to follow due process by not publishing key market information required for respondents to comment based on the latest market conditions. However, based on market information made available up until the end of 2022, no remedies are required. No providers have SMP under the ECA. Therefore, all the proposed SMP remedies are invalid and would be illegal. Moreover, the manner that the RA wishes to approach market regulation would mean regulating forever based on an ex-ante basis.

Notwithstanding the above comments about the lack of economic grounds and illegality, we note the particularly burdensome nature of the proposed remedies.

The RA notes various positions about possible undefined future market outcomes in the table associated with paragraph 251. The RA states that it has concerns about potentially “excessive” retail or wholesale prices. But what is excessive? How much profit, or other measure of return on investment, does the RA want to allow? It does not say. Therefore, providers are left in a grey zone.

If the RA does want to limit profitability to a specific level, how can it possibly work out without a tremendously expensive cost model exercise wholly disproportionate to the small size of the market that would drive up operating costs and therefore prices to consumers in Bermuda? The RA recognizes this by stating in paragraph 253 that:

“The cost of regulation forms a much more significant percentage of the total cost of supply of telecommunication services in a microstate... up to 150 times higher per person when spread over a population of 65,000.”

In other words, there is no way of regulating this without making things worse than the outcome that the RA fears. Moreover, regulating in the way proposed creates uncertainty that reduces the chance of investment by existing or new providers. Consequently, the RA will frighten away further investment by existing providers and potential competitive entry in the future.

The RA recognises that:

“...in comparison with other micro-states, Bermuda has relatively strong infrastructure-based competition”¹⁰

It is more attractive to invest in Bermuda because it is small, flat and wealthy. Consequently, arguments for regulation in other jurisdictions have less application in Bermuda.

¹⁰ Paragraph 257

Further, the RA states that

“The RA should not impose ex ante remedies on SMP sectoral providers that would provide any long term inefficient¹¹ entry assistance to infrastructure-based entrants.”.

But that is precisely what it is doing. Wholesale regulation is a first step in the well-known concept of the ladder of investment. It enables market entry by providers that also wish to progress to infrastructure based competition.

Question 5: Anchor Product Definition and Pricing

Do you agree with the RA's initial position that any anchor product should have the same price and definition for any provider that has been found to have SMP in that particular market.

One Communications disagrees with the notion of anchor products. It is redundant and counter-productive regulation, especially given the current state of the competitive market in Bermuda. Anchor pricing regulation simply drives up administrative complexity and cost and ultimately that feeds through to the amount customers have to pay for non-regulated products.

We are not clear why the RA thinks that a straight-line graph¹² proves anything at all. Without the current excessive level of regulatory intervention in the market higher speed products might be cheaper per Mbps.

In fact, the straight line graph may prove that anchor regulation is commoditising and undermining the market by making it static and less responsive to customer needs. Therefore, overall, prices might be higher and speeds and quality of service lower than they could be without it. The only way to find out is to remove the regulation.

It is more enlightening to look at how many customers want this product. The RA says that the take-up is low at about 10% of the market. The RA appears to make an erroneous statement in its analysis which is not consistent with the graph in figure 7.4 (which shows the number of fixed broadband subscribers on regulated services) as follows:

“...the RA notes that the proportion of fixed broadband subscribers on these services has risen over time...”

To the contrary, the graph shows that the numbers of subscribers taking these regulated services are now declining. What is also clear is that these lower speed packages will be less

¹¹ Paragraph 259; our highlighting

¹² Figure 7.3, page 69

and less popular over time as the need for higher data rates continues to grow in accordance with the data density of applications. Anchor regulation helps to anchor lower speed services.

To the extent that anchor pricing might be argued to reduce prices for some customers¹³ it would disincentivize investment by potential new entrants because they would be less able to compete for customers. Anchor pricing therefore reduces the opportunity for competitive forces to work. This contravenes the principle set out in section 21(e) of the ECA that requires the RA to seek to rely on market forces.

Question 6: Number of Anchor Products

What are your views on whether one or two anchor products are required in the retail fixed broadband market?

As stated above, One Communications disagrees with the notion of anchor products. It is redundant and counter-productive regulation, especially given the current very competitive marketplace.

Question 7: Should Anchor Product be an Entry Level Service

In the event that only one anchor product is considered for the retail fixed broadband market, do you agree with the RA's initial position that the anchor product should be targeted at an entry level service priced at no more than \$80 per month for a 50 Mbps download/10 Mbps upload?

See answer to question 6.

Question 8: Need for Ex Ante Anchor Product in Retail Mobile?

Do you believe that the RA should consider an anchor product ex ante remedy in the retail mobile market to protect consumers against ongoing price increases? If so, what should be the component parts of such a product? The RA's initial position is that the anchor product for retail mobile should be set at no more than \$50 for unlimited local talk & texts and 10 Gigabytes of data per month. This is an existing "Student Bundle" offering from Digicel.

See answer to question 6.

¹³ The regulation may well be driving up prices overall, however.

Question 9: Use of International Benchmarking for Price Assessment

Do you agree that the price for relevant service products should be cross checked by international benchmarking?

We have no objections to this for the purposes of ex-post analysis, as long as it is borne in mind that labour costs in particular are likely to be much higher in Bermuda than elsewhere. To properly reference international benchmarks, purchasing power parity has to be factored into the final assessment of both the demand and supply side of the market.

Question 10: Median Price Monitoring

Do you agree that it is important that the RA monitor the median price across all products in each of the fixed broadband and mobile services markets in addition to the use of anchor product pricing?

We think that this level of detail over complicates the analysis. A broad look at benchmarks, reasonably adjusted for additional costs of operation in Bermuda, would suffice to provide reassurance that competition was delivering the best value for money services.

Question 11: Approach in Place of Accounting Separation

Do you agree with the RA's provisional opinion that implementation of costly cost orientation/separated accounting obligations may not be in the best interest of end users in the Bermuda market? If not, what alternatives should the RA consider to ensure that a balance is maintained between "developing or maintaining effective and sustainable competition for the benefit of consumers with regard to price, innovation and choice" and "promoting investment in the electronic communications sector"?

Yes. The RA itself has spelt out the support for not using accounting separation including the disproportionate costs for small island providers. The market is competitive, and we see no need for any such measure.

Question 12: Setting Retail Minus Caps Using International Benchmarking

Do you agree with the RA's provisional opinion that any retail minus X% cap should be set by international benchmarking? If not, what alternatives (aside from costly cost orientation/separated accounting obligations) should the RA consider to ensure that a balance is maintained between "developing or maintaining effective and sustainable

competition for the benefit of consumers with regard to price, innovation and choice” and “promoting investment in the electronic communications sector”?

While we disagree that any such regulation is justified given the competitive market that exists, for reasons of cost, benchmarking is a better methodology than complex costing assessments. Wholesale relationships have been negotiated beyond the requirements of existing regulation. Resellers have been able to negotiate with network owners and come to mutually beneficial terms. The lack of inter-carrier disputes evidences this point. The RA need not intervene by setting a static discount on retail.

END



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27th February 2025

Regulatory Authority of Bermuda
1st Floor, Craig Appin House
8 Wesley Street
Hamilton HM11
Bermuda

Re: Response to Market Review of the Electronic Communications Sector Consultation

Dear Regulatory Authority,

Paradise Mobile appreciates the opportunity to provide input on the Market Review of the Electronic Communications Sector. As a new ICOL holder in Bermuda, we are committed to fostering innovation, expanding consumer choice, and ensuring fair market access. Below are our key responses to the consultation

Competition and Market Structure

Paradise Mobile strongly opposes any consolidation between Digicel and One Communications. The current market already reflects Significant Market Power (SMP) concentrated between these two entities. Any merger or increased coordination would:

- Reduce competition, limiting consumer choice and innovation.
- Strengthen market dominance, making it harder for new entrants to compete.
- Increase the risk of anti-competitive behavior, such as price-fixing and discriminatory wholesale access.

The RA must uphold and strengthen regulations that prevent market consolidation and ensure fair competition.

Ex Ante Remedies and Pro-Competition Regulations

Paradise Mobile supports the continuation of ex ante remedies to promote a level playing field, particularly in the following areas:

- **Wholesale Access & Infrastructure Sharing** – Digicel and One must continue offering fair, reasonable, and non-discriminatory (FRAND) wholesale access to smaller operators.
- **Retail and Wholesale Market Protections** – Mandatory price controls, service transparency, and KPI publication are necessary to prevent price squeezing and anti-competitive practices.



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- **Cross-Market Competition** – The RA must ensure that Digicel and One do not leverage their fixed broadband dominance to distort competition in mobile markets through predatory pricing or bundling strategies.

Barriers to Market Entry and Growth

The RA has acknowledged the significant structural barriers to entry in Bermuda's electronic communications sector, particularly for operators without legacy infrastructure. To promote competition, we urge the RA to:

- Ensure fair and transparent spectrum allocation to support new entrants.
- Monitor and prevent anti-competitive wholesale pricing that restricts access to critical network components.
- Implement technology-neutral policies that allow emerging providers to compete effectively.

Market Definition & SMP Oversight

The mobile sector remains highly susceptible to SMP concerns. The current SMP designation for Digicel and One Communications should remain in place, with additional oversight in the following areas:

- **Pricing & Tariff Structures** – Ensuring that wholesale and retail pricing do not create barriers for smaller competitors.
- **Network and Service Performance Standards** – Enforcing KPI transparency to prevent incumbents from using network quality as a competitive barrier.
- **Retail Market Fairness** – Reviewing promotions, bundling practices, and loyalty programs to prevent unfair market advantages.

Maintaining Merger Control Conditions

Paradise Mobile strongly opposes the removal of existing merger control conditions, as doing so would:

- Further entrench the market power of Digicel and One.
- Limit opportunities for new entrants to grow market share.



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- Potentially lead to higher prices and reduced service quality for consumers.

The RA must maintain and enforce existing merger control conditions to protect competition and consumer welfare.

Conclusion

Paradise Mobile urges the RA to take a firm stance in preserving competition, maintaining ex ante remedies, and preventing market consolidation that would harm Bermuda's telecommunications sector. Our ability to drive innovation and offer consumers better choices depends on a regulatory framework that prevents monopolistic behavior and ensures fair access to infrastructure and spectrum.

Bermuda deserves better networks, stronger competition, and improved consumer offerings. Allowing further market concentration would lead to stagnation, reduced innovation, and poorer service quality.

We appreciate the opportunity to share our perspective and look forward to continued engagement with the RA to ensure a fair and competitive telecommunications market in Bermuda. Paradise Mobile remains committed to lowering prices, improving customer offerings, and raising service standards.

Regards,

Zlatko Zahirović

The logo for Paradise Mobile, featuring the word "paradise" in a bold, pink, lowercase sans-serif font, with the word "mobile" in a smaller, pink, lowercase sans-serif font directly beneath it.

ZLATKO ZAHIROVIC

Chief Technology Officer

Response:

Comments on the Market Review of the Electronic Communications Sector

Name: Raymond Seymour

Question 1: Do you agree with the RA's initial conclusion that the merger control conditions imposed in 2014 and 2015 on OneComm and Digicel are no longer fit for purpose and should be removed (Section 4 paragraphs 48 and 49 of the Consultation Document)?

No, we do not agree with the RA's initial conclusion that the merger control conditions imposed in 2014 and 2015 on OneComm and Digicel should be removed.

OneComm and Digicel should retain the merger control conditions, as their removal could lead to further market concentration and reduce competition. It is important to recognize that BTC is separate from Digicel, and BCV is separate from Logic.

The RA should classify:

- BTC as an infrastructure provider for wholesale access.
- BCV as an infrastructure provider for wholesale access.

Currently, businesses and residents in Bermuda have no alternative options for accessing retail services from these essential utility providers. Vertical integration of any access line would not provide meaningful benefits unless a third land-based network was introduced. Without such competition, removing regulatory oversight could lead to market dominance and reduced consumer choice. The RA must maintain its oversight to ensure fair access and prevent the negative effects of market concentration.

Question 2: What are your views on the RA's preliminary identification of relevant product and geographic market contained in Section 6?

The RA's preliminary identification of relevant product and geographic markets in Section 6 contains several concerning inconsistencies and problematic assumptions that merit reconsideration.

FIXED BROADBAND MARKET

The RA's decision to maintain the 2020 market definitions for fixed broadband appears problematic given current market conditions in Bermuda. While the RA concludes there is no evidence to support changing these definitions, comparative market data suggests otherwise.

Issues with the Current Market Definition

The RA's broad definition of "retail provision of fixed broadband, provided over any technology, and for any speed, on an island wide basis" fails to account for several critical market realities:

1. **Technology Differentiation:** The definition disregards meaningful differences between copper (DOCSIS) and fiber technologies. These technologies have fundamentally different capabilities, particularly regarding upload speeds, which has created a segmented market where:
 - One Comm's copper infrastructure caps uploads at 75 Mbps (and just 20 Mbps for most customers)
 - Digicel's fiber network artificially limits uploads to 200 Mbps (and 50 Mbps or 10 Mbps for lower-tier customers)
2. **Speed Tiers and Service Parity:** By defining the market as covering "any speed," the RA overlooks significant disparities between advertised and delivered performance, particularly in upload capabilities essential for modern digital participation.
3. **Geographic Considerations:** While an 'island-wide basis' definition may seem appropriate for Bermuda's size, it overlooks potential service disparities between areas. Although Bermuda is small, the RA must ensure that an essential broadband product is available in the market, allowing residents to access critical information at the lowest cost. This product should reflect the national minimum available for individuals relying on a fixed government payment, such as a national pension. Given that the government mandates online access for certain services, residents would otherwise be forced to leave their homes to seek digital services or pay excessively high market prices for poor-quality broadband.

Comparative Market Position

Bermuda's current market definition has enabled pricing and performance that is extremely uncompetitive when compared to similar island jurisdictions:

- Bermuda ranks last among 12 comparable markets in price-to-performance ratio (\$0.867 per Mbps vs. \$0.138 in Jersey)
- For similar price points, other markets deliver substantially superior service:
 - Cayman: \$108 for 350 Mbps symmetrical service vs. Bermuda: \$130 for 150/20 Mbps
 - BVI: \$116 for 300 Mbps symmetrical service vs. Bermuda: \$130 for 150/20 Mbps
 - Bahamas: \$139 for 1000 Mbps symmetrical service vs. Bermuda: \$130 for 150/20 Mbps

Structural Market Failures

The current market definition fails to address:

1. **Duopoly Control:** One Comm (61% market share) and Digicel (36%) effectively control the market, with One Comm providing wholesale access to four ISPs while Digicel serves only its retail customers.
2. **Coordinated Price Increases:** A pattern where One Comm initiates price increases that affect all customers on their network, followed by Digicel matching these changes, has created a "Customer Jail" where consumers have nominal choices but no meaningful options for better service or lower prices.
3. **Artificial Throttling:** Despite Bermuda having robust undersea connectivity (three direct connections to the USA plus fallback options), providers artificially restrict speeds, particularly uploads, without technical justification.
4. **Price increase:** If a Significant Market Power (SMP) is requesting an increase, they must file with the Regulatory Authority (RA) explaining the rising expenses. These expenses should typically reflect cost-of-living adjustments based on CPI or RPI methodologies, unless there are exceptional expenses that benefit the company or customers—such as forthcoming national upgrades or network recovery costs from damage. All costs should be applied as a percentage increase to consumers, ensuring a fair distribution, rather than a blanket charge of

\$5 or \$10 when such a cost-of-living expense is not justified. Otherwise, the SMP is driving prices higher without providing market benefit, solely for the benefit of shareholders.

Regulatory Incentive Misalignment in Telecommunications Oversight

The current regulatory framework creates a structural conflict of interest that appears to harm consumer interests in the telecommunications market. The regulator's funding model, which derives 1.65% of its budget from ICOL's relevant turnover, potentially compromises its regulatory independence and effectiveness.

The Conflict of Interest

When the regulator's financial health is directly tied to industry revenue, it creates an inherent disincentive to promote policies that would lower consumer prices. The three-year pricing data (2023-2025) demonstrates a pattern of either stagnant or increasing prices despite minimal service improvements. Most concerning is the significant premium consumers pay compared to neighboring Caribbean markets:

To illustrate the perception:

\$80 - Relevant service price and speed controlled by the RA

2023

\$80 - 50 Mbps down / 10 up - copper cable

\$80 - 20 Mbps down / 10 up - fiber cable

2024

\$80 - 50 Mbps down / 10 up - copper cable

\$80 - 20 Mbps down / 10 up - fiber cable

2025

\$80 - 50 Mbps down / 10 up - copper cable

\$80 - 25 Mbps down / 10 up - fiber cable

\$66 - Cayman 100 down/ 50 up

Service unregulated

150 level

2023

\$110 - 150 Mbps down / 20 up - copper cable

2024

\$160 - 150 Mbps down / 20 up - copper cable

\$135 - 200 Mbps down / 50 up - fiber cable

2025

\$130 - 150 Mbps down / 20 up - copper cable

\$140 - 200 Mbps down / 50 up - fiber cable

\$66 - Cayman 100 down/ 50 up

\$120 - BVI - 300 down/up

\$80 - USVI- 200 down/50 up

300 level

2023

\$150 - 300 Mbps down / 50 up - copper cable

2024

\$160 - 300 Mbps down / 50 up - copper cable

\$185 - 450 Mbps down / 200 up - fiber cable

2025

\$170 - 300 Mbps down / 50 up - copper cable

\$192 - 450 Mbps down / 200 up - fiber cable

\$108 - Cayman 350 down/up

\$120 - BVI - 300 down/up

\$95 - UVI - 300 down/75 up

Market Structure Concerns

The regulator justifies the current approach through market competition principles, yet the pricing data suggests competition has failed to deliver consumer benefits. Instead, consumers face a constrained choice: purchase inadequate lower-tier services or pay substantially more for internationally competitive speeds.

This combination of misaligned regulatory incentives and ineffective market structure has created a telecommunications environment where:

1. Prices consistently trend upward
2. Service tiers remain significantly behind international standards
3. Consumers pay premium prices for services that cost substantially less in comparable markets

The data strongly suggests regulatory intervention is necessary to address this structural market failure, beginning with a reconsideration of how the regulatory authority is funded to eliminate potential conflicts that may influence market oversight decisions.

Recommended Market Definition Revisions

The market definition should be revised to:

1. **Distinguish between different access technologies—fiber and copper—**and their respective capabilities, ensuring that fiber technology can compete fairly with copper-based services. Fiber offers significantly higher speeds, lower latency, and greater reliability, yet outdated copper infrastructure continues to dominate in some markets due to pricing structures that do not reflect actual service quality. Pricing models should align with performance, preventing consumers from being forced into inadequate options while managing their digital lives. Slower services should not command higher prices simply due to market constraints.
2. **Recognize upload and download speeds as separate** but equally critical components of modern connectivity. Consumers increasingly rely on cloud storage, video conferencing, and remote collaboration, all of which require robust upload speeds. No carrier should be permitted to throttle network performance to maximize revenue. For instance, Digicel operates its network more effectively in other markets, raising concerns about why Bermuda's network underperforms despite having the technical capability to do better. Carriers must be required to justify operating below competitive market standards.

Note: "Throttle" refers to the practice of operating at less than full capacity without any apparent reason or necessity for doing so.

3. **Establish minimum performance thresholds** that reflect contemporary digital demands, ensuring that consumers receive service levels that support modern applications and connectivity needs

Maintaining the 2020 market definition without addressing these structural issues will continue to leave Bermuda at a competitive disadvantage compared to similar markets, with negative implications for consumers, businesses, and Bermuda's overall digital competitiveness.

FIXED VOICE MARKET

Price Comparison Issues

The RA's price comparison between fixed voice and mobile services appears fundamentally flawed for several reasons:

1. **Incomplete cost accounting:** The RA compares OneComm's \$19.95/month and Digicel's \$30/month fixed voice prices against mobile plans, but fails to account for mandatory additional costs. OneComm's actual cost is \$99.95 when including required access line (\$50) and ISP (\$30) charges.

Fixed line comparisons based on price

\$42.00 - LiveNet (Senior Plan) - mobile - unlimited local calling
\$47.00 - Digicel (Senior Plan) - mobile - unlimited local calling & unlimited US and CA calling
\$50.00 - LiveNet (Student Plan) - mobile - unlimited local calling
\$50.00 - LiveNet - fixed voice VOIP and access - unlimited local calling
\$53.00 - Digicel - fixed voice VOIP and access - unlimited calling
\$75.00 - LiveNet (Entry Plan) - mobile - unlimited local calling and 2 GB mobile data
\$79.00 - Paradise - mobile - unlimited local calling and 10 GB mobile data
\$99.95 - One Comm - fixed voice VOIP, broadband access and ISP - unlimited local calling
\$107.00 - Digicel (Student Plan) - mobile - unlimited local, unlimited US and Can, 15 GB data

2. **Non-equivalent service comparison:** The RA compares OneComm's unlimited local calling plan (\$19.95 + mandatory fees) with Digicel's 50-call plan (\$30/32), rather than Digicel's comparable unlimited plan (\$53).
3. **Specialty plan omission:** The analysis overlooks competitive mobile specialty packages targeting seniors and students that directly substitute for fixed lines:
 - Digicel Senior Mobile: \$47 (includes unlimited local, US and Canada calls)
 - LiveNet Senior Mobile: \$42 (unlimited local calls)
 - These plans are priced competitively with or below fixed voice options.

Market Definition Concerns

The RA's conclusion that "fixed voice services and mobile services are not in the same market" is questionable given:

1. **Price differential misrepresentation:** The claimed "substantial price differentials" between fixed and mobile services diminish significantly when accounting for all required fees and comparing equivalent service tiers.
2. **Technology and access pricing issues:** Both OneComm and Digicel fixed voice services are VoIP-based, electricity-dependent, and non-portable across ISPs - making them functionally similar to mobile services in many respects.
3. **Double-charging concerns:** Customers are charged separately for broadband access and voice access despite both services using a single fiber line and modem. This regulatory-sanctioned practice artificially inflates fixed voice costs.

Regulatory Inconsistencies

The RA's market analysis appears to contradict its own regulatory approach, which has:

1. Set access prices that have effectively increased fixed voice costs
2. Created pricing structures that may not reflect actual service costs
3. Established a regulatory environment that has resulted in potential market distortions between fixed and mobile voice services

Given these inconsistencies, the RA should reconsider its market definition and conduct a more comprehensive analysis that accurately accounts for total consumer costs, equivalent service comparisons, and the competitive reality of specialty mobile plans that directly compete with fixed voice services.

Further, there are concerns about the RA's market identification approach, particularly its reference to "two existing island-wide providers which are already likely to be operating at below minimum efficient scale."

While this assessment correctly recognizes Bermuda's scale limitations, it draws problematic conclusions. Plum's research indicates that achieving minimum efficient scale in telecommunications typically requires approximately 2 million customers—a population Bermuda cannot realistically attain. Therefore, operating "below minimum efficient scale" is not a market failure but an inherent characteristic of Bermuda's market that must be accommodated through appropriate regulatory frameworks.

Comparing Bermuda to larger Caribbean markets with millions of potential customers is fundamentally flawed. Instead, the RA should consider regulatory approaches used for comparable microstates, such as British territories like Guernsey, Jersey, and the Isle of Man, which:

- Have similar small populations
- Deploy comparable technologies
- Face the same scale limitations
- Address these issues by relying on larger markets (the UK) for network procurement

These territories have developed regulatory frameworks that acknowledge their scale constraints while still promoting market efficiency and technological advancement.

Furthermore, the RA's current approach risks encouraging operators to maximize equipment amortization at the expense of technological advancement. This would hinder Bermuda's ability to maintain telecommunications infrastructure on par with other developed small nations and ultimately damage our international competitiveness.

Bermuda's market assessment should strengthen our economy by focusing on developing world-class digital infrastructure that can attract knowledge-based industries and economic growth, rather than applying market standards that ignore our unique economic needs and scale limitations.

TV SUBSCRIPTION MARKET

I generally support the Regulatory Authority's approach to market definition but have several substantive concerns about how certain services are categorized and the depth of consumer behavior analysis presented in the document.

Support for Traditional Pay TV and SVoD Market Integration

I agree with the RA's conclusion that traditional pay TV services and paid OTT/SVoD services should be considered within the same relevant market. The evidence presented is compelling:

- The significant decline in traditional pay TV subscribers (25% from 2014-2018 and a further 23% from 2019-2023) strongly indicates that consumers are actively switching to alternative services.

- The 2018 consumer survey results suggest that a Small but Significant Non-transitory Increase in Price (SSNIP) on traditional pay TV would likely drive consumers toward paid OTT services rather than free alternatives.
- This substitution pattern demonstrates sufficient demand-side substitutability between traditional pay TV (cable, satellite, IPTV) and subscription video-on-demand services.

Concerns About VSP Exclusion from the Relevant Market

However, I have significant concerns about the exclusion of Video Sharing Platforms (VSPs) from the relevant market for the following reasons:

1. Evolution of YouTube Beyond Simple Video Sharing

The RA's characterization of YouTube primarily as a platform for short-form, user-generated content overlooks its significant evolution. Today, YouTube functions as:

- A host for full-length professional content, including back-catalog TV shows and classic movies
- A platform for live broadcasts from major networks including NBC, CBS, ABC, Fox, PBS, Channel 4, and BBC news
- An official distribution channel for music labels to release new content
- A broadcast medium for sports leagues offering full-length programming for baseball, American football, sailing, and other sports

YouTube's "Explore" section categorizes content in ways nearly identical to SVoD platforms, with dedicated sections for Music, Live, Gaming, News, Sports, and Learning. This functionality allows consumers to use it as a direct substitute for both traditional TV and paid streaming services.

2. Outdated Consumer Research

The RA's market definition relies heavily on a consumer survey conducted in August 2018 with 400 residents. Given the rapid evolution of the streaming landscape since then, particularly:

- The significant expansion of SVoD options during and after the COVID-19 pandemic (with new entries from Disney+, HBO Max, Apple TV+, etc.)
- Changing consumer viewing habits and technological adoption
- Economic pressures affecting household entertainment budgets

A more recent and comprehensive market survey would likely reveal different substitution patterns than those observed in 2018. The current analysis may not accurately reflect how today's consumers perceive and use VSPs versus SVoD services.

3. Economic Substitution Patterns

The market analysis should more thoroughly address the economic dimension of service substitution. Many consumers are not simply switching between comparable paid services but are replacing relatively expensive traditional pay TV packages (approximately \$100) with free or much lower-cost alternatives.

This price-driven substitution has profound implications for:

- Market competition dynamics
- The financial sustainability of local content production
- Long-term infrastructure investment

In households where funds are limited, VSPs often serve as the primary television viewing option for local TV, video news (such as Bernews and CITV), movies, TV shows, and even daily soap operas. While SVoD services may offer higher production quality content, their increasing prices

and restrictions on account sharing make them less financially accessible as continuous monthly subscriptions.

Service Quality Regulation

There appears to be a regulatory gap regarding service quality for local over-the-top subscription providers. These providers use their own broadband networks to provision IPTV services but may not be subject to the same quality requirements as traditional providers. When customers pay for channel packages that experience frequent outages or quality issues, there should be clear regulatory standards and enforcement mechanisms to protect consumer interests.

Market Distinction Clarification

The document raises important points about the regulatory fee disparities between traditional providers (OneComm and Digicel) and international technology companies. However, this discussion should more clearly acknowledge that broadband access and subscription TV represent distinct markets:

- The broadband market enables access to a variety of services beyond video (including audio, data, security, etc.)
- Demand for broadband is primarily driven by access type and quality of service
- The existence of streaming video services (both commercial and free) is a significant driver of consumer demand for higher-bandwidth broadband connections

The "Fair Share" discussion regarding technology companies' contributions to network costs is relevant but should be framed as an issue that spans market boundaries rather than one confined to the subscription TV market. For example, Bernews is not a TV company, but if there is a major press conference, the nation will tune in and stream their content across Smart TVs, tablets, phones on Wi-Fi, and devices with screens connected to the mobile network. Would they be required to pay their "fair share," and for what? Would it be for internet usage, TV subscription licensing, or some arbitrary measure?

National Video Service Considerations

An additional factor worth considering is the national security and information resilience implications of market definition. If the regulatory framework leads to a scenario where most consumers abandon traditional local subscription services in favor of international platforms, Bermuda could face vulnerability in its ability to deliver critical local information during emergencies.

If international services like YouTube, TikTok, or other platforms were to become unavailable (due to policy changes, technical issues, or other disruptions), Bermuda would benefit from having robust local video services that don't depend entirely on international providers. The market definition should consider this public interest dimension alongside purely economic considerations.

In conclusion, while the RA's preliminary market identification provides a useful foundation, it would benefit from updated consumer research, a more nuanced consideration of how VSPs function in today's market, and greater attention to the service quality and national resilience implications of market structure changes in Bermuda.

BUSINESS CONNECTIVITY MARKET

We agree with the RA's direction to broaden the focus from leased lines to business connectivity services, but have significant concerns about the current market definition and its implementation.

Key Issues with the Current Market Definition

1. Definition vs. Reality Disconnect

The RA defines business connectivity by four key characteristics:

- Symmetric speeds (equal upload and download)
- Enhanced service levels
- Quality and reliability
- Significant price premium over fixed broadband

However, this definition creates a problematic contradiction in Bermuda's telecommunications market. While these characteristics appropriately describe business connectivity, the mass market in Bermuda offers only asymmetric services with severely limited upload speeds (75-200 Mbps upload compared to 1000 Mbps download).

This differs markedly from peer jurisdictions like Jersey, Gibraltar, Guernsey, Barbados, Bahamas, Cayman Islands, and BVI, which all provide symmetrical gigabit services in their mass market offerings. These services meet most of the RA's own definition of business connectivity but are available to residential and small business customers at significantly lower prices.

2. Lack of Competitive Constraint

The RA correctly notes in paragraph 213 that "the existence of an effectively competitive (or effectively regulated) fixed broadband market exerts a significant indirect constraint on the prices that can be charged for business connectivity services." However, Bermuda's current market structure prevents this constraint from functioning effectively for several reasons:

- **Absence of high-quality mass market alternatives:** In Bermuda, small and medium businesses cannot access symmetrical high-speed connections through mass market offerings, forcing them to purchase more expensive business connectivity services.
- **Pricing disparity:** The data shows Bermuda's mass market gigabit services cost \$300-315 with limited upload speeds, while comparable services in peer markets cost \$80-235 with full symmetrical speeds.
- **No price competition:** Despite the global trend of declining prices (Cayman saw a 56% price drop since 2021, Guernsey 37% since 2022), Bermuda's prices have remained static or even declined in service quality (Digicel reducing upload speeds by 43%).

3. Market Evolution Barriers

The RA accurately identifies in Figure 6.1 that across the developed world, there has been a shift "from connections between business sites... to use of access lines to connect to the Internet" and that businesses have migrated "from leased lines to use of high-speed fixed broadband in many cases."

Yet Bermuda's market structure actively resists this evolution by:

- Maintaining an artificial distinction between business and mass market services
- Not providing the high-quality symmetrical mass market options that have enabled this transition in other markets
- Creating price points that force small and medium businesses to either accept inferior connectivity or pay substantially more for business-grade services

Competitive Impact

The comparative data provided demonstrates Bermuda's significant competitive disadvantage:

Mass Market Pricing Comparison (1 Gigabit Service)

- Jersey: \$80 (1000 Mbps up/down)

- Gibraltar: \$81 (1000 Mbps up/down)
- Guernsey: \$99 (1000 Mbps up/down)
- Barbados: \$113 (1000 Mbps up/down)
- Bahamas: \$139 (1000 Mbps up/down)
- USVI: \$148 (1000 Mbps down / 400 Mbps up)
- Isle of Man: \$192 (1000 Mbps down / Not specified)
- Cayman: \$210 (1000 Mbps up/down)
- BVI: \$235 (1000 Mbps up/down)
- Seychelles: \$247 (1000 Mbps down / 1 Mbps up)

Business Connectivity Options

- Singapore: 2.5 Gbps for \$140
- Luxembourg: 2 Gbps for \$70
- Dublin: 2 Gbps for \$87
- Bermuda: No published rates, requiring customized private packages

This creates a two-tiered system where:

1. Large corporations with substantial resources can access high-quality dedicated connections
2. Small/medium businesses and service providers crucial to Bermuda's economy (small law firms, accounting firms, boutique traders) must either:
 - Accept significantly inferior connectivity
 - Pay disproportionately higher costs than global competitors
 - Operate at a competitive disadvantage in the digital economy

The decline in Bermuda's global internet speed ranking (from 12th in 2020 to 37th in 2024) further evidences this growing competitive disadvantage.

Transparency Issues

A critical issue exacerbating these market problems is the lack of transparency in business connectivity offerings:

- Digicel and One do not publish rates, speed levels, or performance metrics for business services
- Business customers considering Bermuda cannot make informed decisions without customized quotes
- This opacity prevents effective market competition and price discovery
- It undermines Bermuda Government and BDA claims about "world class infrastructure"

Recommendations

1. **Revise the market definition:** The RA should recognize that high-quality symmetrical mass market services can and should provide competitive constraint on business connectivity pricing.
2. **Require symmetrical service options:** Regulatory action should ensure that mass-market providers offer symmetrical high-speed services comparable to those in peer jurisdictions. Keep in mind that copper cable and fiber cable must be defined as separate technologies because they are not designed to function identically, depending on the service and the deployment of gateways on-premises. If copper cable cannot match fiber cable, then there is no direct competition based on the delivered service.
3. **Mandate pricing transparency:** The RA should require published pricing and service levels for business connectivity offerings to enable market efficiency and competition.
4. **Address service quality decline:** The RA should investigate and address Bermuda's declining global internet speed ranking through appropriate regulatory measures.

5. **Eliminate artificial market segmentation:** The current framework forces smaller businesses to either accept inferior connectivity or pay premium prices, creating an artificial and harmful market segmentation that works against Bermuda's economic interests.

Without addressing these issues, the current market definition risks undermining Bermuda's competitive position as a global financial hub, placing smaller businesses at a disadvantage, and creating market distortions that run counter to the RA's responsibility to ensure an efficient, competitive telecommunications market.

Question 3: Do you agree with the RA's initial assessment of the SMP sectoral providers set out in Section 7?

We agree with aspects of the RA's initial assessment but have significant concerns about both their methodology and the resulting market outcomes. My detailed response addresses three key areas of concern:

1. Market Research Methodology Concerns

The RA has relied primarily on industry-submitted data rather than conducting independent market research comparable to Department of Statistics standards. This approach has several substantial shortcomings:

- **Over-reliance on provider data:** The RA's assessment is based heavily on information from "Market Analysis submissions," "SMP filings from OneComm and Digicel," and "Quarterly and Annual filings from each sectoral provider." This creates an inherent conflict of interest, as these companies have financial incentives to present data in ways that minimize regulatory intervention.
- **Absence of consumer research:** The methodology appears to lack direct consumer feedback mechanisms, surveys, or satisfaction metrics. Without this perspective, the RA cannot fully assess whether the market is serving the "long-term interests of end users in Bermuda" as stated in their objectives.
- **Limited independent verification:** The document mentions "informal data gathering requests" but provides no details on independent verification procedures. While the RA notes "ongoing work to validate data," the nature and scope of this validation remain undefined.
- **Static market definition:** The RA's conclusion that there have been no "dramatic changes" in market share actually signals a concerning lack of competitive dynamics. In healthy telecommunications markets, we would expect to see some market share shifts over time as companies compete on price, quality, and innovation.

The regulatory approach should incorporate comprehensive, independent market research using methodologies similar to those employed by the Department of Statistics, including consumer surveys, expert technical assessments, and international comparative analysis. This would

provide a more balanced view than the current approach, which relies heavily on information from the regulated entities themselves.

2. Inadequate Benchmarking Implementation

While the RA acknowledges international price benchmarking as a potentially valuable regulatory tool, it has not effectively implemented this approach in practice. The document states explicitly that "Benchmarking as a mechanism to prevent excessive pricing has not been deployed in Bermuda."

The RA raises several challenges to benchmarking, including:

- Microstate effects raising efficiently incurred prices
- High wage rates in Bermuda increasing costs
- Difficulty in selecting appropriate benchmark countries
- Challenges in making fair product comparisons

However, these challenges can be addressed with appropriate methodological adjustments:

Addressing microstate effects: Many of the benchmarked territories have similar or smaller populations than Bermuda:

- Gibraltar (~34,000)
- British Virgin Islands (~30,000)
- Turks and Caicos (~45,000)
- Bermuda (~64,000)
- Guernsey (~64,000)
- Cayman Islands (~66,000)
- Jersey (~104,000)

The fact that some of these similarly-sized territories (particularly Gibraltar and BVI) offer significantly better value propositions than Bermuda suggests that microstate effects alone cannot justify our current pricing structure. For example, Gibraltar provides 1,000 Mbps symmetrical service at \$81, while Bermuda charges \$130 for just 150/20 Mbps.

Addressing wage rate differences: Bermuda's high GDP per capita (\$123,000 compared to \$77,000 in the US and \$46,000 in the UK) certainly impacts operational costs. However, we can quantify this difference to make appropriate adjustments. If labor represents approximately 30% of a telecommunications provider's operating costs (an industry standard estimate), and Bermuda's wages are approximately 60% higher than the US, this would justify a price premium of about 18% ($30\% \times 60\%$) over US prices for equivalent services. The current premium far exceeds this adjustment factor.

Addressing selection of benchmark countries: The RA could establish a transparent framework for selecting benchmark countries based on:

1. Similar island/remote geography
2. Similar population size ranges
3. Similar economic development profiles
4. Demonstrated effective competition or regulation
5. Availability of comparable data

Addressing product comparisons: The RA could focus on standardized metrics like:

1. Price per Mbps (download and upload)
2. Price for standardized service tiers (e.g., entry-level, mid-tier, premium)
3. Price relative to local purchasing power
4. Service reliability and performance metrics

An example comparison using this approach reveals stark differences:

- Bermuda: \$0.87 per Mbps download ($\$130 \div 150$ Mbps)
- Barbados: \$0.11 per Mbps download ($\$113 \div 1,000$ Mbps)
- Gibraltar: \$0.08 per Mbps download ($\$81 \div 1,000$ Mbps)

Even after adjusting for wage differences, these disparities indicate potential market failure requiring regulatory intervention.

3. Evidence of Market Deterioration

The RA's approach has failed to prevent concerning trends in Bermuda's telecommunications market, which show clear signs of deterioration rather than improvement:

Documented price inflation without service improvements:

- December 2023: \$110 for 150/20 Mbps
- December 2024: \$120 for 150/20 Mbps
- February 2025: \$130 for 150/20 Mbps

This represents an 18% price increase over just 14 months for identical service specifications. This rate of increase significantly exceeds Bermuda's general inflation rate and has occurred without any corresponding improvements in service quality, speed, or reliability.

Stagnant service tiers: While international markets have seen rapid increases in available speeds (with gigabit services becoming standard in many markets), Bermuda's service offerings have remained largely unchanged. The lack of service tier evolution suggests insufficient investment in network capabilities despite the price increases being implemented.

Widening international competitiveness gap: As other jurisdictions continue to improve their telecommunications infrastructure (driven by either competition or effective regulation), Bermuda's relative position continues to decline. This has broader economic implications, as high-quality, reasonably priced telecommunications services are increasingly essential for economic development, particularly for a jurisdiction seeking to maintain its position in international business and finance.

Absence of baseline comparisons: The RA has not presented evidence of service quality improvements since the 2020 ECMR. A proper assessment would include:

- Speed test data comparisons (2020 vs. 2024)
- Network reliability metrics
- Customer satisfaction scores
- Service response times
- Price-to-performance ratios

Without these comparisons, the RA cannot substantiate any claim that the market is serving the interests of Bermuda residents and businesses.

Impact on Consumers and Businesses

The consequences of these market failures extend beyond mere inconvenience:

Individual consumers: Bermudian households are paying significantly more for inferior services compared to peer jurisdictions. This reduces disposable income and limits access to modern digital services like high-definition streaming, remote work platforms, and online education resources.

Small businesses: High-cost, lower-quality connectivity puts Bermuda's small businesses at a competitive disadvantage. Many modern business tools (cloud services, video conferencing, etc.)

require reliable, high-speed connectivity that is either unavailable or prohibitively expensive in Bermuda.

International business sector: Bermuda's position as a global business center depends on world-class infrastructure. The widening gap between Bermuda's telecommunications offerings and international standards threatens this position, potentially impacting the broader economy.

Innovation and entrepreneurship: Digital startups and technology-driven innovation rely on affordable, high-quality connectivity. The current market conditions create barriers to such innovation in Bermuda.

Recommended Regulatory Approach

The RA should implement a more robust and proactive regulatory approach including:

1. **Independent market research:** Commission research that incorporates:
 - Consumer satisfaction surveys
 - Technical performance testing
 - Price and service comparisons with appropriate benchmark jurisdictions
 - Economic impact analysis of current market conditions
2. **Transparent benchmarking framework:** Develop and publish a benchmarking methodology that:
 - Identifies appropriate comparison jurisdictions
 - Makes transparent adjustments for Bermuda-specific factors
 - Establishes reasonable price and performance targets
 - Schedules regular reassessments
3. **Specific performance targets:** Establish clear expectations for:
 - Price trajectories (potentially including price caps relative to benchmark-derived targets)
 - Service speed improvements
 - Reliability standards
 - Customer service metrics
4. **Enforcement mechanisms:** Implement consequences for non-achievement of targets, such as:
 - Mandatory price reductions
 - Increased regulatory scrutiny
 - Penalties for non-compliance
 - Enhanced opportunities for new market entrants
5. **Regular public reporting:** Publish annual assessments of:
 - Progress toward established targets
 - Comparisons with benchmark jurisdictions
 - Consumer satisfaction metrics
 - Economic impact analysis

Conclusion

The RA's initial assessment correctly identifies the continued SMP status of key providers but fails to demonstrate effective action to address the resulting market failures. The evidence suggests that the current regulatory approach has been insufficient to prevent deterioration in the value proposition of Bermuda's telecommunications services.

Without more robust regulatory intervention, Bermuda risks further declining competitiveness in telecommunications infrastructure. This has negative implications not only for individual consumers but also for Bermuda's broader economic position, particularly in international business sectors that depend on world-class connectivity.

The RA should acknowledge these shortcomings and commit to a more proactive regulatory approach that establishes clear performance expectations, implements effective monitoring mechanisms, and takes decisive action when market outcomes fail to serve the interests of Bermuda's residents and businesses.

Question 4: Do you agree with the RA's initial proposed SMP ex ante remedies contained in Section 7.5?

Question 5: Do you agree with the RA's initial position that any anchor product should have the same price and definition for any provider that has been found to have SMP in that particular market.

No, the RA's initial position does not account for the fundamental differences in broadband technologies. Setting a uniform price and definition for all providers, regardless of their technological infrastructure, fails to reflect the varying technical capabilities of different networks. This approach could distort competition, incentivize inferior service, and ultimately harm consumers.

Broadband technologies are not the same, and the RA's definition improperly groups old and new technologies under a single standard. Digicel operates a symmetrical fiber network in regions such as Cayman, BVI, and Barbados, yet in Bermuda, it caps uploads at 200 Mbps. OneComm, on the other hand, operates a copper cable network with a maximum upload speed of 75 Mbps. Applying the same pricing and definition across these fundamentally different technologies ignores the technical disparities that should define competitive service at the SMP level.

Consumers would be left with non-comparable product sets, potentially paying premium prices for subpar services. For instance, the RA created these Relevant Service: OneComm copper cable sells a 75 Mbps down/15 Mbps up service for \$115, whereas Digicel fiber cable offers 100 Mbps down/30 Mbps up for \$100. Despite offering a technically inferior service, OneComm charges more, a scenario effectively endorsed by the RA's policy. This results in a market imbalance where outdated infrastructure is financially rewarded by the regulator instead of being incentivized to improve; where the 75 Mbps product should drop to \$40.

A more effective regulatory approach would be to ensure that wholesale access is provided at a technically competitive level. Instead of forcing fiber networks to compete with copper cable under the same pricing structure, the RA should establish minimum performance standards tailored to each technology type. This would create a fairer competitive landscape for ISPs such as OneComm Retail, Digicel Retail, TBI, B-Mobile, and LiveNet, ensuring that consumers have access to higher-quality service at competitive prices.

Ultimately, a blanket pricing policy does not foster healthy competition or benefit consumers. A more nuanced regulatory approach that considers technological differences and market dynamics is necessary to promote fair pricing and service quality.

Question 6: What are your views on whether one or two anchor products are required in the retail fixed broadband market?

Yes, anchor products are required in the Bermuda market. To effectively support the entire market, broadband services should be categorized into distinct tiers:

- essential (basic connectivity for all residents),
- basic (sufficient for standard household use), and
- advanced (for businesses and consumers requiring internationally competitive speeds).

If the goal is to foster innovation, the RA should introduce an advanced tier in collaboration with carriers. This would enable the deployment of nationally competitive broadband services that enhance Bermuda's business reputation. Similar initiatives have been successfully implemented elsewhere, such as Guernsey, which offers 2 Gbps to all homes, and Jersey, which was the first island to introduce 1 Gbps service before the U.S. and later replaced its entire copper network with fiber.

Currently, the RA's pricing regulations may be limiting consumer access to internationally competitive services. For example, the RA has set prices at \$100 for 100 Mbps down/30 Mbps up and \$115 for 75 Mbps down/15 Mbps, yet reports indicate that consumers are not purchasing these plans. Instead, they are opting for higher-speed packages, such as 150 Mbps (\$130) to 450 Mbps (\$192), to meet their everyday needs. In contrast, similar price points in other small nations provide speeds ranging from 300 Mbps to 1 Gbps.

To better serve the market, the RA could reconsider its approach to pricing regulation. Rather than setting price floors that may unintentionally increase costs, policies should encourage affordability while ensuring access to higher-speed services that align with global standards. A more competitive broadband landscape would benefit both consumers and businesses, reinforcing Bermuda's position in the digital economy.

Question 7: In the event that only one anchor product is considered for the retail fixed broadband market, do you agree with the RA's initial position that the anchor product should be targeted at an entry level service priced at no more than \$80 per month for a 50 Mbps download/ 10 Mbps upload?

It is deeply troubling that the regulator is considering an \$80 per month price point for an entry-level broadband service that offers only 50 Mbps download and 10 Mbps upload speeds in 2025. This recommendation, if enacted as the national standard for the 2025-2029 period, is not only outdated but dangerously out of touch with both current global broadband definitions and technological progress.

As of 2025, this service would no longer meet the US's updated broadband definition, which now requires a minimum of 100 Mbps download and 20 Mbps upload speeds. By setting such a low bar, the regulator risks locking the nation into substandard service for the next four years, a time period in which broadband infrastructure is evolving rapidly, with copper cables being phased out and fiber and 5G networks gaining traction.

To base the national standard on such a restrictive and obsolete service is not only a failure to meet the needs of consumers today but also a major setback for the country's broadband future. It would limit access to the types of speeds and services necessary to foster economic growth, innovation, and competitiveness. Furthermore, it undermines efforts to ensure broadband access as a fundamental utility for all. By adopting this recommendation, the regulator would be setting a damaging precedent that could have long-lasting effects on national broadband policy and consumer welfare.

In short, the proposed approach is deeply flawed and will have far-reaching negative implications if implemented. This is an opportunity to get broadband policy right, and continuing down this path would be a serious misstep for the country's digital future. The following illustrates how troubling the regulator's question truly is.

\$35 - 300 Mbps down / 300 Mbps up - Gibraltar
\$60 - 300 Mbps down / 300 Mbps up - Barbados
\$69 - 600 Mbps down / 600 Mbps up - Jersey
\$80 - 200 Mbps down / 50 Mbps up - USVI
\$80 - 50 Mbps down / 10 Mbps up - Bermuda Dec 2023 - copper cable
\$80 - 20 Mbps down / 10 Mbps up - Bermuda Dec 2023 - fiber cable

\$80 - 50 Mbps down / 10 Mbps up - Bermuda Dec 2024 - copper cable
 \$80 - 25 Mbps down / 10 Mbps up - Bermuda Dec 2024 - fiber cable
 \$80 - 50 Mbps down / 10 Mbps up - Bermuda Dec 2025 - copper cable
 \$80 - 25 Mbps down / 10 Mbps up - Bermuda Dec 2025 - fiber cable
 \$82 - 500 Mbps down / 500 Mbps up - Guernsey
 \$85 - 350 Mbps down / 350 Mbps up - Bahamas
 \$108 - 350 Mbps down / 350 Mbps up - Cayman
 \$120 - 300 Mbps down / 300 Mbps up - BVI
 \$120 - 500 Mbps down / 500 Mbps up - Isle of Man
 \$140 - 250 Mbps down / 250 Mbps up - Turks and Caicos
 \$146 - 200 Mbps down / 1 Mbps up - Seychelles

Since relevant services exist in Bermuda for both copper cable and fiber cable service providers, the regulator should implement a market correction. Bermuda has frozen essential (25 and 50 Mbps) and basic (75 and 100 Mbps) services for the past four years, while other markets have rapidly advanced their essential and basic service offerings. The new levels should be: essential, \$40 for 200 Mbps (similar to what is sold in Dominica, an island with a comparable population and broadband technology); and basic, \$80 for 500 Mbps symmetrical (up and down) service. This correction is necessary because it should account for the next four years. 500 Mbps symmetrical is already a common offering in America, the Caribbean, and throughout Europe where fiber is deployed. Bermuda's undersea capacity is not undersized; every home and business has access to fiber; and OneComm and Digicel currently offer ~200 Mbps and ~500 Mbps services in other small nations, such as USVI, Cayman, BVI, and Guyana.

Question 8: Do you believe that the RA should consider an anchor product ex ante remedy in the retail mobile market to protect consumers against ongoing price increases? If so, what should be the component parts of such a product? The RA's initial position is that the anchor product for retail mobile should be set at no more than \$50 for unlimited local talk & texts and 10 Gigabytes of data per month. This is an existing "Student Bundle" offering from Digicel.

This question is quite disturbing. First, the RA is choosing a product. The RA should be asking the carrier what it costs to deliver that product to the market and then advising if it's reasonable to offer the market a relevant service. Second, *the RA is saying price increases are the only way the market functions*, which completely neuters the RA's authority. In an active market, prices fall due to competition, technical advancements, or lack of consumer interest. It is irresponsible to present regulation for consideration without quantifiable data showing that the market has a specific problem that needs correction.

Paradise Mobile currently offers 10GB of 5G speed data for \$67 and includes unlimited slow data, unlimited local voice, and unlimited local text. Digicel and OneComm choose not to compete at that level. Instead, they offer 15GB with a \$20 data overage per GB at OneComm, and Digicel offers 20GB with a \$40 data overage per GB, while both offer unlimited local voice and text plus long distance, which might not be needed by the average local consumer daily.

It would be more helpful if the RA extended a license fee deduction to Paradise Mobile for 12 months, and then reviewed whether it needs to be extended another 12 months. This should be based on the premise that they need to reinvest in their network to compete with the incumbents, and that the RA does not need to manage them so closely as they are not an SMP in the mobile market. They are, in fact, making the market more competitive, advancing Bermuda's technology service, and the benefit goes directly to consumers who can choose innovation supported by the RA. This would cause the incumbents to act as they would in a competitive market—compete to win customers.

Further, if the RA wants to introduce a relevant mobile service, it should be an essential service and be defined to allow residents to connect to the network daily to load a bus app, purchase and authorize a fare, and receive SMS codes for two-factor authentication required by banks and security services. This would be helpful as the government moves toward paperless offerings and provides mobile services to vulnerable communities. The price should be no greater than \$40, including government tax.

Question 9: Do you agree that the price for relevant service products should be cross checked by international benchmarking?

This question is problematic because the Regulatory Authority (RA) sets the price and service standards. If the RA believes international benchmarking is necessary, they should provide a clear justification rather than seeking agreement. They have the market expertise and regulatory control to determine the best pricing strategy.

Additionally, the way benchmarking has been used so far has not resulted in ineffective price regulation. For example, Bermuda has seen continuous price increases despite no improvement in service quality:

- Internet prices rose 18.2% over 14 months, from \$110 (Dec 2023) → \$120 (Dec 2024) → \$130 (Feb 2025), with no increase in speeds.
- Bermuda's connectivity score has dropped by 7 points due to these price hikes.
- Providers have set price floors, ensuring no service is priced below \$80, freezing market competition.
- In contrast, 300 Mbps symmetrical plans in Gibraltar (\$50–\$60) and Barbados (\$50–\$60) show that smaller and larger markets alike remain competitive, unlike Bermuda.

"Relevant service" should be clearly defined based on Bermuda's needs:

- essential connectivity (voice, data, video)
- advanced services for international business
- tourism-friendly nationwide coverage.

Since these are critical to economic activity and often irreplaceable, cost-oriented pricing should be prioritized. However, if "relevant service" is leading to artificial price floors rather than fostering affordability, the RA must justify its continued reliance on this method and clearly explain why it wants to use benchmarking and exactly how it will use its current regulatory powers to make it a positive influence on the Bermuda electronic communications sector.

Question 10: Do you agree that it is important that the RA monitor the median price across all products in each of the fixed broadband and mobile services markets in addition to the use of anchor product pricing?

We do not agree that the RA should solely monitor the median price across all products. While price is a factor, focusing solely on price ignores other crucial aspects of consumer needs, such as service quality, contract flexibility, and access to specific features. We propose adding a biennial international market review to the annual telecoms market review, which would introduce new market standards. This review would also highlight broader needs. These standards must be actively enforced to translate them into tangible benefits for consumers. For example, if a new standard mandates a minimum level of customer service responsiveness (for example, 24 turnaround on outage), the RA should actively monitor compliance. Providers who fail to meet this standard should face penalties. Similarly, if a new standard requires greater contract flexibility (for example, tourist mobile package comes with national hotspot service), the RA should ensure providers offer compliant contracts. Consumers should also be made aware of their options.

Instead of relying on generalized oversight, the RA should implement a targeted enforcement mechanism that leverages proposed biennial benchmarking data to identify specific areas where intervention is necessary. For example, if the proposed benchmarking reveals that Bermuda's prices for a particular service tier are significantly higher than the median price in comparable jurisdictions, as the current data suggests, this should trigger an automatic review. Currently, the RA collects information from carriers, but this data collection has not translated into sufficient action to address Bermuda's high prices. For example, the data collected shows Bermuda's price for a 150/20 Mbps service has increased from \$110 to \$130, while comparable or faster services in other jurisdictions, like Gibraltar (300/300 Mbps for \$50) or Jersey (500/500 Mbps for \$69), are significantly less expensive. This disparity suggests that simply collecting data is insufficient to ensure competitive pricing and consumer benefit.

This review, triggered by the proposed benchmarking data, could involve:

- **Demand-side interventions:** Investigating whether consumers are being adequately informed about available options and empowering them to switch providers.
- **Supply-side interventions:** Examining whether there are anti-competitive practices, such as price fixing or market collusion, that are artificially inflating prices. The RA could also consider regulatory measures to increase competition, such as lowering barriers to entry for new providers or mandating infrastructure sharing.
- **Price caps:** In cases where anti-competitive practices are identified or where market forces are demonstrably failing to deliver reasonable prices, the RA should consider implementing temporary price caps to protect consumers.

This targeted enforcement mechanism, informed by proposed benchmarking, ensures that regulatory efforts are directed where they are most needed, rather than imposing blanket price controls that may not accurately reflect market conditions. It focuses on ensuring the market provides diverse offerings tailored to consumer needs—such as essential services for low-income residents, entry-level packages for new businesses, and advanced service tiers that enhance international competitiveness—rather than simply observing median prices.

Question 11: Do you agree with the RA's provisional opinion that implementation of costly cost orientation/separated accounting obligations may not be in the best interest of end users in the Bermuda market? If not, what alternatives should the RA consider to ensure that a balance is maintained between "developing or maintaining effective and sustainable competition for the benefit of consumers with regard to price, innovation and choice" and "promoting investment in the electronic communications sector"?

We disagree with the RA's provisional opinion that removing cost-orientation and separated accounting obligations is in the best interest of end-users in Bermuda.

End-users benefit most from access to high-quality services at competitive prices. Without cost-orientation and separated accounting obligations, the RA must rely on carriers—including regulated SMPs—to self-report costs, with no clear mechanism to verify whether excessive profits are being imposed on consumers.

Infrastructure investment is critical, but transparency in cost structures is equally important. Carriers should provide the regulator with operating cost data to ensure pricing aligns with international benchmarks. Currently, Bermuda offers fiber services to both small businesses and residential customers at the same standard, but the RA lacks detailed cost information for delivering different speeds (e.g., 50 Mbps vs. 1,000 Mbps) over a single installed line and modem.

This lack of transparency creates pricing disparities. For example, Guernsey offers 1,000 Mbps symmetrical service for \$99, whereas Bermuda provides only 25 Mbps down and 10 Mbps up

using similar technology. Given Bermuda's reliance on dual access provider, the regulator must investigate such gaps to ensure fair pricing.

Cost-orientation and separated accounting obligations are necessary to prevent market failures and ensure regulatory oversight. Without these mechanisms, the RA risks allowing unchecked pricing strategies that could harm end-users and discourage fair competition. Maintaining these obligations ensures a balance between encouraging investment and protecting consumer interests.

Question 12: Do you agree with the RA's provisional opinion that any retail minus X% cap should be set by international benchmarking? If not, what alternatives (aside from costly cost orientation/separated accounting obligations) should the RA consider to ensure that a balance is maintained between "developing or maintaining effective and sustainable competition for the benefit of consumers with regard to price, innovation and choice" and "promoting investment in the electronic communications sector"?

No, the RA's retail minus X% cap should not be set exclusively by international benchmarking.

The RA should first stop biasing the market review by claiming that cost-oriented pricing is costly.

Prior to the regulator's operation, the carrier, as a network provider, had to present all costs associated with changing prices or introducing new products to the market. The telephone company or the cable company owned the networks that carried all land-based traffic. Today, the access lines are still provided by the telephone company, BTC, and the cable company, BCV—the infrastructure model has not changed, but the regulator has removed the requirement to present proper costs to operate a basic service for a network provider. Instead, it simply added a price cap to basic services based on the carrier's profits and priced a 50 Mbps access line at \$50, then bundled the ISP service for \$30. Under the "minus X% cap," the comparative price should be in line with benchmarked prices in small nations, but this gives no indication if the carrier is cross-subsidizing or is unable to offer lower or more efficient prices and service because the company is actually in a bad financial position.

Cost-oriented management of specific parts of the market should be applied because it will inform the RA of the actual cost to serve Bermuda and remove the conditions that force Bermuda to overpay to operate a basic service in all sectors of the electronic communications market. The RA can use benchmarking where a bundled price exists for access lines and ISPs sold together to manage market performance.

The RA is currently using a price cap, and all it does is create an extremely expensive floor that is completely out of line with a competitive market as demonstrated below.

February 2025

\$35 - 300 Mbps down/up - fiber - Gibraltar
\$66 - 100 Mbps down/50 Mbps up - fiber - Cayman
\$80 - 200 Mbps down/50 Mbps up - fiber - US Virgin Islands
\$80 - 25 Mbps down/10 Mbps up - fiber - Bermuda