

**Consolidated Responses to the Preliminary Report, Preliminary Decision and Order
on the Market Review of the Electronic Communications Sector – June 2025**

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Digicel Response



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Comments on the Market Review of the Electronic Communications Sector

1. Declaration of Interest

Consultation Title: “Preliminary Report, Preliminary Decision and Order 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:

Signed by:

Meredith Sharples

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MEREDITH SHARPLES
6/9/2025



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2. OPENING REMARKS

Digicel is pleased to express its interest in participating in the public consultation on Regulatory Authority of Bermuda's Preliminary Report, Preliminary Decision and Order on the Market Review of the Electronic Communications Sector published by the Regulatory Authority of Bermuda (RA).

As a leading sectoral provider operator in Bermuda, Digicel is committed to operating in 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 electronic communications 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 the electronic communications markets.

Digicel response to the Preliminary Report, Preliminary Decision and Order (the "RA Document") is organized as follows:

- Section 2: Comments on Section 5 of RA Document ("*Summary and discussion of responses to the consultation document*"). We analyse the RA responses on our comments presented in the Consultation document focusing on our arguments rejected by the RA.
- Section 3: Comments on Section 6 of RA Document ("*SMP assessment and proposed remedies*"). We present our comments by market showing evidence regarding the SMP assessment made by the RA.
- Section 4: Comments on Section 7 of RA Document ("*Proposed methodology for international price benchmarking*"). We present a general discussion of the RA proposals to use international benchmarking as a tool to analyse prices and set regulated prices
- Section 5: Finally, we present our final remarks on the SMP assessment made by the RA and its proposed remedies.

When making references to the RA Document, we use the abbreviation "Para. X." to refer to paragraph number X in the document. References to other documents and sources are usually included in footnotes.



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3. COMMENTS ON RA'S RESPONSES TO THE RA DOCUMENT

We present in this section our comments to the RA Document section 5 "SUMMARY AND DISCUSSION OF RESPONSES TO THE CONSULTATION DOCUMENT".

3.1 GENERAL RESPONSES

3.1.1 Return on Capital Employed ("ROCE") Analysis

The RA has stated that there is significant evidence that competition is limited in the main markets of the sector based on the analysis of the ROCE of Bermuda leading operators (Para. 51). However, the RA's analysis is not economically sound.

Principally, the ROCE must be compared with the company's WACC, not the ROCE of other companies in different countries. Especially, when the European companies that Plum mentions have had a ROCE below their WACC for several years.

Therefore, any finding premised on this analysis is not sound and should not be taken into consideration.

3.1.2 Decommissioning of Copper Network

The RA mentions that Digicel is required to maintain its existing copper access facilities until Digicel provides a phase-out plan for the decommissioning of copper for a consultation process (Para. 61). Likewise, the RA considers that the expiration of the remedies related to copper will be discussed outside this ECMR consultation.

Digicel is grateful for the continued discourse with the RA regarding the discontinuation of its copper network.

As we have stressed in these discussions, the decommissioning of the copper network is crucial not only from a technical perspective but from a commercial perspective as Digicel continues to



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operate two networks in parallel, with the copper network at end-of-life. This is considerable constraint to our resources.

Digicel is aware that the shutdown of copper networks has been achieved in other countries with highly developed fibre networks, such as Spain.¹ Copper network switch-off allows operators to deliver higher quality services to its customers in a more efficient way. This is especially relevant given the end-of-life nature of copper equipment which makes it difficult and expensive to find spare parts, thus making the network more prone to faults and other quality problems, as well as more expensive to operate. UK regulator Ofcom explains this as follows:

Landline phone calls have traditionally been delivered over a network known as the public switched telephone network (PSTN). This network is old, and becoming harder and more expensive to maintain, so it needs to be replaced.

Replacing the PSTN now will ensure that we continue to have reliable home phone services available.

This is not happening only in the UK. These changes are taking place all over the world, with many countries having now completed them.

BT has taken the decision to retire its PSTN by January 2027 and this means other providers that use BT's network must follow the same timescale. Other companies with their own networks such as Virgin Media plan follow a similar timescale.

In addition, telecoms providers are also investing in new systems and networks – for example, by upgrading old copper-based broadband lines to full-fibre. They will need to switch customers away from the old PSTN at the same time as upgrading their technology.

This means that in the future, landline calls will be delivered over digital technology, called Voice over Internet Protocol (VoIP). You might also see this referred to as 'digital phone' or 'digital voice'.²

¹ See, e.g. "Telefónica cierra una era con el apagado de las últimas 661 centrales de cobre" (Telefónica closes an era with the switch-off of the last 661 copper central offices), El Mundo, 27 May 2025. <https://www.elmundo.es/economia/empresas/2025/05/27/6835d0e6e85ecceb9058b4588.html>

² Ofcom, *Moving landline phones to digital technology: what you need to know*, last updated 30 May 2025, <https://www.ofcom.org.uk/phones-and-broadband/landline-phones/future-of-landline-calls>



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Digicel's copper network is increasingly evident of outdated technology with fibre offering more viable service, lower costs, efficient performance and consumer satisfaction as we move from a voice-based communications sector to one that is driven by data. **It is important to note, that Digicel has deployed a full fibre network in the island of Bermuda which offers full fibre services to 100% of the island ensuring that all consumers can access equivalent services on our fibre network.**

It is simply unfeasible to maintain two networks with the increasing prices of provisioning copper when the opportunities that a full fibre network offers is the present and future for the provisioning of electronic communications in Bermuda.

To achieve the earliest possible decommissioning of copper, we are of the view that the regulatory barriers presently in place and those proposed, be removed, to allow for Digicel to progress with the successful commercial discontinuation of services without being stymied with regulatory burdens.

We anticipate with the copper switch-off, there will be increased competition in the fixed voice market, as the RA itself acknowledges. The RA Document recognizes on Para. 242 that the imminent discontinuation of the copper network will provide FVT customers with an opportunity to switch to providers other than Digicel, but this is not reflected in the revenue market share forecasts.

Digicel will continue to provide access to services until such time as the approval of the RA is received to discontinue but is of the considered view that the regulatory process under the RA can be conducted as a standalone regulatory exercise within the careful guardrails of the RA without placing additional regulatory burdens on Digicel regarding this matter.

3.1.3 Low Earth Orbit Satellite Suppliers (LEOs)

The RA states that no sectoral providers have secured a licence to provide LEO services in Bermuda and the remote idea that a licence is granted does not deprive sectoral providers of having SMP in this market. Nonetheless, the RA has preliminarily decided to reserve its right to review the fixed broadband market if LEO services become available in Bermuda (Para. 63).



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In this regard, Digicel agrees with the expected revision of the fixed broadband market if LEO satellite broadband services become available in Bermuda. However, we consider that the fact that LEO satellite services are not currently offered in the Bermuda market should not limit the consideration of the expected entrance of Starlink (a global LEO satellite operator) in the SMP assessment, because it has coverage in the country and has stated its intention to launch services in Bermuda soon. This latter point is relevant considering that the RA should perform a forward-looking SMP assessment.

3.2 IDENTIFICATION OF RELEVANT PRODUCT AND GEOGRAPHIC MARKET

3.2.1 Inclusion of LEO services

In Para. 113, the RA states that LEO-based fixed broadband services are included in the fixed broadband market. However, the RA notes that LEO services are not currently available in Bermuda, and it is unknown whether any new LEO entrant will gain sufficient traction to materially affect the fixed broadband market in the review period. The RA has a similar understanding regarding the inclusion of LEO services in business connectivity market (Para. 114).

Digicel agrees with the RA statement that LEO satellite services are included in the relevant market for fixed broadband services. Nonetheless, the fact that LEO satellite services are not currently available in the Bermuda market should not limit the consideration of the expected entrance of Starlink (a global LEO satellite operator) in 2026 in the SMP assessment. This latter point is relevant considering that the RA should perform a forward-looking SMP assessment.

Similarly, Digicel agrees with the RA's statement that LEO satellite services are also included in the relevant market for business connectivity services. Nonetheless, Digicel reasserts that even if LEO satellite services are not currently available in the Bermuda market, Starlink has announced that it will enter the market in 2026,³ and therefore LEO services should be considered in the SMP assessment. This expected entry will make the market more competitive, and even now it has rendered it a contestable market.

³ Please see Starlink Availability Map, where Bermuda appears as "Starting in 2026". <https://www.starlink.com/map>



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Finally, Digicel considers that the RA should consider LEO services to be also part of the mobile market because of the ability of satellite providers to offer Direct-to-Device (DTD) services to mobile phone users. Again, expected entry of a new competitor may render the market competitive in the forecasted period, and it renders it contestable right now.

And that, in the same way as decided for the fixed broadband market on Para. 63, the RA should at a minimum, review the mobile and business connectivity markets as soon as LEO services become available for Bermuda users in any of those markets.

3.2.2 Inclusion of OTT communications services in the product scope of fixed voice and mobile services market

First, Digicel disagrees with the RA's statement that OTT communication services cannot functionally substitute for mobile services, as they do not include the access component (Para. 120). Regarding this, Digicel considers the RA's perspective to be incorrect because it is based on a narrow technical viewpoint, suggesting that OTT services do not provide an access network since they depend on mobile services (internet access) to reach users. Given that 96% of Bermudan citizens⁴ have a mobile connection, that means that the addressable market for OTT services is practically equal to the whole country.

Therefore, Digicel considers that the RA should evaluate the substitution between OTT services and mobile services (especially voice and messaging services) from a user perspective. To do this, the RA could conduct a consumer survey or analyse the previous evolution of market indicators, such as the number of SMS messages or minutes of voice calls in mobile services. Other regulatory authorities in the region (such as the CRC of Colombia) have already conducted similar analyses and found substitution patterns between some traditional telecommunications services and OTT services.⁵

Second, Digicel disagrees with the RA's statement that OTT voice services cannot be substitutes for fixed voice services due to their functional differences. Specifically, the RA states that, under OTT voice services, users must go through several steps to make a voice call, in contrast to fixed voice services (Para 121).

In this respect, Digicel reaffirms that the RA did not conduct a proper evaluation of the capabilities of devices and users to meet the requirements necessary for a voice call. Likewise, Digicel emphasises that

⁴ According to Telegeography, mobile penetration in Bermuda reached 96 lines/100 population in 2024.

⁵ Please see Comisión de Regulación de Comunicaciones (CRC), *El rol de los servicios OTT en el sector de las comunicaciones en Colombia 2021* (The role of OTT services in the telecommunications sector in Colombia 2021), <https://www.crcom.gov.co/es/biblioteca-virtual/rol-servicios-ott-en-sector-las-comunicaciones-en-colombia-2021-informe>



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the market definition should be based on a substitution analysis from a user perspective rather than a technical perspective, as that is the standard under competition law. For instance, the European Commission's Guidelines on market analysis and SMP assessment in electronic communications⁶ state that (our emphasis):

*26. The starting point of any analysis should be an assessment of relevant retail market(s), taking into account demand-side and supply-side substitutability **from the end-user's perspective** over the next review period based on existing market conditions and their likely development.*

In this regard, Digicel already showed that the technical steps that the RA mentions do not constitute a burden on users to choose OTT services instead of traditional ones, and the RA has not disproven that.

Therefore, from the point of view of end users those services are substitutes. As follows, Digicel shows its previous analysis regarding how through Smartphones, users can easily access OTT services and thereby substitute for fixed voice services.

Table 1: User perspective of the steps required to make an unmanaged VoIP call

Steps identified by RA	Service user perspective
<ul style="list-style-type: none"> Have a fixed broadband connection or mobile data connection 	<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> Own a compatible device 	<ul style="list-style-type: none"> Most OTT apps are compatible with all 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.
<ul style="list-style-type: none"> Have installed the relevant application on the device 	<ul style="list-style-type: none"> 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.

⁶ EUROPEAN COMMISSION, COMMUNICATION FROM THE COMMISSION, Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services, (2018/C 159/01), Official Journal of the European Union 7.5.2018. C 159/1 (EC SMP Guidelines)



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Steps identified by RA	Service user perspective
<ul style="list-style-type: none"> Have the device turned on 	<ul style="list-style-type: none"> 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.
<ul style="list-style-type: none"> Be logged in to the service 	<ul style="list-style-type: none"> 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.

Including OTT services in the fixed voice and mobile markets would also be consistent with EU SMP Guidelines:

34. *Although the end use of a product or service is closely related to its physical characteristics, different types of products or services may be used to achieve the same end.*
35. *Product substitutability between different services may arise through the increasing convergence of various technologies, which often allows operators to offer similar retail product bundles. The use of digital transmission systems, for example, can lead to similarities in the performance and characteristics of network services using distinct technologies.*
36. *In addition, so called 'over-the-top' (OTT) services or other internet-related communications paths have emerged as a potential competing force to established retail communications services. As a result, NRAs should assess whether such services may, on a forward-looking basis, provide partial or full substitutes to traditional telecommunications services.⁷*

3.2.3 Fixed and mobile termination markets

According to section 22(2) of the ECA, markets must meet the three criteria to be regulated. In Para. 122., the RA shows that termination could be considered as relevant markets from an economic analysis perspective. However, RA also makes clear that termination markets do not meet the three criteria, and therefore they must not be included as markets suitable for regulation.

⁷ EC SMP Guidelines, page C159/6.



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The RA states that they are concerned about the possibility of the consensus of these markets may eventually end and they may be eventually become non-competitive. But a concern for an eventual, hypothetical future competition problem does not justify including them as regulated markets in this review but rather revisiting its market definition in future market reviews if needed.

Therefore, Digicel considers that those markets must not be included as markets suitable for regulation because they do not pass the three-criteria test.

3.3 ASSESSMENT OF THE THREE CRITERIA TEST ON RELEVANT MARKETS

The RA reminds on Para. 24. that, under section 22(2) of the ECA, a market can be regulated only if it meets all three criteria as set out thereunder. From the plain language analysis of the criteria, a few rules how they should be assessed can be derived.

The second criterion (b)(i) reads that, to meet this criterion, the market “**is not likely to be affected** by technological changes or other developments that would render it effectively competitive”.

According to the ECA, a market needs not be in effective competition at present to fail the three-criteria test, it suffices with it being likely to become so in the future. However, the RA proposes to regulate some markets because they are not competitive at present, even when it concedes that they are likely to become competitive in the future. We will reference this point when responding to specific market definitions and analyses later in this document.

The third criterion (c) reads that, to meet this criterion, “the application of ex post competition rules alone would not be sufficient to promote or preserve effective competition in the relevant market”.

From this, the burden of proof that ex post enforcement is not sufficient falls with the RA, not with operators or any other agent in the market.

As follows, we present our comments on RA’s responses regarding the three-criteria considering the explained above.



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3.3.1 HIGH AND NON-TRANSITORY BARRIERS TO ENTRY

Digicel highlights that the RA did not respond to our previous statement regarding the absence of high and non-transitory barriers to entry in any of the relevant markets.

3.3.1.1 Fixed broadband markets

First, in Para. 136, the RA states there are still substantial economies of scale involved in deploying and operating a fixed access network, including for FWA networks. In this regard, Digicel reaffirms that the assumption that the small size of Bermuda market by itself makes entry unprofitable is not consistent with the economics of the fixed broadband business and evidence from the Bermuda market. The economies of scale in wired fixed networks typically are exhausted in a single city. Furthermore, each technology has a different cost curve, and therefore economies of scale. In particular, Economies of scale for FWA are much lower than in wired networks, and therefore the minimum profitable size of a FWA operator is lower than that of a wired operator in the same area.

Additionally, the RA omits the fact that LEO networks achieve economies of scale at the regional level. Therefore, for them there are no barriers to entry to the Bermuda market, since the incremental cost of doing so once they have the network deployed to serve other contiguous markets is zero or close to zero.

It must be considered as well that new entrants can reach economies of scale beyond the Bermuda market.

Players such as Starlink, which operate in many other markets in the region, achieve economies of scale both in the network and other activities at the regional level, and therefore they can compete on par with Bermuda incumbent operators.

3.3.1.2 Mobile market

Second, in Para. 137, the RA acknowledges that the mobile market has seen market entry from one infrastructure-based provider (Paradise Mobile) and two Mobile Virtual Network Operators (MVNOs) (FKBNet and iTech (Bermuda) Ltd trading as BMobile) since the last ECMR. However, the RA suggests that the presence of these new entrants does not contradict the alleged existence



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of high and non-transitory barriers to entry because these new entrants have gained little traction in the market and are smaller companies without the economies of scale available to Digicel and OneComm.

The discussion on the minimum efficient size misses the point that, for competition purposes, the relevant size is the minimum profitable size, i.e. the size that allows a competitor to be profitable, even if it is less profitable than larger competitors. In the case of mobile communications, economies of scale are mathematically never exhausted, but they quickly reach an inflection point where scale-driven incremental cost decreases become negligible. This happens typically between 18% to 27% market share. Also, it is important to remind the RA that cost efficiency does not only depend on scale, but on competition intensity. Companies operating under monopoly or oligopoly market structures incur in monopoly inefficiencies that usually more than offset scale gains.

In this regard, Digicel considers that the RA's assessment is incomplete because it does not perform a proper analysis of the relevance of economies of scale as a barrier to entry compared to the relevance of the infrastructure, legal, and commercial costs already incurred by the new entrants.

In that sense, the RA should consider the following in its assessment:

- (i) MVNOs face lower costs than infrastructure-based operators; therefore, they do not need the same level of scale to exert competitive pressure on the incumbents; and
- (ii) Paradise Mobile is an infrastructure-based operator that is already competing in the market; therefore, it has already overcome most of the entry barriers in this market.

Regarding the relevance of economies of scale in the capability of the new entrants to exert competitive pressure on the incumbents, Digicel considers that the new entrants are gaining scale not only from the Bermuda market but also from their presence in other markets (such as Paradise Mobile, which has a presence in the Cayman Islands and is expecting to enter new markets such as the Turks and Caicos Islands (TCI)). Additionally, evidence that economies of scale would not be a limitation for these new entrants to exert competitive pressure on the



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incumbents is their current offering. For example, Paradise Mobile offers mobile service plans at very competitive prices compared to the incumbents' offers. This is also the case for the MVNOs.

In any case, the RA should perform a proper analysis of the relevance of economies of scale as a barrier to entry or sustainability in this market. This analysis should consider the current offerings of the new entrants (pricing comparison analysis).

3.3.1.3 Fixed voice services market

Third, regarding fixed voice services, Digicel considers that these services can be provided over many technologies with little incremental investment using managed VoIP technology. This is the case of cable networks owned by OneComm, mobile networks, FWA, WiFi and LEO. Digicel reaffirms that the RA's analysis is flawed because it does not consider the relevance of unmanaged 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.

3.3.2 CHANGES OR DEVELOPMENTS WHICH MIGHT RENDER THE MARKET EFFECTIVELY COMPETITIVE

Digicel finds that the RA has failed to disprove our previous comments, and that it must accept that there are technology and market developments underway which are likely to render all relevant markets competitive.

3.3.2.1 Fixed broadband market

Firstly, Digicel disagrees with the RA's statement regarding the small prospect of a LEO provider having a significant impact on the market within the market review horizon. Digicel reaffirms that a potential entrant does not need 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:



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“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.”⁸

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.”⁹

As providers of fixed broadband services, satellite operators (such as Starlink) meet all the criteria of a potential entrant in a contestable market in Bermuda. Starlink already offers those services in other jurisdictions in the region,¹⁰ In addition, Digicel considers that the RA’s suggestion regarding an expected adjustment to the fixed broadband market assessment if any LEO provider becomes available in Bermuda shows that the RA itself considers that entry to be likely.

Digicel disagrees with the RA’s statement that substantive changes in FWA networks are not likely to significantly impact the competitive dynamics of the fixed broadband market. In this regard, Digicel believes that the evaluation of technological changes was not conducted with a forward-looking approach as required by section 22(2)(b)(i) of the ECA. Specifically, the RA did not analyse the expected evolution of the broadband service market over the next four-year regulatory period. In particular, the RA did not respond to our statement that the fact that Wave/Horizon failed to consolidate as a viable FWA operator after its entry in 2021 and ultimately exited the market by 2024 does not necessarily mean that another new entrant cannot succeed. In fact, there was another case of successful deployment of FWA services during this

⁸ 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.

⁹ 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.

¹⁰ For instance, Starlink services are already available in the Caribbean region in the US East Coast, Bahamas, British Virgin Islands, US Virgin Islands, Puerto Rico, Jamaica, Haiti and the Dominican Republic. <https://www.starlink.com/map>



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period: TeleBermuda International acquired the assets of World on Wireless, which were in liquidation, and used them to launch its own FWA network.

Therefore, Digicel considers that the RA has not proven that entry by FWA providers is not viable.

3.3.2.2 Mobile Market

Secondly, Digicel remarks that the RA does not consider that 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 (such as FKBNNet and BMobile), which could improve the competitive dynamics in this market, apart from the expected growth of the third player (Paradise Mobile).

Furthermore, a significant technological change can be expected when LEO companies begin to offer direct-to-device satellite services to mobile phones. Those services have already been offered by satellite operators, such as Starlink in the United States, and they are in negotiation with other mobile operators to roll out them in other jurisdictions in the region,¹¹ and many of the newest smartphones, such as the latest generation iPhones, support direct-to-device connections. Entry by Starlink is likely since it has already achieved economies of scale at the regional level, and it would raise the number of infrastructure-based mobile operators in Bermuda to four.

In any case, as we showed in the previous section, LEO providers need not actually enter the market to discipline the behaviour of incumbent operators. It is sufficient for them to be likely entrants to turn the market a contestable one where incumbents do not have SMP any longer. Therefore, the mobile market does not meet the three criteria test.

3.3.2.3 Fixed voice services market

Thirdly, regarding fixed voice services, Digicel reaffirms 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

¹¹ See: <https://www.t-mobile.com/coverage/satellite-phone-service>



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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).

3.3.2.4 Business connectivity market

Digicel considers our position relative to LEO services stated above is also relevant to business connectivity services if the RA considers that satellite operators, such as 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).

3.3.3 COMPETITION LAW ALONE IS INSUFFICIENT TO ADEQUATELY ADDRESS THE IDENTIFIED MARKET FAILURES

In Para. 141, the RA states that “investigating complaints about anti-competitive conduct can be both time-consuming and costly. Moreover, there is a risk of ongoing consumer harm occurring (e.g. from excessive pricing) while the RA investigates the issue. On the other hand, *ex ante* intervention allows for targeted remedies and monitoring to address the most pressing competition concerns”.

Digicel considers the RA’s statement incorrect when we consider that none of the relevant markets has met the two previous criteria. In other words, none of the relevant markets has high and non-transitory barriers to entry, and there are technological developments that might render the market effectively competitive. Therefore, under this scenario, *ex post* competition rules should be sufficient to ensure competition.

In fact, *ex post* competition rules should be preferable to imposing *ex ante* remedies, which are rigid and slow to adapt in fast-changing markets such as the communications market. Likewise, *ex ante* remedies could distort the current and expected competitive dynamics in this market.

Former FCC General Counsel Jonathan Sallet explained in a 2011 paper:



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Because rulemaking is necessarily based on a current state of understanding about the market, it is ill-equipped to deal flexibly with the rapidly changing and ever-evolving nature of competition in the Internet marketplace. Regulators (like the rest of us) cannot be expected to forecast the future trajectory of innovation with precision. In today's dynamic and complex Internet market, regulators thus run the risk of inadvertently stifling innovation and competition by incorrectly predicting sources of competition or economic incentives that favor new value propositions.¹²

Eisenach and Soria of NERA explain in a 2016 report the reasons why ex post enforcement is best suited than ex ante prescriptive regulation to cope with technological and market changes:

A dynamic model focusing on predictable ex post enforcement of clearly defined performance standards (rather than ex ante prescriptive regulations) can recognise and embrace the pace of technological and market innovation. This allows the approach taken to achieve regulatory objectives to evolve over time, even when the objectives remain mostly stable.¹³

The fact that ex post enforcement requires time and resources does not mean it is not adequate and or appropriate to discipline the market. RA implies that they can regulate markets when ex ante regulation is more *efficient* than ex post competition rules, but the ECA does not state that, but that ex post must not be *sufficient*. Therefore, when RA has not proven that ex post competition rules are not sufficient, the market cannot be construed to meet the three-criteria test, and as a consequence the ECA does not grant RA the right to regulate that market.

The RA has not proven that ex ante regulation is less time consuming than ex post enforcement. As Eisenach and Soria remind in their 2016 report:

It is sometimes offered that an ex post approach is “too slow” to correct harmful conduct when compared to ex ante rules that prohibit such conduct outright. The main problem with this argument in the rapidly changing digital ecosystem is that it ignores the time it takes to put in place ex ante rules in the first place. Further, having ex ante rules does not eliminate the need for—and delays associated with – adjudication of alleged violations.¹⁴

¹² See Jonathan E. Nuechterlein and Philip J. Weiser, 2013, Digital Crossroads, MIT Press, Chapter 10. “The ultimate end game in telecommunications regulation ... should be a deregulatory environment...”

¹³ See Jeffrey A. Eisenach and Bruno Soria. A New Regulatory Framework for the Digital Ecosystem, GSMA, December 2016. <http://www.gsma.com/publicpolicy/new-regulatory-framework>

¹⁴ See Jeffrey A. Eisenach and Bruno Soria. A New Regulatory Framework for the Digital Ecosystem, GSMA, December 2016. <http://www.gsma.com/publicpolicy/new-regulatory-framework>, page 34.



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Moreover, the burden of proof that ex post enforcement is not sufficient falls with the RA, not with operators or any other agent in the market. Digicel cannot be punished with unjustified obligations as an operator just because the RA cannot find the time and resources to conduct proper ex post analyses.

3.4 CONCLUSIONS ON RELEVANT MARKET IDENTIFICATION

Digicel finds that the above considerations show that the RA has not proved that any of the markets identified passes the three-criteria test.

We therefore consider that there is no legal foundation to regulate any of those markets.



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4. COMMENTS ON SMP ASSESSMENT AND PROPOSED REMEDIES

We present in this section our comments on the RA Document section 6 “SMP ASSESSMENT AND PROPOSED REMEDIES”.

4.1 Comments on methodological points

In Para. 216, the RA assess the SMP based on analysis of market shares. Particularly, the RA refers to the European Commission SMP Guidelines (2018) which states that very large market shares (in excess of 50%) are evidence of the existence of a dominant position, except in exceptional circumstances.

In this regard, Digicel highlights that the European Commission SMP Guidelines (2018) also indicates some nuances to the assessment of a dominant position based on large market shares such as considering the market evolution and the ability of new entrants to increase their market share quickly.

“However, even an undertaking with a high market share may not be able to act to an appreciable extent independently of customers with sufficient bargaining strength. In addition, the fact that an undertaking with a strong position in the market is gradually losing market share may well indicate that the market is becoming more competitive, but does not preclude a finding of SMP. Significant fluctuation of market share over time may be indicative of a lack of market power in the relevant market. The ability of a new entrant to increase its market share quickly may also reflect that the relevant market in question is more competitive and that entry barriers (53) can be overcome within a reasonable timeframe.”¹⁵

Likewise, the European Commission SMP Guidelines (2018) states that if the market share is high but below 50% threshold, the NRAs should rely on other key structural market factors to assess SMP. In this case, the RA should perform a thorough market analysis before determining any SMP when the market share is not higher than 50%.¹⁶

¹⁵ European Commission SMP Guideline (2018). Paragraph 56.

¹⁶ European Commission SMP Guideline (2018). Paragraph 57.



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Therefore, any SMP assessment should not rely on market shares only but consider as well the other factors mentioned in the European Commission guidelines.

Furthermore, the previous references to market shares were made in the context of determining single SMP. To assess the existence of joint SMP, the European Commission SMP Guidelines (2018) states that the NRAs must also consider whether, in light of all considerations, market conditions would be conducive to a mechanism of tacit coordination.¹⁷

The SMP Guidelines remind that, under EU jurisprudence, “three cumulative conditions are necessary for a finding of collective dominance as defined (70):

First, each member of the dominant oligopoly must have the ability to know how the other members are behaving in order to monitor whether or not they are adopting a common policy. It is not enough for each member of the dominant oligopoly to be aware that interdependent market conduct is profitable for all of them but each member must also have a means of knowing whether the other operators are adopting the same strategy and whether they are maintaining it. There must, therefore, be sufficient market transparency for all members of the dominant oligopoly to be aware, sufficiently precisely and quickly, of the way in which the other members' market conduct is evolving;

Second, the situation of tacit coordination must be sustainable over time, that is to say, there must be an incentive not to depart from the common policy in the market. It is only if all the members of the dominant oligopoly maintain the parallel conduct that all can benefit. The notion of retaliation in respect of conduct deviating from the common policy is thus inherent in this condition. For a situation of collective dominance to be viable, there must be adequate deterrents to ensure that there is a long-term incentive in not departing from the common policy, which means that each member of the dominant oligopoly must be aware that highly competitive action on its part designed to increase its market share would provoke identical actions from others, so it would derive no benefits from its initiative;

Third, to prove the existence of a dominant position to the requisite legal standard, it must also be established that the foreseeable reaction of current and future competitors, as well as customers, would not jeopardise the results expected from the common policy.”¹⁸

¹⁷ European Commission SMP Guideline (2018). Paragraph 69.

¹⁸ European Commission SMP Guidelines (2018). Paragraph 67.



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The RA has not conducted that analysis, and therefore it has not proven that joint SMP exists in this market.

4.2 Mobile Services.

As shown in the previous section, Digicel considers that the RA has not proven that the mobile services market passes the three-criteria test, and therefore it should not be regulated.

4.2.1 Comments on SMP assessment

Digicel disagrees with the RA's conclusion that Digicel and OneComm have joint SMP in the retail and wholesale mobile services markets.

4.2.1.1 Single SMP assessment

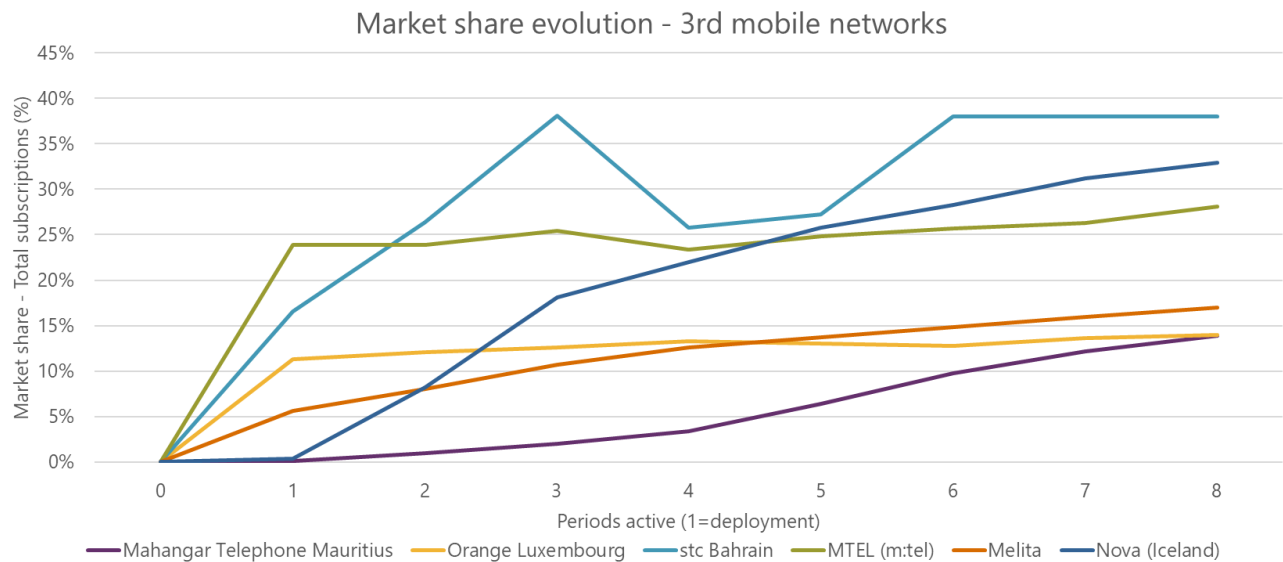
Firstly, the forecast of Paradise's market share is unrealistic. Paradise has won 1.5% market share per year in its two years of operation. A forward-looking analysis must look at the market share that Paradise is likely to achieve in the time until next market review. Given that market reviews must be conducted every four years, and that the present review will finish in September 2025, the relevant market share is that Paradise is likely to reach in 2029, that is, six years after launch.

We have analysed the market share that third operators in small markets have achieved in a six-year period after launch. We have included the operators mentioned by the RA on Figure 6.2., Para. 222. of the RA Document. As shown on Figure 1, based on developments in other markets, it is likely that Paradise reaches a market share between 10% and 38% before the next market review.



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Figure 1: Market share evolution after launch



Source: Telegeography

If Paradise captures that market share proportionally from Digicel and OneComm, it is very likely that Digicel's market share would fall below the 40% threshold, and depending on Paradise's success, OneComm could also fall below 50%. Additionally, the new entrants' market shares must be analysed prospectively. If they have reached 4% in two years, it is likely that they would reach between 10% and 38% by the time of the next review.

Table 2: Mobile market share forecast by 2029

Paradise scenario	share	Mobile operators' market shares		
		Paradise	Digicel	OneComm
2024 (RA Document)		1%	44%	55%
2029 (low)		10%	40%	50%
2029 (average)		20%	36%	45%
2029 (high)		38%	28%	34%



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Source: RA, Telegeography, NERA analysis

As shown on Table 2, a proper forecast of market shares shows that, in two of the likely scenarios Digicel market share will be below the 40% threshold, and only in one it would be close to it. We therefore consider that there is a prima facie presumption that Digicel does not have SMP in this market.

Secondly, regarding high and enduring barriers to successful and sustainable entry, the RA's analysis is not sound. Paradise and the MVNOs have already incurred the fixed costs required to enter the business, which are now sunk costs without impact on their prospects for sustainability. Also, as we mentioned, the analysis of the presence of entry barriers should consider the differences between infrastructure-based operators and MVNOs. Likewise, the current offerings of the new entrants suggest they can exert competitive pressure on the advantages that limit the alleged market power.

The RA's assumption that the number of operators that can compete profitably in a market depends on its population size is not supported by evidence. We conducted a proper statistical analysis and found that the number of operators in a small market is not driven by population, but by GDP per capita and service penetration. Both parameters are very high in Bermuda, thus suggesting that the Bermudian market can sustain three mobile operators.

Analysis of the drivers of the number of mobile network operators in small states
<p>To assess RA's statements regarding the dependence of the number of operators on the size of the country, we have analysed the potential drivers of the number of mobile operators using regression analysis. This method allows us to identify the main drivers of a variable of interest (in this case, the number of operators) based on statistical criteria.</p> <p>The results of a regression analysis indicate which variables are statistically significant, represented by "stars" on the right side of the coefficient. The number of stars ranges from 1 to 3, with 3 stars indicating higher statistical significance, while a non-star indicates no statistical significance. Therefore, a potential driver is considered relevant to the variable of interest if it has statistical significance.</p> <p>In summary, through regression analysis, we can determine whether a variable is relevant to the number of operators based on its statistical significance.</p>



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For our analysis, we included the following countries: Bermuda, Luxembourg, Singapore, Jamaica, British Virgin Islands, Curaçao, Malta, Turks and Caicos, Mauritius, Monaco, Guernsey, St. Vincent and the Grenadines, Jersey, Barbados, Iceland, Bahamas, Montenegro, Cyprus, and Bahrain.

For our analysis, we included the following countries: Bermuda, Luxembourg, Singapore, Jamaica, British Virgin Islands, Curaçao, Malta, Turks and Caicos, Mauritius, Monaco, Guernsey, St. Vincent and the Grenadines, Jersey, Barbados, Iceland, Bahamas, Montenegro, Cyprus, and Bahrain.

We have considered the following variables, taken from the sources below:

Variable	Source
Nominal GDP (USD) – “l_gdp”	World Bank - World Development Indicators
Nominal GDP/Capita (USD) – “l_gdp_pc”	World Bank - World Development Indicators
Population – “l_pop”	World Bank - World Development Indicators
Population density (pop/sqkm) – “l_pop_density”	World Bank - World Development Indicators
Surface (sqkm) – “l_surface”	World Bank - World Development Indicators
Number of MNO – “n_operators”	TeleGeography
Total Subscriptions (Mobile) – “l_lines”	TeleGeography
Mobile penetration (%) – “l_penetration”	TeleGeography

Note: For countries where data was not available, we utilized data from the United Nations DataHub and statistics from the official websites of each respective country.

For each variable, we selected data from 2018 to 2023. To perform the regression analysis, we transformed these variables into logarithmic form to ensure the interpretability of the coefficients.

We performed a multiple regression analysis where the dependent variable is the number of mobile operators (“n_operators”), excluding Monaco from the estimation as it has operators that provide services from France. Upon conducting the year-on-year analysis, we found that population is not statistically significant in any case. However, GDP per capita and service penetration show significance. This can be observed in Table 3, column (3).

Table 3: Analysis for number of operators - 2023

	(1)	(2)	(3)
	n_operators	n_operators	n_operators
l_pop	-0.0200	-0.0690	
l_gdp	0.339*	0.339*	
l_lines	-0.233	-0.233	0.0396
l_pop_density	0	0.0490	0.0461
l_surface	-0.0490		
l_penetration	2.230*	2.230*	1.963**
l_gdp_pc			0.391**



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_cons	-1.956	-1.956	-2.524
R2	0.623	0.623	0.665
N	17	17	17

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The positive coefficients show that how penetration and GDP per capita positively affect the number of mobile operators. We have conducted this analysis also for the years 2018 to 2022 and the results are consistent with our findings for 2023.

Thirdly, time commitments may be important if they lock customers into very long terms. However, as the current contracts in the market last for between one and two years, all users will have two or three opportunities to switch to Paradise before the next review.

4.2.1.2 Joint SMP assessment

We also note that the RA has not justified the existence of joint SMP. The only evidence provided by the RA regarding this is that Digicel and OneComm use the same technology and face the same cost structure (based on the European Commission Guidelines). However, Digicel remarks that the RA does not consider other recommendations made by the European Commission, such as the importance of having less complex and more stable economic environments, as well as the relevance of the number of market players, which has changed considerably from the previous ECMR due to the entrance of Paradise Mobile and MVNOs.

“Arriving at a common understanding on coordinated behaviour is generally easier in less complex and more stable economic environments. Given that coordination is generally simpler among fewer players, it would seem relevant in particular to examine the number of market participants. Further, it may be easier to reach a common understanding on the terms of coordination if a relative symmetry can be



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observed, especially in terms of cost structures, market shares, capacity levels including coverage, levels of vertical integration and the capacity to replicate bundles.”¹⁹

In that sense, it is striking that the RA did not evaluate the incumbents’ offerings as they did in previous ECMRs²⁰ or conduct another analysis to attempt to show evidence that the incumbents participated in tacit collusive conduct.

A proper analysis is not likely to end in a finding of joint SMP. In the European Union, for instance, retail and wholesale markets were considered suitable for regulation in 2003. However, the market analyses in the period 2003-2007 found that both the European Commission and each and every one of the 25 National Regulatory Authorities (NRAs) decided that the retail mobile market was in effective competition; and therefore, there was no SMP in them, neither single nor joint.

- Joint dominance was found only in the wholesale market, and only in 2 of the 25 Member States of the European Union. In one of them (Ireland) the statement was annulled on appeal. The other market was Spain, and the only remedy imposed (launching offers for MVNO) is already in operation in Bermuda.

The exceptionality of the above case became evident in 2007 when the European Commission removed the wholesale market for mobile access and origination from its list of susceptible markets in its first revision of the list of markets²¹, implying that it generally considers it to be in effective competition.

¹⁹ European Commission SMP Guideline (2018). Paragraph 72.

²⁰ In its 2020 RA conducted a price analysis of fixed broadband markets on Para. 163 of its Market Review of the Electronic Communications Sector - Final Report, Decision & Order, 1 September 2020

²¹ European Commission, *Commission Recommendation of 17 December 2007 on relevant markets for goods and services within the electronic communications sector that may be subject to ex ante regulation pursuant to Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services* (2007/879/EC)



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4.2.2 Comments on remedies

Digicel does not agree that there is SMP in mobile services market and therefore does not think that remedies should be applied. However, we have some comments on the remedies proposed by the RA.

Firstly, regarding the RA monitoring of the median price charged by Digicel and OneComm using international benchmarking methodology, we explain our critique of that methodology in Section 4.

Secondly, Digicel does not agree that, if mandated, anchor prices should have identical specifications and price for all regulated providers. The goal of setting regulated anchor products is to promote competition. Telecommunications providers compete on a variety of product properties, including service definitions and prices.

In this context, the role of anchor products is to set a floor to the margins that providers can make, and to extend this restriction to the whole market via the chain of substitution with other products. This requires the prices for those anchor products to be low enough to ensure that the providers do not make excessive profits on them. However, if prices for all anchor products are low enough, there is no need for them to be identical.

Furthermore, if all providers are allowed to define a specific mix of price and service features for their anchor products, there will competition also among anchor products, in addition to competition among more performing products.

4.3 Fixed Broadband Services

As shown in the previous section, Digicel considers that the RA has not proven that the fixed broadband market passes the three-criteria test, and therefore it should not be regulated.

4.3.1 Comments on SMP assessment

Digicel agrees with the RA's conclusion that Digicel does not SMP. Nonetheless, we remark that the price evolution of Digicel offers evidence of its lack of SMP. In the last years since the previous 2020 Market



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Review, Digicel has kept constant the prices of its higher-speed services and lowered the price of the entry-level services. A price rise by OneComm and price decreases by Digicel would be consistent with the RA finding that OneComm has single SMP in the Fixed broadband market and Digicel has not.

4.3.1 Comments on remedies

Digicel has no comment on remedies applied in fixed broadband services.

4.4 Business connectivity services

As shown in the previous section, Digicel considers that the RA has not proven that the business connectivity market passes the three-criteria test, and therefore it should not be regulated.

4.4.1 Comments on SMP assessment

Digicel disagrees with the RA’s conclusion that Digicel and OneComm have joint SMP in the business connectivity market.

It is unrealistic to forecast that other competitors will take market share from OneComm only, while Digicel will remain at 50%. A more realistic forecast will take market share from both competitors in a similar proportion to their market shares. We have conducted this exercise (see Table 4), and Digicel share will fall below the 50% threshold.

Table 4: Business connectivity market share forecast by 2029

Others share scenario	Mobile operators’ market shares		
	Paradise	Digicel	OneComm
2024 (RA Document)	7%	50%	43%
2029 (RA forecast)	14%	50%	36%
2029 (balanced forecast)	14%	46%	40%

Source: RA, Telegeography, NERA analysis



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4.4.2 Comments on remedies

Digicel does not agree that there is SMP in the business connectivity market and therefore does not think that remedies should be applied. However, we have some comments on remedies proposed by the RA.

Digicel considers that the proposed use of an international benchmark to set the discount factor X for wholesale prices is not reasonable. It would not be possible for the RA to build such a benchmark in a proper way, since retail prices are not transparent in business connectivity markets worldwide, as they are negotiated in a one-to-one basis and included in confidential, private contracts. This is also the case for many wholesale contracts, especially in the many countries where business services are not regulated. Therefore, the RA is not likely to have proper information to build this benchmark, and any discount rate calculated using incomplete and partial information is likely to distort competition in the Bermuda market.

4.5 Fixed Voice Services.

As shown in the previous section, Digicel considers that the RA has not proven that the fixed voice services market passes the three-criteria test, and therefore it should not be regulated.

4.5.1 Comments on SMP assessment

Digicel disagrees with the RA's conclusion that Digicel has SMP in the fixed voice services markets.

It is unrealistic to forecast that Digicel market share in subscribers will fall steeply below OneComm's (para. 241), and at the same time it would grow in revenue (para. 243). That suggests that Digicel prices are much higher than OneComm's, and that they will rise fast while OneComm's will not. A more realistic forecast will make market share in revenues evolve at the same pace as the subscriber share. Under this forecast, Digicel will no longer reach a market share that looks like a presumption of market dominance.

Moreover, the RA should have considered the impact of OTT services on market power, even if it did not consider them to be in the same market. According to the European Commission SMP



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Guidelines: *"Where no sufficient substitutability patterns can be established to warrant including such OTT-based services in the relevant product market, NRAs should, nevertheless, consider the potential competitive constraints exercised by these services at the stage of the SMP assessment (see also cases CZ/2017/1985 as well as CZ/2012/1322 and further below)."*²²

4.5.2 Comments on remedies

Digicel does not agree that there is SMP in the fixed voice services market and therefore does not think that remedies should be applied. However, we have some comments on remedies proposed by the RA.

In view of the importance of moving from copper to fibre connections, and the relevance of other technologies (such as managed VoIP, unmanaged VoIP and mobile voice) to deliver fixed voice services, Digicel considers that any eventual remedy imposed on the fixed voice market should be technology neutral, and it be left to the designated operator to choose which technology it prefers to use to provision telecommunication services to its end-users.

²² European Commission SMP Guidelines, footnote 36.



5. COMMENTS ON THE PROPOSED METHODOLOGY FOR INTERNATIONAL PRICE BENCHMARKING

We present in this section our comments to the RA Document section 7 “PROPOSED METHODOLOGY FOR INTERNATIONAL PRICE BENCHMARKING”.

5.1 Approach to International Benchmarking by the RA

Benchmarking is an economic technique that can provide useful insights if used properly. 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.²³ 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.

We have conducted a statistical analysis of the drivers of mobile prices, considering the ones mentioned by the RA (population size, GDP per capita, GDP, population density, surface area, number of lines, and number of operators). The results of the analysis can be seen below. We found that the only variables that have a statistically significant relationship with Mobile ARPU is GDP/capita. The variables mentioned by the RA seem not to have any relevant influence on pricing.

Analysis of the drivers of mobile ARPU	
We conducted a statistical analysis of the drivers of mobile ARPU using the same set of small states and variables that we used to analyse the drivers of the number of operators:	
Variable	Source
Nominal GDP (USD) – “l_gdp”	World Bank - World Development Indicators
Nominal GDP/Capita (USD) – “l_gdp_pc”	World Bank - World Development Indicators
Population – “l_pop”	World Bank - World Development Indicators

²³ 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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Population density (pop/sqkm) – “l_pop_density”	World Bank - World Development Indicators
Surface (sqkm) – “l_surface”	World Bank - World Development Indicators
Mobile ARPU (USD/line per month) – “l_arpu”	TeleGeography
Total Subscriptions (Mobile) – “l_lines”	TeleGeography
Number of MNO – “n_operators”	TeleGeography

Note: For countries where data was not available, we utilized data from the United Nations DataHub and statistics from the official websites of each respective country.

For each variable, we selected data from 2018 to 2023. To perform the regression analysis, we transformed these variables into logarithmic form to ensure the interpretability of the coefficients.

We took the logarithmic transformation of ARPU as the dependent variable, along with the following explanatory variables: population, number of mobile lines, and population density. Additionally, we included the variable for the number of operators.

Based on the data available for each year, the only specification with significant variables is specification (3), where the variable that has some statistical significance is the GDP per capita (“l_gdp_pc”). Therefore, using this approach, no other variable appears to affect annual ARPU. Below are the results for 2022, the year for which we have sufficient ARPU data.

Table 5: Analysis using 2022 data

	(1)	(2)	(3)
	l_arpu	l_arpu	l_arpu
l_pop	207.3	0.177	
l_gdp	0.189	0.370	
l_lines	5.774	-0.841	-0.346
l_pop_density	-213.9	0.0648	0.0842
n_operators	2.471	0.178	0.103
l_surface	-213.1		
l_gdp_pc			0.442*
_cons	-2.493	4.857	4.706
R2	1	0.896	0.894



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N	7	7	7
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$			
The results show that increases in GDP per capita, drive increases in annual ARPU. These results remain consistent when we conduct the analysis for the remaining years in the database.			

Therefore, any international benchmark that intends to explain prices in Bermuda should be composed only by countries with very high income (GDP/capita) and universal service penetration.

5.2 Median prices are not representative of market levels

Digicel is of the view that the RA has misrepresented Digicel’s comments at Para. 190. We do not refer on our comments to the effect of temporary promotions, but of prices for specific services that are consistently lower than others.

In any case, the main problem with median prices is that it depends very much on the shape of the distribution of prices. Average prices are usually more representative than median of the state of competition. And an accurate measurement of price competition requires that it is conducted customer segment by customer segment, rather than for the whole market, because it is at the segment level that operators design and implement their commercial strategies. Because of this, if a given customer segment is relevant in the Bermuda market but not in the comparable used in the benchmark, the median or average values of prices may differ greatly to those in Bermuda, even if the prices at each of the remaining segments were identical.

5.3 The RA should call a separate consultation on benchmarking

Digicel finds that the above explained considerations show that the current RA proposal to use international benchmarking to regulate prices in Bermuda cannot be properly implemented in its current form. We also agree with the RA that cost orientation would be onerous and damaging



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to Bermuda operators and users. And that, given the key role that the RA intends to give to benchmarking in price setting, it is important to get it right.

Therefore, we consider that the RA should launch a separate consultation on international price benchmarking and its role in price setting in Bermuda, backed by more solid evidence and more rigorous application of benchmarking techniques than the ones presented in the RA Document.



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CONCLUDING REMARKS

Digicel considers that the RA has not proven that any of the markets identified in the RA Document passes the three-criteria test, and therefore none of those markets should be regulated.

Furthermore, Digicel considers that it has no SMP in any of those markets, and therefore no remedies should be imposed on Digicel.

In addition, Digicel considers that unmanaged services should be included in the markets for mobile and fixed voice services, since they are perceived by users as substitutes to fixed and mobile voice calls and messages.

Finally, Digicel considers that the methodology proposed by the RA to use international benchmarks lacks rigour. Digicel suggests that the application of any such methodology should undergo a separate consultation process that will adequately ventilate the RA's considerations whilst providing stakeholders the opportunity to review those considerations and provide feedback to the RA. The significance of the implementation of a methodology cannot be underscored, and in our respected view, should be a standalone process and be conflated with the present market review. Further, we recommend, that any price that may eventually remain regulated, retain its present price.

One Communications

Response

Date: June 9, 2025



Re: One Communications' Response to Market Review of the Electronic
Communications Sector Preliminary Report, Preliminary Decision and Order

One Communications' Response to the Market Review of the Electronic Communications Sector Preliminary Report, Preliminary Decision and Order

Date of Submission: June 9, 2025



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Introduction

Thank you for the opportunity to respond to the Regulatory Authority's ("RA") Preliminary Report, Preliminary Decision and Order (the "Preliminary Report") which forms the next stage of the RA's Market Review of the Electronic Communications Sector.

Our response notes the necessity of adherence to procedural standards required for the Market Review and concerns with respect to the conclusions reached in the RA's Preliminary Report. This response identifies factual errors or misclassifications in the Preliminary Report as well as to illustrate the high burden of regulation proposed by the Preliminary Report, which we believe is not supported by the facts underlying the operation of the Electronic Communications Sector in Bermuda.

We urge the RA to review and consider revisions to its Preliminary Report in response to these points, as we believe the *ex ante* and other regulations will not achieve better services or benefit competition in the market and instead will undermine the confidence of investors in the sector and unnecessarily stifle competition in the market, to the detriment of consumers.

OneComm thanks the RA for its continued collaboration, engagement, and openness to receive this feedback.

Executive Summary

Section 22 of the Electronic Communications Act 2011 ("ECA") requires that a certain process and analysis be conducted to determine the state of the electronic communications market, and to determine whether any additional regulation is needed over the next 4 year period to accomplish the objectives set out in the statute. This response details the following procedural issues and substantive deficiencies in the Preliminary Report:

- i. Lack of forward-looking analysis;
- ii. Incorrect and inconsistent application of the European Commission Guidelines;
- iii. Lack of evidentiary support provided in the consultation; and
- iv. Lack of proper consideration of the sufficiency of ex post powers.

As a result of these issues and deficiencies, the Preliminary Report adopts an overly historical, rather than forward-looking, perspective. The Preliminary Report relies on outdated data, improperly equates differing technologies and their impact on service delivery, omits the growing competitive impact of new entrants (e.g. Paradise Mobile) and non-licensed providers (e.g., OTT providers), and ignores emerging trends like LEO satellite services, all of which jeopardize the credibility of the forecasting included with respect to the market definition. For instance, Starlink has publicly stated that they will be providing services in 2026, yet the consultation does not take this entry into account.

These problems undermine the RA's preliminary views on market definition, SMP and remedies needed, and should be revisited by the RA in re-issuing its Preliminary Report once a proper analysis of the market conditions is undertaken.

Requirements to Undertake Market Analysis

A. Forward-Looking Market Analysis is needed in order to define the markets

When identifying markets susceptible to ex ante regulation, Section 22 of the ECA mandates that the RA conduct a forward-looking market analysis. The Preliminary Report does not meet this obligation prior to defining the markets subject to review, as evidenced by:

- i. **Incorrect Reliance on Historical Data:** The RA's analysis depends on backward-looking metrics, such as historical market shares, without forecasting future market dynamics.
- ii. **Inadequate Forecasting:** Projections in Figures 6.1 (mobile)¹ and 6.3 (fixed broadband)² are mere linear extrapolations of past trends, which the RA itself stresses are not firm forecasts.
- iii. **Omission of Emerging Trends:** The Preliminary Report does not include an analysis of the difference in technologies present in the fixed broadband market, expected technological developments (e.g., Low Earth Orbit (LEO) satellite services) or new entrants like Paradise Mobile or OTT providers, which have already begun to reshape market competition during the regulatory period.

While the Preliminary Report notes the importance of utilizing forward-looking data in its discussion of SMP designations, the analytical discussion in the report does not reflect this position. For example, in business connectivity the report does not contemplate the finding that the retail market share of non-SMP providers has grown recently to 6% by revenues. Additionally, in the mobile market, the report does not address the fact that Paradise has been able to win share in the short time since its official launch.

The absence of these considerations undermines the definition of the markets themselves, a process that needs the benefit of foresight, rather than a simple review of legacy dynamics, in viewing how these markets will develop over the regulatory period to 2029.

¹ Page 48 of the Preliminary Report.

² Page 50 of the Preliminary Report.

This procedural failure must be resolved prior to drawing conclusions about the market definition, and certainly before SMP designations and proposed *ex ante* remedies are considered. By neglecting to assess future market conditions, the RA risks imposing regulations that are misaligned with Bermuda's evolving telecommunications sector.

B. European Commission Guidelines are Incorrectly and Inconsistently applied in Market Definition

In its establishment of market definitions, the Preliminary Report references select sections of European Legislation (from the European Electronic Communications Code ("EECC")) and the European Commission guidelines on Market Analysis to bolster its conclusions on retail remedies. However, what is missing in the analysis throughout the Preliminary Response is the fact that EU regulators apply those particular regulations and guidelines to wholesale markets predominantly, rather than to retail markets. Retail markets have largely benefited from regulatory forbearance in an effort to foster investment. It is therefore incorrect to use the European regulation as authority or justification for *ex ante* remedies in retail markets in Bermuda.

This is a significant inconsistency that undermines the RA's entire approach to its market analysis. The Preliminary Report seeks to apply wholesale market guidelines and legislation to address purported inefficiencies in Bermuda's retail markets. The Preliminary Report does not consider the critical technical and methodological differences the EU has attached to the regulation of wholesale and retail markets (and the EUs retreat from the latter).

Further, the RA's significant reliance on inappropriate EU guidance, in effect, disregards Bermuda's distinct legal and market environment. The consequence is that the RA's conclusions are indicative of an inadequate consideration of the distinct and

evolving dynamics of service providers in these distinct areas, both now and into 2029 (the end of this current Market Review period).

To illustrate this point, in 2020, the European Commission issued a recommendation that only two markets should be regulated with ex ante remedies via the EECC, both being wholesale. This contrasts with EU legislation prior to the EECC where, in 2003, eighteen markets were regulated, seven of which were retail. There is no reasonable basis for the RA to arbitrarily rely on outdated guidance that is not fit for purpose in the Bermuda market context. By seeking to apply what are essentially EU wholesale market guidelines to Bermuda's retail markets, the RA risks unbalancing the current competitive dynamic and discouraging future capital investment.

C. Lack of Evidentiary Support

The Regulatory Authority Act 2011 ("RAA") states at Section 71 that the administrative record in a public consultation shall include "any additional material, not generally available to the public on which the Authority relied" and "any reports, recommendations or decisions, whether preliminary or final, adopted in the course of the public consultation."

The Preliminary Report does not meet this transparency requirement as it relies on but omits critical market data, denying stakeholders the ability to fully engage meaningfully in the consultation process. For instance, the RA received annual market data through December 2024 but did not share this data with the industry during the initial consultation or in the Preliminary Report. This has limited stakeholder analysis of market dynamics and thereby negatively impacted their ability to provide meaningful feedback. Despite OneComm's requests, to date, we are still unclear as to what other information may not have been published.

These omissions breach the ECA's requirement for evidence-based regulation and compromise procedural fairness. The RA must publish all relevant data, proposed benchmarks to be used, a greater understanding of how retail price regulation might work e.g. standalone services and/or bundled pricing, how handset subsidies might be treated within the proposed framework as a part of bundles or whether they could only be sold at full upfront cost. These details are important to fully consulting on the proposed regulations, as contemplated by the legislative requirements.

Additionally, the Preliminary Report does not provide the necessary evidentiary support for the RA's conclusions regarding the existence of SMP and the need for ex ante remedies in the fixed broadband, mobile, and business connectivity markets. OneComm has identified the following substantive issues where the lack of evidentiary support raises concerns:

- **Lack of Barriers to Entry**: For the Mobile market, the RA has failed to explain why it believes this market is not subject to effective competition, both now and to 2029 (the period of the Review). There are four licenses for the provision of mobile services in Bermuda, with three being utilized. Paradise Mobile is a recent market entrant and is gaining market share. There are also a growing number of MVNO service providers in Bermuda. Given recent facilities-based entry in fixed broadband and mobile, there is clear evidence that any barriers to entering those markets are clearly surmountable.
- **Increasing Competition**: The RA's claim of stable market shares in the mobile sector is contradicted by data showing smaller operators' growth (6% revenue share in business connectivity) and Paradise Mobile's recent entry (contributing to a 4% mobile competitor's share in total and growing). These trends indicate a contestable market, not SMP or dominance.
- **OTT Substitution Ignored**: The RA dismisses over-the-top ("OTT") services as non-substitutive, despite their competitive pressure on voice and SMS pricing

(e.g., WhatsApp). In defining mobile, broadband, and voice markets, numerous regulators, such as in the European Union, India, United Arab Emirates, all specifically include OTTs in their consideration and definition of each market. Moreover, Trinidad and Tobago's regulator notes that OTTs constrain mobile operators, a precedent the RA overlooks:

*"Retail Domestic Mobile Telephony Market Definition highlights that OTTs significantly influence the domestic mobile market in Trinidad and Tobago, with 70%–90% of respondents using these services. OTTs act as a competitive constraint on traditional mobile operators ..."*³

- **Lack of Precedent:** To OneComm's knowledge, there is no precedent for the combination of mobile and fixed termination in a single market. Combination of these two distinct categories ignores the unique needs of their distinct customer sets and differing network investment and operating standards that make each category unique.
- **Network and service provider (via wholesale access) Competition in the fixed broadband sector:** The Bermuda fixed broadband sector has benefited from both network and service provider (via access to networks) based competition, over the last decade or more. The RA has not provided any analysis to suggest this situation has not delivered effective competition.

Bermuda consumers have a wide choice of where to purchase their broadband, at what price, and at what speed. The market is currently subject to aggressive discounting of FTTx by Digicel (an operator that the RA has deemed does not have SMP). This market is evolving rapidly with market shares being contestable now and into the future.

³ Framework on Over-The-Top Services (OTTs) In Trinidad and Tobago, Oct 2024 (as also previously referenced by Digicel)

It is our position that the RA should reconsider its preliminary findings with a view to properly assessing the competitive forces within each of the markets.

Assessment of SMP for each Market and Improper Market

Definition

The RA's SMP assessments are fundamentally flawed for a number of reasons. As a result of the procedural and substantive errors described above, for instance, in its assessment of SMP in the fixed broadband market, the RA has identified significant differences in technology between OneComm's DOCSIS 3.1 HFC network and Digicel's GPON fibre network. This recognition of the technological differences was relevant to a finding there has not been tacit collusion but is later ignored by the RA when it was considering SMP in that same market.

Section 23(2)(d) of the ECA specifies that the RA should consider any provider's technological advantages when conducting its market review assessment. Please refer to the [Annex A: Confidential Supplemental Information](#) included herein further information concerning the different technologies and their impact.

Ex Post versus Ex Ante regulation

As stated above, missing from the Preliminary Report is a proper explanation as to why *ex post* competition rules alone would not be sufficient to promote or preserve competition in each of the relevant markets. The history of the RA's use of *ex post* powers is, to our knowledge, that the RA has not exercised such powers over the course of the last review period (or indeed longer), even though as the RA states, "*price control regulation is currently limited.*" This is strong evidence that the existing *ex post* competition rules have been sufficient to avoid any abuse of dominance actions by the RA. Moreover, there is no evidence to suggest that such sufficiency of *ex post* competition rules will change going forward.

It is important to note that even with a finding of SMP, there is no automatic finding of abuse of dominance, nor is there an absolute requirement for *ex ante* remedies. This is consistent with the European Market Analysis Guidelines referred to by the RA, which clearly stipulate that a finding that an entity has SMP does not have any direct bearing on whether the same entity has abused a dominant position.⁴

The reality of the Bermuda telecommunications market is that it is effectively competitive, there is retail competition, and the level of profitability in the market is consistent with the risk of investment in microstates, such as Bermuda. Under the ECA, the RA has the burden of establishing that *ex post* regulation is not sufficient to regulate the market.

The RA mentions that it believes that *ex post* regulation may be too costly and not timely enough. These statements, however, are unsupported by any analysis, have not been proven in practice, and are not substantiated by any evidence. Such an assertion is unreasonable in circumstances where the RA has not used *ex post* regulation within the last 4 years and has no reasonable basis to draw the conclusion that *ex post* regulation is insufficient for the next 4 years. *Ex ante* remedies cannot be imposed merely because

⁴ EUROPEAN COMMISSION COMMUNICATION FROM THE COMMISSION Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services (Text with EEA relevance) (2018/C 159/01):

11. Similarly, the designation of an undertaking as having significant market power in a market identified for the pose of *ex ante* regulation does not automatically imply that this undertaking is also dominant for the purpose of Article 102 of the Treaty or for the purpose of application of Council Regulation (EC) No 139/2004 (10) or similar national provisions. Moreover, a significant market power (SMP) designation has no direct bearing on whether that undertaking has also abused a dominant position under Article 102 of the Treaty. It merely implies that, within the scope of Article 14 of the Directive 2002/21/EC, from a structural perspective, and in the short to medium term, in the relevant market identified the operator has and will have, sufficient market power to behave to an appreciable extent independently of its competitors, customers, and ultimately consumers

the RA suspects (without any justifiable basis) that ex post regulation may be costly and not timely.

Misuse of ROCE Estimates

The RA's Preliminary Report introduces ROCE benchmarking as its main justification for implementing a variety of proposed *ex ante* remedies, despite having expressly acknowledged that ROCE is unreliable in the absence of separated account information⁵. Identifying a particular piece of information as unreliable and then relying on it is inherently irrational. The degree to which the RA's ROCE analysis pervades the Preliminary Report, and its findings cannot be both obvious and significant.

The estimates of OneComm's ROCE (paragraph 51) in the Preliminary Report are used to justify SMP designations and retail price controls but were not properly disclosed in the January 2025 Consultation Document. Without reference to methodology or assumptions, the RA estimates a 58% ROCE for OneComm in 2023, which would represent a more than 220% increase from the 18% ROCE it estimates for 2020. While OneComm does not have the necessary segment data to properly calculate the ROCE, the manifestly unlikely increase in the RA's numbers from 2020 to 2023 suggests a fundamental error has been made in the RA's calculations, and little reliance can be placed on those estimates.

The lack of transparency regarding the estimates noted in the Preliminary Report prevents verification of a central SMP justification and introduces misleading figures at a late stage in the consultation, thereby impacting other elements such as market definition, SMP designation and the application of remedies noted throughout the document.

The RA then proceeds to compare its estimated ROCE figures for OneComm to ROCE estimates for large country, large population telecom providers like AT&T in the United States (which has over 340 million people and 3.8 million square miles of landmass vs Bermuda with approximately 65,000 people and 21 square miles). There are a number of concerns arising from the RA's citation of speculative ROCE figures in this Preliminary Report:

- **The January 2025 Consultation document did not include references to the RA's 2023 ROCE estimates**, including it being used as a metric to determine SMP and impose price regulation. Hence, stakeholders, OneComm included, had no opportunity to comment on this at the earlier Consultation stage.
- **The OneComm Bermuda business includes non-licensed and licensed business activities**. In other words, there are areas of the OneComm business that are not subject to regulation by the RA because they do not fall under the scope of an ICOL.
- **The RA 2020 Market Review Final Report made clear that without segmented financial reporting for licensed business activities**, there is no method for determining any related ROCE. No such segmented financial reporting (consistent with the RA 2020 Market Review) exists within OneComm and the financial reporting stipulated in the 2020 Final Report was never implemented.⁶
- **ROCE is not an appropriate measure of profitability for the sector, given the data problems inherent in its calculation**. ROCE does not properly account for capital cycles, intercompany debts and other common accounting points. Instead, OneComm suggests that EBITDA margins are a

⁶ It should be noted that the Preliminary Report clarifies that cost accounting and account separation are too costly, and therefore inappropriate as a regulatory remedy for Bermuda. OneComm agrees with that position but reminds the RA of its own finding that proper ROCE calculations would require the segmented data that is not available.

commonly used investment metric that better reflects the degree of profitability of electronic communications companies.

OneComm provides in Annex B, a copy of Global telcos performance benchmarks: Spring 2024 by research and advisory firm Twimbit. That study provides a fulsome EBITDA analysis of global telcos that will help the RA to better understand the profitability levels of all competitors in Bermuda's electronic communications markets. This report is instructive in showing that EBITDA market conditions in Bermuda are comparative to markets in other jurisdictions at a rate of 34% on average.

Public Policy Considerations

Finally, OneComm urges the RA to consider the public policy considerations that logically arise from its Preliminary Report. Specifically, by establishing SMP and proposing *ex-ante* remedies based on a flawed market analysis and incorrect and speculative ROCE figures for OneComm, competition will not improve in the market but rather will curb local and international appetite for investment in the sector. Said another way, the Preliminary Report reflects an inaccurate estimate of ROCE to establish the opinion that OneComm's investors have received too high a return on their invested capital and therefore should potentially be restricted from profiting going forward.

In pursuing this route, OneComm believes that the RA is acting contrary to its duties under the ECA, specifically the requirement to promote both investment in, and an orderly development of, the sector. Through the various procedural missteps, the RA has bypassed the degree of consultation and analysis needed to examine what investment is needed in the sector, the risk to the same, and the required levels of financial return. The report relies on flawed analysis and focuses on specific outcomes to the Market Review; the RA would be inadvertently implementing an economic policy that will have a chilling effect on investment in the sector by arbitrarily capping return on invested capital.

Finally, the RA should consider whether its goals for the Market Review will deliver effective competition and stimulate investment in Bermuda. OneComm's view is that they will not. The EU and other jurisdictions have retreated from *ex ante* regulation (especially in retail markets) with a view to stimulating investment in fibre and 5G networks.

The Electronic Communications Code in Europe of 2018 was a significant step in this regard, backed up by the European Union's introduction of the Gigabit Infrastructure Act of 2024. That legislation is focused on delivering the right investment environment for the deployment and expansion of very high capacity networks in the EU, both at the fixed and wireless levels. OneComm respectfully suggests that Bermuda should align itself with the global focus on delivering new investment into electronic communications and contemporary best practices that increasingly embrace competition and deregulated outcomes.

Conclusion

OneComm, as it always has and will, participates willingly and responsively in the process of market reviews, including the 2025 Market Review. It will be apparent to the RA that OneComm has invested significant time and effort in preparing this response to the Preliminary Report in an effort to be a responsible market stakeholder by way of discharging its obligations to Bermuda consumers and OneComm stakeholders.

In preparing this report, OneComm has identified and established a number of fundamental defects in the process by which the RA has carried out this market review. Those fundamental defects include, but are not limited to:

- Failure to undertake an adequate market analysis:
 - Insufficient forward-looking analysis;
 - Incorrect and inconsistent application of EU legislation and guidelines;
 - and

- General lack of evidentiary support for conclusions.
- SMP determinations are fundamentally flawed.
- Failure to establish that ex post regulation is not sufficient to regulate the market.

At each step of the market review process to date, there has been a lack of due process and proper analysis. Critically, in:

- (i) identifying relevant markets,
- (ii) determining SMP: and
- (iii) assessing competitive outcomes

The RA is required by law to comply with statutory requirements that are prerequisites for moving to the next stage in the process. As such, the RA's lawful compliance with its statutory obligations to sequentially establish each foundational requirement is fundamental in how the RA is supposed to review markets before even considering the need for ex ante remedies. It follows that the RA's failure to establish any of these foundational requirements renders any subsequent findings, conclusions and determinations void.

In light of all of the above, OneComm considers that the most appropriate route for the RA to pursue to ensure a lawful and fair review of Bermuda's unique and dynamic telecommunications regulatory landscape is to remedy the omissions and deficiencies identified above, prior to moving forward with a final report and order. In that regard, OneComm will work collaboratively with the RA within the consultation framework to conclude the process within the statutory deadline.

Date: June 9, 2025



Re: One Communications' Response to Market Review of the Electronic
Communications Sector Preliminary Report, Preliminary Decision and Order

Please note that a lack of response to any issue in this consultation wholly or in part does not necessarily represent entire or partial agreement, nor does any position taken by One Communications in this document mean a waiver of One Communication's rights in any way. One Communications expressly reserves all its rights.

Annex A: Confidential Supplemental Information

Overview

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Re: One Communications' Response to Market Review of the Electronic
Communications Sector Preliminary Report, Preliminary Decision and Order

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Global telcos performance benchmarks

Spring 2024

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Key Takeaways

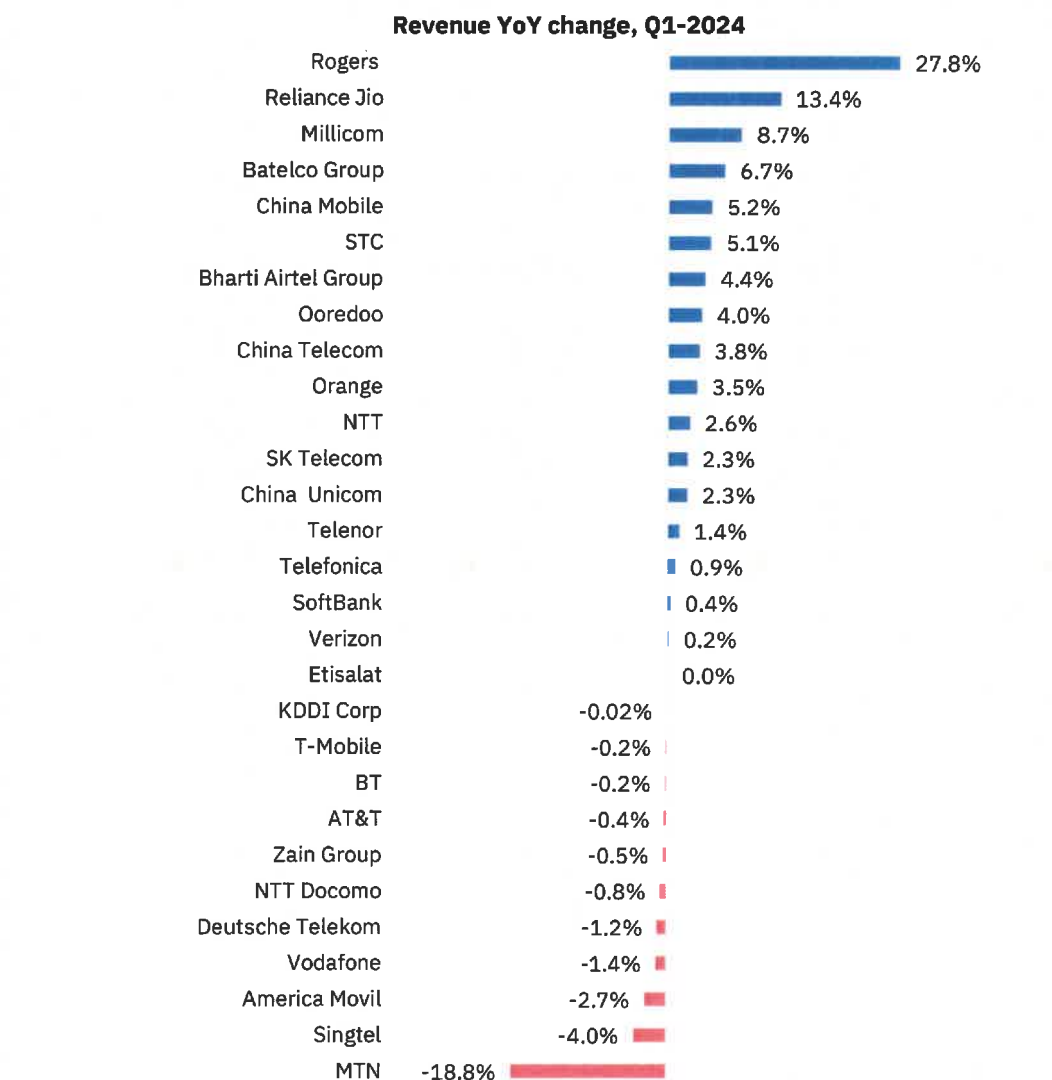
- Average YoY (Year-on-Year) revenue growth slowed from 3.9% in Q1-2023 to 2.2% in Q1-2024.
- Aggregate revenue increased by USD 3 billion to USD 323.9 billion in Q1-2024, with 2 of 29 telcos exhibiting double-digit revenue growth.
- Cost-containment measures and operational streamlining efforts resulted in positive EBITDA change for 75% of the analysed telcos.
- Telcos maintained EBITDA margin stability of 38.1% due to cost-containment measures, operational efficiency initiatives, and continued top-line growth.
- The maturation of 4G and 5G networks in major markets led to a CAPEX decline for around ~67% of the 21 analysed telcos in Q1-2024.
- Overall CAPEX for Verizon, AT&T, T-Mobile, Deutsche Telekom, Bharti Airtel Group, NTT Docomo, and Softbank declined by ~USD 2.9 billion YoY in Q1-2024.
- The average ARPU increased by 2.1% YoY to USD 28 in Q1-2024, led by Verizon and Millicom.
- ARPU for Indian telcos increased due to a growing mix of data (4G/5G) subscribers and strategic ARPU upliftment initiatives adopted by the telcos.

Revenue analysis of Global telcos: Q1-2024

Average revenue growth for leading global telcos slowed from ~3.9% in Q1-2023 to ~2.2% in Q1-2024

Approximately 66% of telcos achieved YoY revenue growth in Q1-2024 compared to Q1-2023. The combined revenue of the 29 analysed telcos increased by USD 3 billion to ~USD 323.9 billion in Q1-2024, with 2 telcos exhibiting double-digit growth.

Exhibit 1: Revenue trends (% change) for Global telcos (YoY basis), Q1-2024



Source: Telco financials, Twimbit analysis

Rogers

Rogers Corporation (Rogers) achieved a 27.8% YoY revenue increase, reaching USD 3.6 billion (CAD 4.9 billion), driven by growth in wireless and cable segments.

- Wireless segment - Revenue increased by 7.7% YoY to reach USD 1.9 billion (CAD 2.5 billion) in Q1-2024, due to:
 - Steady expansion in the overall mobile subscriber base.
 - Successful acquisition of Shaw Mobile's subscribers from the Shaw Mobile integration.
 - A 4% revenue uptick in wireless equipment sales following a strategic shift in product mix and higher-value offerings.
- Cable segment - Revenue surged by 92.6% YoY to reach USD 1.5 billion (CAD 1.9 billion) in Q1-2024 driven by:
 - Cable network expansion nearly doubled, with ~10 million homes gaining access.
 - 8.5% YoY increase in ARPU (Average Revenue Per User) to USD 103.9 (CAD 140.1).

Reliance Jio

Reliance Jio revenue grew 13.4% YoY to reach USD ~3.5 billion (INR 288.7 billion) in Q1-2024. Key drivers include:

- 9.7% YoY increase in subscribers, reaching 481.1 million with 108 million+ 5G subscribers.
- Strategic initiatives such as the IPL Dhan Dhana Dhan plan, which offers two months of free services on recharge of Rs 234 for new JioBharat device users.
- Expanding JioAirFiber offering across ~5,900 cities and towns, with pan-India coverage planned soon.
- Selective and strategic adjustments in the mobile pricing options.

Millicom

Millicom's revenue rose 8.7% YoY in Q1-2024 to USD 1.5 billion, driven by revenue growth across its operating regions except Bolivia, where the revenue growth was nearly flat.

- Mobile service revenue increased 9.1% YoY to USD 787 million.
- Fixed and other services revenue grew 8.8% YoY to USD 572 million.

Batelco

Batelco's overall revenue increased 6.7% YoY in Q1-2024 to USD 293.1 (BHD 110.5 million) with growth across all reporting segments (Bahrain, Jordan, Maldives, Sure Group).

- Mobile telecommunications grew 6.3% YoY to USD 138.5 million (BHD 52.2 million), making it the largest revenue segment at 47.2%.
- Data communications circuit revenue increased 9.8% YoY to USD 47 million (BHD 17.7 million).
- Fixed broadband revenue declined 5.5% YoY to USD 50 million (BHD 18.8 million).
- Fixed-line telecommunication services revenue fell 6.1% YoY to USD 11.7 million (BHD 4.39 million).
- Wholesale services revenue decreased 0.6% YoY to USD 20.5 million (BHD 7.73 million).

China Mobile

Revenue grew 5.2% YoY to USD 36.8 billion (CNY 263.7 billion) in Q1-2024, driven by efforts to increase mobile subscribers and ARPU.

- Mobile subscribers increased 0.5% YoY to reach 996 million, with 5G package customers rising 0.5% YoY to 799 million.
- ARPU increased by 6.7% YoY to USD 6.7 (CNY 47.9).

STC

Revenue increased 5.1% YoY in Q1-2024 to USD 5.1 billion (SAR 19.1 billion), with growth across all business segments, including Saudi Arabia (KSA).

- Revenues inside KSA grew ~4.1% YoY to USD 4.9 million (SAR 16.7 million)
- Revenues outside KSA increased 13.3% YoY to 0.6 million (SAR 2.3 million).

MTN

MTN Group's revenue declined 18.8% YoY in Q1-2024 to USD 2.3 billion (ZAR 42.9 billion), due to:

- Voice revenue decreased 32.2% (down 1.4%).
- Data revenue decreased 14.7% (up 20.2%).
- Fintech revenue increased 11.4% (up 25.0%).

MTN group service revenues increased in South Africa, but it declined in Nigeria in Q1-2024.

- South Africa: 3% YoY increase to USD 0.6 million (ZAR 10.4 billion).
- Nigeria: 52.8% YoY decline to USD 0.5 billion (ZAR 10.2 billion).

Singtel

Singtel Group revenue declined 4.0% YoY to USD 2.6 billion (SGD 3.5 billion) in Q1-2024 due to:

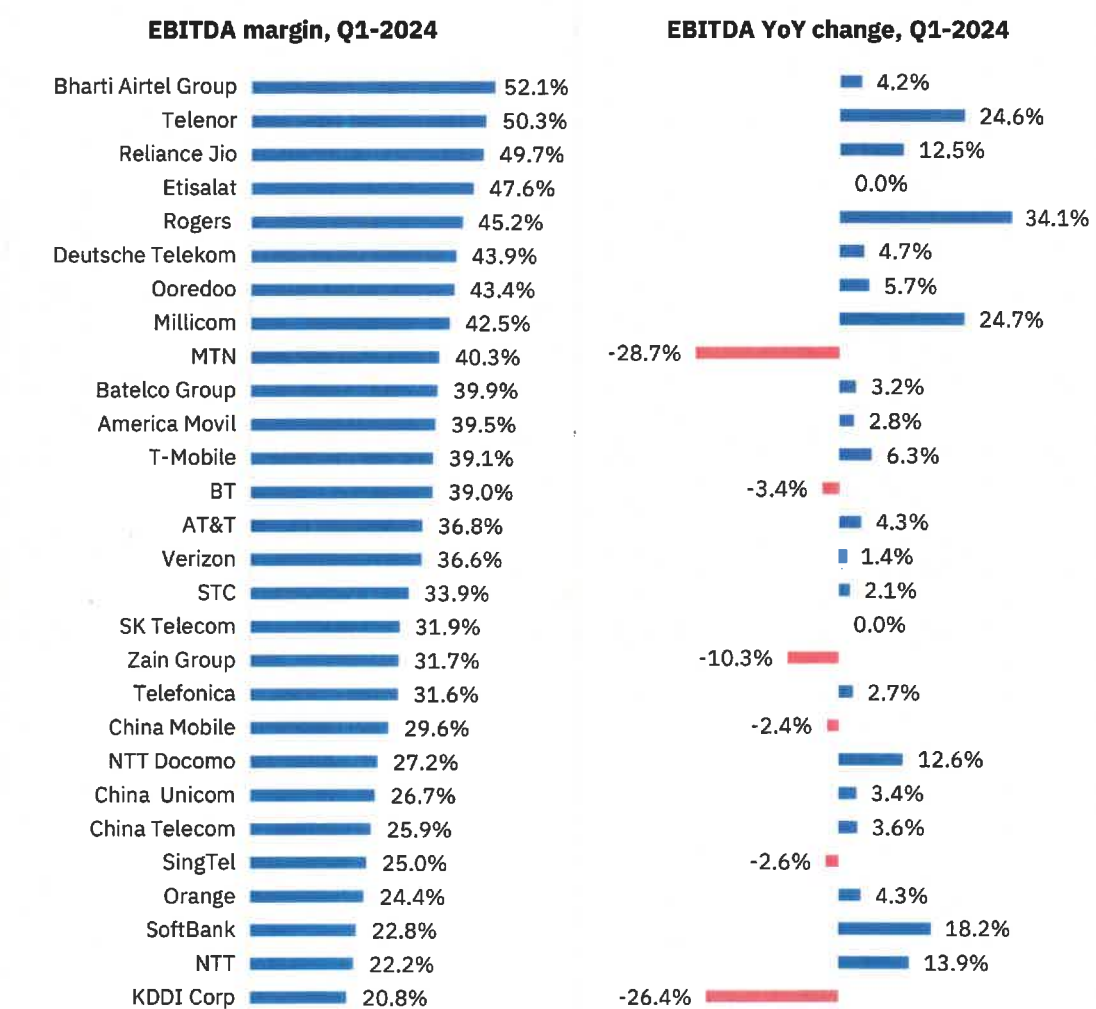
- Absence of contributions from Trustwave.
- Depreciation of the Australian Dollar (AUD).

EBITDA analysis of Global telcos: Q1-2024

Average EBITDA margin for the leading global telcos stabilised at 34% in Q1-2024

Cost control measures, operational efficiency initiatives, and sustained top-line growth have stabilized EBITDA for 75% of the analysed telcos. Nearly ~11% of telcos reported a slight EBITDA decline, within a manageable 3%.

Exhibit 2: EBITDA and EBITDA margin trends for Global telcos, Q1-2024



Source: Telco financials, Twimbit analysis

Rogers

Rogers' EBITDA surged 34.1% YoY to USD 1.6 billion (CAD 2.2 billion) in Q1-2024 driven by enhanced synergies and efficiencies across its wireless, cable, and media segments.

- Wireless: EBITDA rose 7.7% YoY to USD 1 billion (CAD 1.2 billion), benefiting from increased revenue.
- Cable: EBITDA soared 97.5% YoY to USD 0.8 million (CAD 1.1 billion), driven by higher revenue and achieved cost synergies from integration efforts.
- Media: Adjusted EBITDA declined 171% YoY in Q1-2024 due to reduced revenue, increased programming and production costs related to broadcast timing, and higher expenses for the Toronto Blue Jays stadium.

The strong performance across these segments lifted the overall EBITDA margin by 210 bps to 45.2% YoY in Q1-2024.

Millicom

Millicom's EBITDA surged 24.7% YoY to reach USD 632 million in Q1-2024, driven by organic growth of 20% across all countries, with increases ranging from 8% to 26%.

- Colombia achieved a new record EBITDA margin, expected to sustain positive and sustainable EFCF.
- Guatemala returned to positive service revenue and EBITDA growth, supported by improved mobile pricing.

The EBITDA margin expanded by 550 bps to 42.5% YoY in Q1-2024.

Telenor

Telenor Group's EBITDA rose 24.6% YoY to USD 930.4 million (NOK 9.8 billion) in Q1-2024.

- The Nordic business area achieved a 5% organic growth in service revenues while maintaining flat operational expenses, resulting in a significant 8% increase in EBITDA.
- EBITDA in Asia grew by 5.3% YoY despite a 28% rise in energy costs.

Consequently, the overall EBITDA margin increased by 940 bps YoY to reach 50.3% in Q1-2024.

Softbank

Softbank's EBITDA increased by 18.2% YoY to reach USD 2.4 billion (JPY 358.6 trillion) in Q1-2024, driven by a decrease in capital expenditure.

- Capital expenditure declined 24.8% YoY to USD 6.7 million (JPY 100.1 billion), contributing to a 340 bps increase in the overall EBITDA margin to 22.8% in Q1-2024.

NTT

NTT's EBITDA surged 22.0% YoY to USD 5.5 billion (JPY 813.5 trillion) in Q1-2024 driven by several factors:

- Operating expense decreased 1.1% to USD 21.7 million (JPY 3.22 trillion).
- Overall operating profits increased 41.7% to USD 2.9 million (JPY 436.7 billion).
- Depreciation and Amortization (D&A) contributed 5.1% amounting to USD 2.5 million (JPY 376.8 billion).

As a result, EBITDA margin expanded by 350 bps YoY to 22.2% in Q1-2024.

MTN

MTN's EBITDA decreased 28.7% YoY to USD 916.9 million (ZAR 17.3 billion) in Q1-2024.

- EBITDA from South Africa declined 0.8% YoY to USD 0.2 million (ZAR 4.5 billion).
- EBITDA from Nigeria declined 64.8% YoY to USD 0.2 million (ZAR 4.1 billion).
- Costs were pressured upward by inflation and FOREX depreciation, primarily impacting Nigeria.
- MTN SA faced increased expenses for network resilience and electricity tariff escalations.
- Operational inefficiencies were exacerbated by the Sudan conflict.

These factors led to a decline in the EBITDA margin by 560 bps YoY to 40.3% in Q1-2024.

KDDI Corp

KDDI's EBITDA fell 26.4% YoY to ~USD 2.1 billion (JPY 309.3 billion) in Q1-2024, primarily due to decreased operating income.

- SG&A (Selling, General, and Administrative) expenses rose by 27.7% YoY to USD 3.2 billion (JPY 473.8 billion).

As a result, the EBITDA margin declined from 28.2% in Q1-2023 to 20.8% in Q1-2024.

BT

British Telecom's EBITDA declined by 3.4% YoY to USD 2.5 billion (GBP 1.9 billion) in Q1-2024, a ~3% decline on a pro forma basis.

Despite this, growth in the consumer and Openreach segments offset the decline in the business segment.

- Consumer: EBITDA increased ~9% YoY to USD 842.1 million (GBP 664 million).
- Openreach: EBITDA increased ~2% YoY to USD 1.2 billion (GBP 923 million).
- Business: EBITDA declined 24% YoY to USD 533.9 million (GBP 421 million).

These factors led to an overall EBITDA margin decline of 130 bps to 38.9% in Q1-2024.

Zain Group

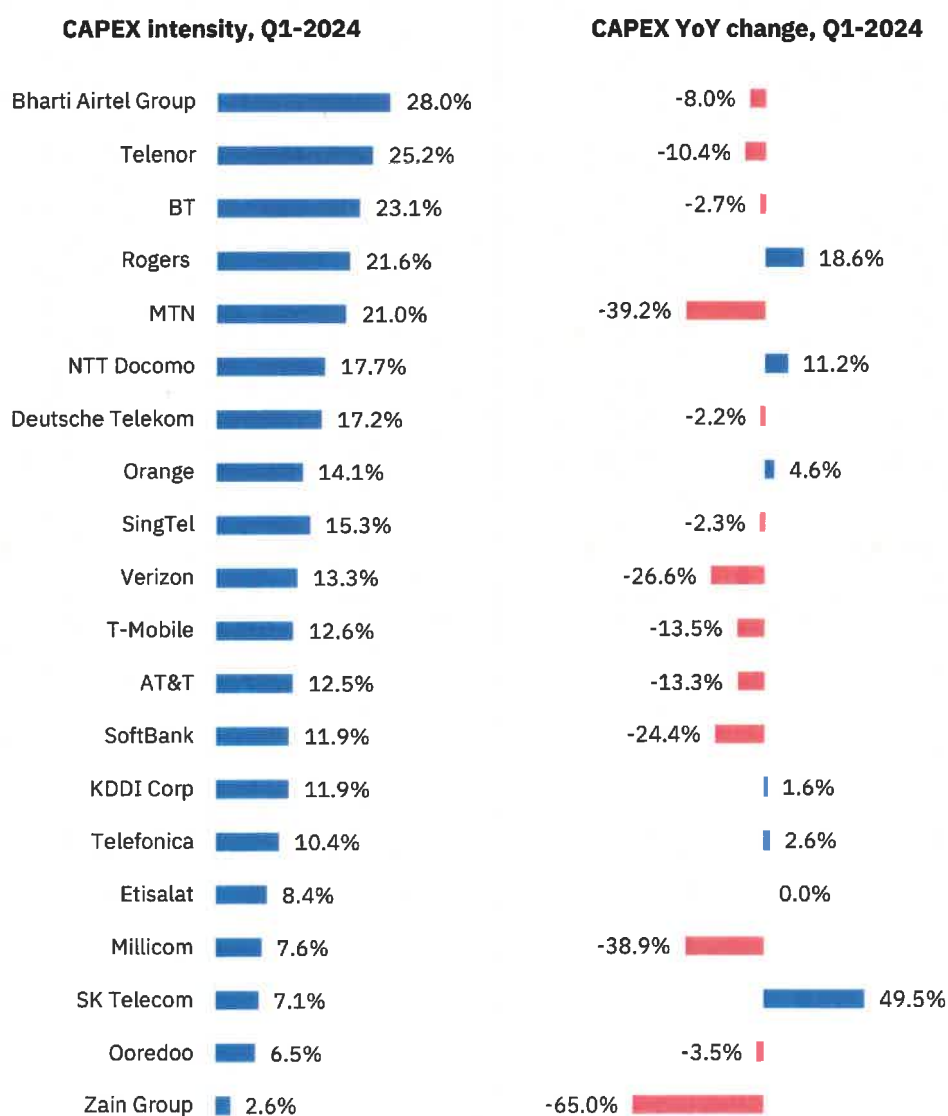
Zain's Group EBITDA declined 10.3% YoY to USD 481 million (KWD 148 million) in Q1-2024, primarily due to an ~86% YoY EBITDA decline in Sudan to USD 12 million. Consequently, the EBITDA margin declined by 350bps YoY to 31.7% in Q1-2024.

CAPEX analysis of Global telcos: Q1-2024

Average CAPEX intensity declined to 14.2% as 4G/5G network deployment of leading telcos reaches completion

Nearly 67% of the 21 telcos analysed reported a YoY CAPEX decline in Q1-2024, up from ~50% in Q1-2023. The maturation of 4G and 5G network rollouts in major markets like the US, India, Europe, and Japan is expected to lead to CAPEX stabilization or decrease in upcoming years.

Exhibit 3: CAPEX and CAPEX intensity trends for Global telcos, Q1-2024



Source: Telco financials, Twimbit analysis

SK Telecom

Focusing on its AI Pyramid Strategy and AI integration in its data center business led to a 49.7% YoY CAPEX increase to USD 238.5 million (KRW 317 billion) in Q1-2024. As a result, CAPEX intensity rose from 4.8% in Q1-2023 to 7.1% in Q1-2024.

Rogers

CAPEX increased 28.6% YoY to USD 784.6 million (CAD 1.1 billion) in Q1-2024 due to continued cable network investments and network footprint expansion.

- Cable: CAPEX spending rose 50.5% YoY to ~USD 400 million (CAD 480 million) due to the Shaw acquisition, cable infrastructure investments, and additional fiber deployments to expand FTTH distribution.
- Media: CAPEX spending increased 96.7% YoY to USD 90 million (CAD 120 million) due to higher infrastructure-related expenditures for the Toronto Blue Jays stadium as part of the second phase of the Rogers Centre modernization project.
- Wireless: CAPEX spending declined 10.6% YoY to ~USD 300 million (CAD 404 million) due to the timing of investments in network development and 5G deployment to expand the wireless network.

The increased CAPEX spending in the cable and media segments offset the minor decline in the wireless segment. Higher revenues also offset the CAPEX intensity, which decreased from 37.4% in Q1-2023 to 18.6% in Q1-2024.

NTT Docomo

Continued AI and IoT investments to fulfil customer demand have led to a 17.7% YoY increase in CAPEX to USD 1.9 billion (JPY 286.9 billion) in Q1-2024. Consequently, CAPEX intensity rose from 15.8% in Q1-2023 to 17.7% in Q1-2024.

Orange

CAPEX grew 4.6% YoY to USD 1.4 billion (EUR 1.5 billion) in Q1-2024, driven by a 5.2% YoY increase in telecom activities expenses to USD 1.5 billion (EUR 1.4 billion).

This increase raised CAPEX intensity from 12.5% in Q1-2023 to 14.1% in Q1-2024.

Zain

Following substantial CAPEX spending in Sudan during Q1-2023 including network expansion and spectrum acquisition, CAPEX declined 65% YoY to USD 39.1 million (KWD 12 million) in Q1-2024.

Consequently, CAPEX intensity decreased from 7.3% in Q1-2023 to 2.6% in Q1-2024.

MTN

CAPEX declined 39.2% YoY to USD 476.9 million (ZAR 9 billion), due to the completion of the network resilience plan rollout by MTN SA.

Consequently, CAPEX intensity decreased from ~28% in Q1-2023 to ~21% in Q1-2024.

Millicom

Continued optimization across all operations has led to a 38.9% YoY decline in CAPEX to USD 113 million in Q1-2024. The decline also resulted from the phrasing of its FY-2024 investment plans compared to FY-2023.

Consequently, CAPEX intensity decreased from 13.5% in Q1-2023 to 7.6% in Q1-2024.

Verizon

CAPEX declined 26.6% YoY to USD 4.4 billion in Q1-2024 due to the completion of its accelerated USD 10 billion capital program related to the C-Band deployment in H1-2023.

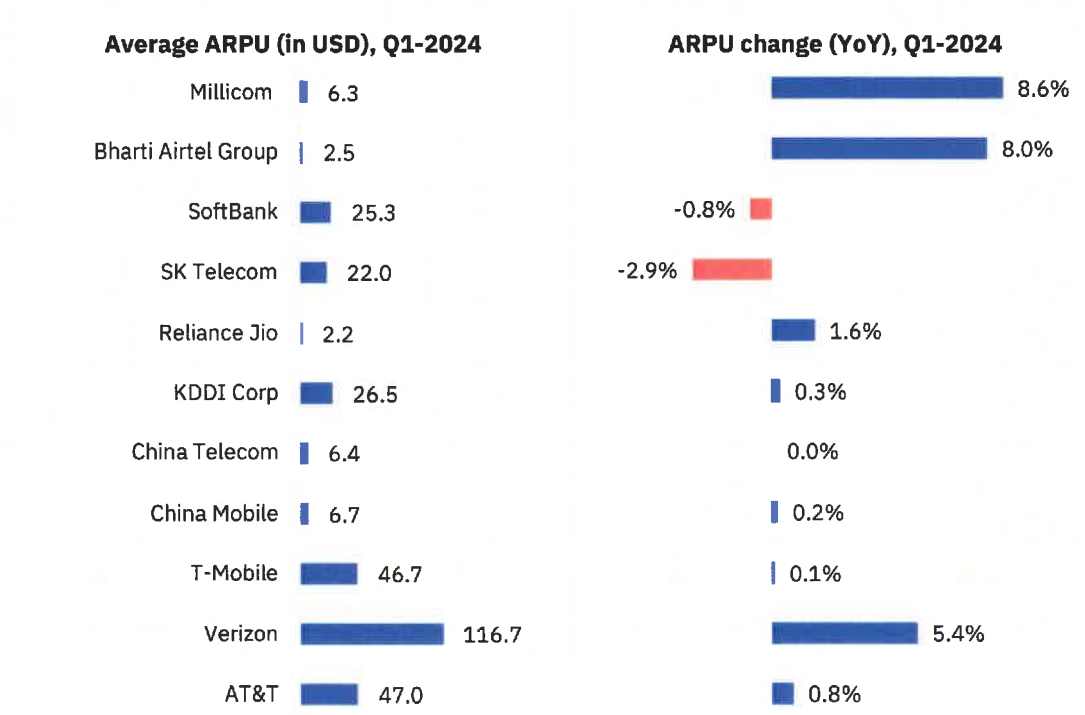
Consequently, CAPEX intensity declined from 18.1% in Q1-2023 to 13.3% in Q1-2024.

ARPU analysis of Global telcos: Q1-2024

The average ARPU level witnessed a modest growth of 2.1% YoY to USD 28 in Q1-2024

- The growing data (4G/5G) subscriber mix and strategic ARPU upliftment initiatives have increased ARPU for Indian telcos.
- Healthy postpaid subscriber contributions resulted in the ARPU growth for the telcos in the Americas, including Verizon and Millicom.

Exhibit 4: ARPU trends for Global telcos, Q1-2024



Note: For Average ARPU (in USD), the average currency conversion rate for the period Jan-Mar 2024 has been considered.

Source: Telco financials, Twimbit analysis

Millicom

ARPU increased 8.6% YoY to USD 6.3 in Q1-2024, driven by:

- Growth in local currency terms across all operating countries.
- A 6.6% YoY increase in 4G customers, reaching 22.3 million.
- A 12.1% YoY increase in postpaid subscribers reaching 7.3 million.

Bharti Airtel Group

ARPU in India increased 8% YoY to USD 2.5 (INR 209) in Q1-2024 due to strategic and selective ARPU upliftment strategies.

- The 4G subscriber contribution to the overall subscriber count rose from 66.8% in Q1-2023 to 71.8% in Q1-2024.

ARPU for Africa increased 11.1% YoY to USD 2.6 in Q1-2024.

- Data customers increased 18.1% YoY to 64.3 million in Q1-2024.
- The share of data customers to overall customers grew from 39% in Q1-2023 to 42.8% in Q1-2024.

Verizon

ARPU increased 5.4% YoY to USD 116.7 in Q1-2024, driven primarily by improvements in subscriber count across its wireless retail segment.

The postpaid subscriber count increased 1.9% YoY to 93.9 million, offsetting a 6.4% YoY decline in the prepaid subscriber count. Additionally, the ARPU increased by:

- Wireless retail postpaid: 4.4% YoY increase to USD 135.7.
- Wireless retail prepaid: 1.5% YoY increase to USD 31.2.

Reliance Jio



















ARPU increased by 1.6% to USD 2.2 (INR 181.7), driven by a better subscriber mix and selective and strategic ARPU upliftment strategies.



















- Reliance Jio reached a subscriber count of 481.8 million with 108 million being 5G subscribers.





















Key Partnerships: Q1-2024



















Key focus areas of the collaborating telcos include 5G, IoT, Cloud computing, Blockchain, RAN technology, 5G orchestration, sub-sea cable connectivity, AI, etc.













Exhibit 5: Key partnership, Q1-2024

Period	Telco	Partner Name	Description
Mar-2024			<ul style="list-style-type: none"> Singtel partnered with Cisco, Fortinet, and Nokia to provide quantum security solutions through Quantum Safe Network (QSN) for customer data protection.
			<ul style="list-style-type: none"> Batelco and Nokia are spearheading 5G private wireless network deployments in the Kingdom of Bahrain, fostering innovation and connectivity.
			<ul style="list-style-type: none"> NTT Data has collaborated with Fanuc to leverage its FIELD system for operational technology (OT) solutions that optimize production processes.
			<ul style="list-style-type: none"> T-Systems and Corent Tech aim to empower Digital Transformation initiatives for customers across the DACH region and beyond.
			<ul style="list-style-type: none"> MTN Cote has partnered with Tappi to promote and support small businesses in Kenya.
			<ul style="list-style-type: none"> STC has joined hands with US-based Nile to offer comprehensive Enterprise NaaS solutions to customers in Saudi Arabia and the Middle East.
			<ul style="list-style-type: none"> Singtel has partnered with Vultr to expand its cloud computing capabilities and increase Nvidia GPU capacity across Southeast Asia.
			<ul style="list-style-type: none"> Zain Bahrain has collaborated with the Ministry of Transportation and Telecommunications to enhance internet services and user experience.
			<ul style="list-style-type: none"> Tuya Smart has partnered with Zain KSA to advance energy management and smart commercial applications.

Mar-2024			<ul style="list-style-type: none"> Deutsche Telekom and DigiCert have strengthened their digital security offerings by expanding the reach for digital certificates and identity management solutions.
			<ul style="list-style-type: none"> Batelco has renewed its strategic partnership with AMS-IX to enrich the value proposition of MN-IX, the carrier-neutral internet exchange in Bahrain, aiming to elevate internet experiences across the MENA region.
			<ul style="list-style-type: none"> STC has partnered with Oracle to launch a sovereign cloud offering, providing hyper scale cloud services with data residency and sovereignty assurances.
			<ul style="list-style-type: none"> Ooredoo has partnered with Huawei to embark on a network upgrade journey, facilitating next generation 5G services across Qatar, Kuwait, Oman, and other countries.
			<ul style="list-style-type: none"> Quickplay, an OTT video platform provider, collaborated with STC to launch Bits, a short-form video platform catering to the Saudi market.
			<ul style="list-style-type: none"> STC Bahrain has formed a strategic alliance with Lionscraft to build infrastructure for Web3 blockchain technology, promoting decentralization and user control over online experiences.
			<ul style="list-style-type: none"> Telefonica Tech has partnered with Teradata to expand its service offerings by integrating Teradata's cloud analytics and data platform into its solutions portfolio.
			<ul style="list-style-type: none"> Ooredoo has partnered with Avaya to integrate contact center and unified communication solutions into its service portfolio, enhancing business customer offerings.
			<ul style="list-style-type: none"> STC and Nokia have successfully tested a 5G private wireless network based on cloud-native O-RAN technology, demonstrating advancements in network infrastructure.

Mar-2024			<ul style="list-style-type: none"> Indosat Ooredoo Hutchison (Indosat) engaged Netcracker to support its expanding fiber-to-the-home (FTTH) subscriber base.
			<ul style="list-style-type: none"> Stc partnered with Mavenir to deploy Saudi Arabia's first commercial Open RAN network, with a planned launch in 2024.
			<ul style="list-style-type: none"> Singtel and M1 signed a memorandum of understanding (MoU) for network-based authentication for mobile subscribers, leveraging GSMA's Open Gateway Initiative.
			<ul style="list-style-type: none"> STC Grou collaborated with Ludium Lab to launch Sora Stream, a cloud gaming service in Saudi Arabia.
			<ul style="list-style-type: none"> Zain KSA subsidiary Yaqoot Digital partnered with MATRIXX Software to expand its customer offerings and enhance the digital experience.
			<ul style="list-style-type: none"> China Mobile International Limited (CMI) partnered with stc Group to expedite the deployment of IoT connectivity services for regional businesses.
			<ul style="list-style-type: none"> STC Bahrain teamed with Huawei to develop a 5.5G network, fostering service innovation and B2B digital transformation capabilities.
			<ul style="list-style-type: none"> Ooredoo partnered with Nokia to deliver sustainable telecommunications solutions, underlining their commitment to environmental responsibility.
Feb-2024			<ul style="list-style-type: none"> SoftBank Group collaborated with Alat, Saudi Arabia, to establish a domestic manufacturing hub for industrial robots, enhancing the country's industrial automation capabilities.
			<ul style="list-style-type: none"> NTT Data and Schneider Electric deployed a private 5G network at the EcoStruxure Data Center in Marienpark Berlin, demonstrating the potential of 5G for data centre optimisation.

Feb-2024			<ul style="list-style-type: none"> Singtel collaborated with VMware to empower enterprises with the Singtel Paragon platform, an orchestration platform for 5G and edge cloud that simplifies connectivity and cloud infrastructure management for businesses.
			<ul style="list-style-type: none"> STC Group teamed with Red Hat to streamline the deployment of new edge and 5G services aiming to reduce the total cost of ownership and address the enterprise market with innovative edge and 5G offerings.
			<ul style="list-style-type: none"> STC Group partnered with China Mobile International to modernise its IoT aggregation infrastructure.
			<ul style="list-style-type: none"> Telefonica collaborated with Tata Elxsi to implement cloud-native infrastructure management using the ETSI Open-Source MANO (OSM) framework, showcasing advancements in cloud-based network management.
			<ul style="list-style-type: none"> Telkomsel collaborated with Singtel to build a 5G orchestration platform based on the Paragon platform.
			<ul style="list-style-type: none"> Ooredoo partnered with Google Cloud to modernise Qatar's data architecture and infrastructure enhancing customer service experiences.
			<ul style="list-style-type: none"> Batelco signed a memorandum of understanding (MoU) with e& to facilitate landing the Al Khaleej subsea cable in the United Arab Emirates (UAE), thereby expanding regional connectivity.
			<ul style="list-style-type: none"> Vodafone Romania selected Ericsson to enhance its existing mobile network using Ericsson's RAN technology, aiming to deliver faster connectivity for Vodafone Romania's customers.
			<ul style="list-style-type: none"> STC Group collaborated with iBasis to foster the development of IoT services across the Middle East.

Feb-2024			<ul style="list-style-type: none"> China Mobile International (CMI) partnered with Batelco to strengthen cooperation in international connectivity, roaming services, and IPTV, fostering a more interconnected telecommunications landscape.
			<ul style="list-style-type: none"> Vodafone and E& allied to provide fully managed voice services to other operators, addressing the demand for VoLTE services and supporting international voice traffic.
Jan-2024			<ul style="list-style-type: none"> Telkom Indonesia and Indosat Ooredoo Hutchison joined forces to improve Indonesia's digital infrastructure by establishing an Interconnected Internet Exchange (IX) ecosystem expected to enhance internet traffic routing and user experience in region.
			<ul style="list-style-type: none"> AT&T, Google, and Vodafone invested USD 155 million in AST SpaceMobile demonstrating their commitment to fostering innovation in satellite-based mobile broadband connectivity.
			<ul style="list-style-type: none"> Telecom Egypt (TE) and Zain Omantel International Company (ZOI) partnered to construct a high-capacity submarine fiber optic cable connecting Egypt and Saudi Arabia across the Red Sea.
			<ul style="list-style-type: none"> Microsoft and Vodafone entered a strategic ten-year agreement focusing on developing and implementing customer-centric AI services to enhance customer experiences in the telecommunications sector.

Source: Company sources, Industry reporting, Twimbit analysis

Research Methodology and Assumptions

- The "Global telcos performance benchmarks: Spring 2024" report presents key findings on the performance of 30 strategically selected leading telcos across diverse geographies, offering a comprehensive global perspective on telco performance. Key performance metrics analysed include Revenue, EBITDA, CAPEX, and ARPU for the period January–March 2024.
- This report leverages data acquired from telecommunications companies and includes extensive secondary research. Twimbit adopted a calendar year approach for data analysis, where FY signifies the period from January to December.
- To ensure consistency and facilitate accurate comparisons, a constant currency conversion rate representing the average USD exchange rate for the period January–March 2024 has been applied throughout the report.
- The report presents a comprehensive assessment of Revenue and EBITDA for 29 and 28 telecommunication companies, respectively. Additionally, CAPEX and ARPU analyses encompass data from 20 and 11 telcos, respectively.
- Blended mobile ARPU has been incorporated wherever relevant to provide a more holistic view.



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LinkBermuda Response



June 9, 2025

Via E-mail: consultation@ra.bm

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

**Re: 2025 Electronic Communications Market Review Preliminary Report –
LinkBermuda Comments**

1. LinkBermuda (“Link”) hereby provides our response to the Regulatory Authority’s (“RA”) consultation dated 1 May 2025 (the “Consultation”) regarding the 2025 Electronic Communications Market Review Preliminary Report (the “Preliminary Report”). The RA published the Preliminary Report as part of its 2025 review of the Electronic Communications Sector (“EC Sector”) market. The RA has invited interested parties to comment on the proposed recommendations that will be set forth in a Final Report.
2. Link appreciates the opportunity to provide comments on the Preliminary Report, further to our comments on the 2025 Market Review of the Electronic Communications Sector Consultation (the “Market Review”). Our failure to comment on any specific issues should not be interpreted in a manner which would be contrary to our interests.

Findings of SMP

3. Link continues to agree with the RA’s preliminary assessment regarding those entities found to have significant market power (“SMP”) in the business connectivity market. Link notes our surprise with respect to the RA’s assessment that OneComm and Digicel no longer hold joint SMP in the fixed broadband market, and that OneComm is now the SMP operator in that market. While Digicel’s market share is lower than in the 2017 EC Sector market review,

their market share remains close to 40%, with the two providers continuing to hold over 90% market share. In Link's view, sufficient factors remain to warrant a finding that Digicel also has SMP in the fixed broadband market.

Proposed Business Connectivity Market SMP Remedies

4. Link agrees that it remains appropriate to continue imposing SMP *ex ante* remedies to support access to wholesale services at fair and reasonable prices. However, we maintain our concerns identified in response to the Market Review that some of the proposed remedies contain subjective elements, which create uncertainty for wholesale access seekers and opportunities for entities with SMP to potentially abuse the process. As wholesale service providers compete directly with their wholesale customers, SMP operators have both the opportunity and the incentive to engage in behaviours that limit the ability of other service providers to compete in a fair and reasonable fashion.
5. Link comments on each of the proposed business connectivity wholesale market SMP remedies below.
 - a. Digicel and OneComm are both required to supply wholesale services to access seekers on a fair, reasonable and non-discriminatory basis.
6. As outlined in our intervention in the Market Review, Link agrees that the existing obligations to supply wholesale services to access seekers must stay in place.
 - b. Digicel and OneComm are not to supply wholesale products that are unwanted by the access seeker unless they can demonstrate that unbundling is technically infeasible or generates disproportionate costs. Access seekers will be required to demonstrate reasonable demand for the wholesale services requested from Digicel and OneComm.
7. Link continues to agree 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.

8. However, we continue to have concerns regarding the proposed ability for SMPs to require bundling where it is “technically infeasible or generates disproportionate costs” to unbundle, and the proposed requirement for access seekers to demonstrate “reasonable demand” for wholesale services they request. Both of these conditions are very subjective and are open to differing interpretations between operators. These unclear terms create an opportunity for SMPs to delay or deny access to wholesale access seekers, to the SMP operator’s own benefit. Such results would have negative consequences for competition in the EC Sector, and ultimately for Bermuda’s consumers. As stated in our comments on the Market Review, Link has experienced challenges in obtaining wholesale access from the two major providers in the past. We urge the RA not to increase barriers to entry and competition where it is already extremely difficult to compete in the market and there are only a limited number of competitors.
9. Link submits that in light of our concerns, it is appropriate to remove these two unnecessary conditions on wholesale access. If the RA chooses to maintain these conditions as outlined, we seek clarification regarding the meanings of “disproportionate costs”, “technically infeasible”, and “reasonable demand”. Examples of the types of evidence the RA deems acceptable in support of those definitions would also help minimize disputes between wholesale access seekers and SMP operators. Further, Link proposes that providers should be exempt from the requirement to provide evidence of “reasonable demand” when requesting wholesale access when the access seeker is already established in that market. For example, Link would be exempt from providing evidence of reasonable demand when requesting wholesale access for a new area in the business connectivity market, as we have been operating in this market in Bermuda for decades.
10. Link submits that ensuring fair and reasonable wholesale access is critical to the survival of competition in Bermuda’s business connectivity market.
 - c. Digicel and OneComm are both required 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 initial Retail minus X% will be determined by an international benchmarking exercise carried out by the RA in parallel with the Preliminary Report and provided as part of the Final Report. Subsequent reviews will be carried out by the RA on a biennial basis.

11. Link maintains our preference for a cost-based approach to establishing wholesale prices. While we recognize the RA's concerns with this approach, we submit that if the pricing for wholesale services is not tied to actual operating costs, this does not result in fair, reasonable, and transparent prices. Without reasonable prices, it is extremely difficult for wholesale customers to compete in a viable and sustainable manner.
12. Link reiterates our concerns 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 other countries' retail pricing, making adequate comparison challenging. The EC Sector in Bermuda is also unique due to its high GDP per capita, and small population base spanning a fairly small geographic region.
13. Link reiterates our 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 SMP operators are supposed to use in setting wholesale access rates and these rates can be difficult to find, particularly for business connectivity services. 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 use of retail rates does not reflect promotions or bundling discounts, which can exceed 25% of the retail price. Failing to account for this discounted pricing can significantly, or completely, negate the utility of a retail minus X% wholesale pricing method. Link submits that the most appropriate way for wholesale providers to compete is for SMP operators to sell wholesale services at reasonable, cost-based prices.
14. In light of these concerns, Link reiterates our recommendation that if wholesale prices are set at retail minus X% (where X is based on international benchmarking), retail prices for all wholesale services including business connectivity services must be published clearly and made readily available on the RA's website so that all wholesale purchasers and SMP operators know what rate the X% 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 operators 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 operators is charging for a particular service.

15. Link also submits that in order to protect wholesale customers who are subject to existing agreements from overpaying for access, the initial retail minus X% prices must apply retroactively. This pricing should at the very least apply when the initial retail minus X% price is determined by the RA, to ensure all wholesale customers are paying the same prices.
16. The RA also outlines that the initial retail minus X% that will be determined by an international benchmarking exercise will be carried out in parallel with the Preliminary Report and included in the Final Report. Link submits that it is critical for interested parties to have the opportunity to provide comments on this parallel international benchmarking exercise and the initial retail minus X%. Link and other wholesale customers will not know whether the approach and determination is reasonable until we see the RA's process, calculations, and final determination of the initial retail minus X%. We note that without a sufficient margin to operate on, wholesale providers will be unable to compete in the market, to the detriment of Bermudians who benefit from increased competition.
- d. Digicel and OneComm are both required to provide the RA with KPIs on the supply of wholesale products to both access seekers and its own downstream retail business.
17. Link reiterates our agreement with this *ex ante* remedy proposed by the RA, as it helps support transparency in the market. We note that while the table at Figure 5.3 of the Preliminary Report notes that "*The wholesale SMP operator should provide the RA with KPIs which should also be published to access seekers [...]*",¹ this latter requirement to publish KPIs for access seekers does not appear to be included in the *ex ante* remedies listed in Appendix B. Given the importance of access to these KPIs for wholesale access seekers, Link submits Appendix B should be amended to ensure that requirement is included.

Proposed Approach to Wholesale Price Caps

18. The RA outlines that setting the wholesale price cap will require them to "*estimate the percentage discount to the retail prices of an SMP operator that allows an equally efficient access seeker to compete profitably in the market*".² Link remains concerned about the use

¹ Preliminary Report, page 45.

² Preliminary Report, page 66.

of such subjective criteria to determine pricing in the wholesale market, as this creates a real risk that wholesale pricing will not be fair and reasonable.

19. The RA further proposes the following price-setting approach:

- Calculate the value of X in a wide range of medium and high income countries with relatively small populations without making the adjustments set out above;
- Include only countries where the wholesale prices are constrained by regulatory requirements for SMP operators to avoid margin squeeze; and
- Confine the products for which X is calculated to:
 - bitstream services for the fixed broadband market; and
 - direct Internet access circuits for the business connectivity market

20. It is Link's understanding that the service type identified by the RA for the business connectivity market is wholesale terminating segments.³ We further understand "wholesale terminating segments" are equivalent to the "local loop" or "last mile" of the network, and request the RA clarify this. Link is concerned that in determining the products for which X is calculated, the RA does not include the "local loop". Link submits that this is the most common wholesale product we use, and must be included in the list of products for which X is calculated. Excluding this primary product in the business connectivity market from pricing controls creates a significant gap in SMP regulation, to the detriment of sustainable competition.

21. Link reiterates the importance of interested parties having the opportunity to provide comments once the RA has completed the initial wholesale price-setting exercise. Without this opportunity, competition in the EC Sector could be significantly impacted if wholesale customers are bound to unfair and unreasonable wholesale prices

Proposed Requirements for Providers of Voice Call and Messaging Services

³ Preliminary Report, page 79.

22. Link limits our comments at this time to the proposed requirement for all providers of voice services that “*All sectoral providers to interconnect with other sectoral providers in Bermuda to allow exchange of calls and messaging (SMS/MMS) between them on a fair, reasonable and non-discriminatory basis.*”⁴ We note that the requirement for all voice providers to interconnect with each other represents a significant barrier for new market entrants. The costs of interconnection are very high and can be prohibitive for new entrants. If the RA intends to support new providers entering the voice services market, Link suggests the RA consider revisiting this requirement.

Conclusion

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

Yours sincerely,



Tim Repose
Director of Operations

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

⁴ Preliminary Report, page 80.

Raymond Seymour
Response

Raymond Seymour

June 8, 2025

To: Craig Davies
The Regulatory Authority of Bermuda
1st Floor, Craig Appin House
8 Wesley Street
Hamilton HM 11, Bermuda

Date of Submission: June 8, 2025

Subject: Response to the Market Review of the Electronic Communications Sector: Preliminary Report, Preliminary Decision and Order (Matter: [20250122], Dated: 1 May 2025)

1. Introduction and Purpose of Submission

We appreciate the opportunity to provide feedback on the Regulatory Authority of Bermuda’s Market Review of the Electronic Communications Sector: Preliminary Report, Preliminary Decision and Order (the "Preliminary Report"). This submission aims to offer a critical perspective on key aspects of the Preliminary Report, highlighting areas of concern that, if unaddressed, may significantly impact market dynamics, consumer welfare, and Bermuda's digital future across both broadband and mobile sectors. Our analysis is based on a review of the Preliminary Report and draws upon broader principles of telecommunications regulation, consumer protection, and market development observed in comparable jurisdictions.

2. General Observations on the Consultation Process and Market Context

Consultation Approach: While we appreciate the opportunity for consultation, the Preliminary Report's structure and content suggest a framework largely established, rather than a collaborative effort to build a community-driven strategy. The perceived resistance to incorporating diverse external input raises concerns about the inclusivity of the decision-making process.

Reliance on Carrier-Fed Information: The primary source of market information seems heavily reliant on data provided by carriers. While their input is valuable, a balanced market review necessitates incorporating broader, independent data sources and comprehensive consumer insights to avoid potential bias.

3. Specific Concerns Regarding the Internet and Mobile Markets, and Regulatory Framework

We detail our concerns by referencing relevant themes and implicit proposals within the Preliminary Report:

3.1. Absence of a Regulated Technical Standard for Broadband (Referencing lack of explicit technical definitions in Section 5.10.3 and 7 of the Preliminary Report)

The Preliminary Report, in its discussions on anchor products and price benchmarking, notably omits the establishment of a regulated technical standard or definition for broadband in Bermuda. This decision grants carriers undue power to unilaterally define service levels and pricing. In developed markets, regulators implement minimum technical standards to prevent market failures where carriers, driven solely by profit, might leave segments unserved or exploit dominant positions. By removing such a standard, Bermuda's regulatory framework risks allowing carriers to offer any level of service at any price, with significant regulatory freedom, potentially at the detriment of consumers and national digital development.

Crucially, this regulatory void contributes to a significant disparity between advertised speeds and actual consumer experience. In 2022, while the RA reported an 'average broadband subscription speed' of 259 Mbps—likely reflecting advertised package speeds—-independent testing from Cable.co.uk measured an actual mean download speed of just 91.96 Mbps. This stark difference between theoretical and delivered speeds underscores the critical need for a standard that focuses on achieved performance rather than merely theoretical bandwidth.

In 2022, Bermudian broadband consumers paid for average advertised speeds of 259 Mbps but received only 91.96 Mbps on average—**just 35.5% of the promised performance**. Based on the pricing structure of One Comm (58% market share), with an average total monthly cost of approximately \$150, the internet access service portion represents approximately \$105 per month (excluding equipment rental and fees). Given this

performance shortfall, consumers effectively receive diminished value from their internet service investment, representing approximately **\$790 per household annually in unrealized service value**. Multiplied across 31,430 broadband subscribers (RA 2022), **this amounts to a total consumer welfare loss of approximately \$24.8 million in 2022 alone**. This calculation is illustrative but has a basis as the consumer paid, Cable.co.uk tested and reported, and the regulator reported accurate subscription rates.

Without this, carriers can continue to offer high-speed packages on paper, while real-world consumer experience lags far behind global and regional benchmarks.

3.2. Limited Regulatory Intervention Focused Solely on Entry-Level Service (Referencing Section 5.10.3 and Section 8 of the Preliminary Report)

The Preliminary Report indicates that, for the 2025-2029 review period, interventions to manage market abuse appear to be primarily applied only to entry-level services intended for "the poor." All other service tiers can be marketed as "good quality," "high quality," or "advanced service" without a foundational regulatory baseline for comparison against regional or global standards. The introduction of benchmarked anchor products, while seemingly beneficial for affordability, risks framing broadband access as a "welfare-state moderator." This approach could either make the poorest version of broadband affordable or, paradoxically, devalue higher-tier services without ensuring corresponding quality standards.

3.3. Impact of Anchor Pricing on Significant Market Power (SMP) Dynamics (Referencing Section 6, 5.10.3, and 7 of the Preliminary Report)

The historical enforcement of anchor pricing (e.g., \$80 for 50 Mbps and 25 Mbps from 2020-2025) has, in practice, established a price floor that providers used to price all other services. This led to the regulated service standard being the lowest quality, not a market choice. Looking forward, an SMP (Significant Market Power) holder needs only to price standard services above any regulated floor; regardless of whether there is an annual review, there is no other supplier in the market that needs to sell below the regulated floor to make a profit or win customers. Benchmarking prices to other markets does not eliminate high prices, since only the entry-level product is being regulated for price. For example: If \$60 is set as the new price, all products will sit above this price and structure the minimum broadband to the regulated price, as the regulator is pricing to ensure the carriers still make a profit. **This approach further entrenches the issue of consumers potentially not receiving the full value for money for their subscriptions, given the evident gap between advertised and actual delivered speeds observed in independent market analyses.**

3.4. Lack of Dynamic Market Oversight for Dominance (Referencing Section 6 of the Preliminary Report)

Despite the SMP assessment identifying dominant players (e.g., One Communications), the Preliminary Report lacks a clear plan for immediate market correction if dominance shifts or if market imbalances occur within the four-year review cycle. This could allow unchecked market power to persist.

3.5. Discrepancy with Regional Market Benchmarks and Future Projections (Referencing Section 7 of the Preliminary Report)

While the Preliminary Report discusses international price benchmarking, Bermuda's current broadband offering of 50 Mbps entry is significantly below regional norms in terms of speed for comparable or even lower prices. The absence of regulated technical service benchmarks further exacerbates this gap, making it difficult to assess progress or compel service upgrades to meet evolving regional standards.

Data from Cable.co.uk highlights Bermuda's lagging position in global internet speeds. In 2024, Bermuda recorded a mean download speed of 107.40 Mbps, ranking 37th worldwide. This is below comparable jurisdictions such as the Cayman Islands (118.83 Mbps, Rank 29) and Gibraltar (180.91 Mbps, Rank 8), and significantly behind leaders like Jersey (273.51 Mbps, Rank 2) and Iceland (279.55 Mbps, Rank 1).

Benchmarking against these markets would require substantial infrastructure investment. Jersey has fully adopted fiber, and Iceland is actively transitioning to an all-fiber network.

In the Caribbean, many markets have deployed symmetrical fiber and operate at lower costs due to faster upgrade cycles. Bermuda, by contrast, has historically prioritized extending the lifespan of its existing infrastructure, delaying modernization. This conservative approach, typical of unregulated markets, slows progress and may prompt resistance from providers if regulatory changes are imposed.

To date, the regulator has not documented a clear strategy to address such resistance. It is understood that legal action was used during the last market cycle to delay adjustments, yet the current market plan includes

no substantive measures to mitigate similar challenges. Instead, it relies on benchmarking and monitoring mean speeds. If either of these mechanisms is obstructed, the strategy lacks a comprehensive, multi-faceted approach capable of driving effective market correction.

Furthermore, Bermuda's historical trend is concerning. From a peak global rank of **12th in 2021**, the island's mean download speed and subsequent ranking have consistently declined to **23rd in 2022 (91.96 Mbps)**, **30th in 2023**, and **37th in 2024 (107.40 Mbps)**. This downward trajectory stands in stark contrast to the aggressive broadband modernization seen in other regions.

Let's look at where things are today in comparable jurisdictions, and where they could be in four years:

Region	Current Plan (Speed / Price)	Forecast (2029)
Cayman Islands	Fibrefast 300 Mbps / \$108	1 Gbps / ~\$100–\$110
British Virgin Islands	Home Lite 300 Mbps / \$116	500 Mbps–1 Gbps / ~\$80–\$100
Turks and Caicos	100 Mbps Plan / \$99	300 Mbps–1 Gbps / ~\$80–\$100
Gibraltar	Fibre Broadband 300 Mbps / \$35	1 Gbps / ~\$40
Guernsey	Essential Fibre 150 Mbps / \$73 (with 2 Gbps available)	2 Gbps+ / ~\$70–\$90 (with 5 Gbps likely becoming available)
Jersey	Ultrafast 600 Mbps / \$69	1 Gbps / ~\$50
US Virgin Islands	Residential Plan 200 Mbps / \$85	500 Mbps–1 Gbps / ~\$80–\$100

Considering Bermuda's current baseline of 50 Mbps for \$80 (floor) and 1 Gbps for \$300 (ceiling), a reasonable forecast, especially for an SMP, suggests a much slower progression than what is seen regionally. Our projection, contrasting with the implied trajectory, suggests that if Bermuda truly aims for a competitive and advanced market, a more ambitious roadmap is essential:

Year	Speed	Price
2025	50 Mbps	\$80
2026	150 Mbps	\$80
2027	300 Mbps	\$75–\$80
2028	600 Mbps	\$70–\$80
2029	1 Gbps	\$70–\$90

This projection highlights the significant gap and the urgent need for a broadband modernization agenda, moving from catch-up to leadership within the specified timeframe. And consider that 1 Gbps is \$80 across North America and in parts of Europe in 2025. And Guernsey has deployed 2 Gbps service, Gibraltar has 2 Gbps service.

3.6. Deficient Consumer Role and Absence of Consumer-Centric Metrics

The Preliminary Report's summary of responses reveals minimal consumer participation, with only one consumer out of 64,000 residents listed as a participant in the Preliminary Review. This highlights a broader issue where consumers play a negligible role in the Regulatory Authority's (RA) market plans. The absence of a recent Consumer Market Report on Electronic Communications (last published in 2018) means there's no national mechanism to gauge consumer thoughts on value for money, acceptable trade-offs, or actual market harm. The RA's acknowledgement of "extraordinary profits" for carriers is insufficient without a corresponding understanding of whether consumer needs are being met and if prices reflect the true value of service. Clearly, there's no equal concern demonstrated for consumers.

This deficit is glaringly apparent when examining the disparity between reported 'average broadband subscription speeds' and independently measured 'mean download speeds', as noted in 3.1 above. The regulator doesn't provide any value-based metrics to the market—such as commitments that service won't be throttled, that outages will be repaired within defined timeframes, that performance won't fall below minimum service thresholds, or that consumers will receive compensation in cases of negligent disruption. While consumer protection generally exists, these crucial value-based metrics don't appear in the market plan to make them a functional part of a well-run electronic communications market. This leaves consumers to grapple with a significant gap between advertised and delivered services without adequate recourse or transparency.

The economic harm appears financially substantial. A common consumer refrain that internet is expensive or "a rip-off" is often triggered by the discrepancy between advertised performance and the actual function of the service. While carriers may survey consumers on satisfaction, users are rarely presented with a regulated baseline for the service they're charged, making it difficult for them to give a fair and informed response regarding value for money. This lack of transparency and a regulated standard for delivered service means consumers are effectively paying premium prices for what often amounts to a significantly underperforming product. In Bermuda, the primary source for determining who is good or bad is the MAJ list, and there is no quantifiable data to refer to—such as uptime, coverage, or full speed. This highlights why the regulator should be surveying consumers directly about their experiences, instead of relying solely on information provided by carriers.

Missing Consumer Outcome Metrics

While the Preliminary Report outlines a number of regulatory actions — including benchmarking, price reviews, and monitoring — it does not explicitly state what the intended outcomes are for the consumer.

For example:

- Will service become more reliable?
- Will prices become more affordable or better aligned with value?
- Will consumers receive clearer protections or guaranteed minimum standards?
- Will underperforming service be addressed through enforceable remedies?

In short: **what, in the regulator's professional view, does a “well-functioning broadband market” look like from the perspective of a typical residential consumer?**

Without clearly articulated consumer outcome goals — such as target speeds, service guarantees, minimum quality-of-experience thresholds, or affordability benchmarks — the framework risks appearing administratively sound but practically disconnected from the lived experience of consumers. A successful plan should not only manage market inputs but also define and deliver tangible improvements in consumer welfare.

3.7. Misapplication of Market Logic: Utility vs. Retail (Referencing General Regulatory Approach in the Preliminary Report)

The regulatory approach outlined in the Preliminary Report treats broadband as a retail commodity—sold and delivered in any form—rather than as a public utility. This retail logic is fundamentally misaligned with the nature of electronic communications, which society depends on continuously and critically.

Service disruptions such as fiber cuts, four-hour 911 outages, and island-wide internet and phone failures demonstrate that communications infrastructure is not merely transactional. These events reveal the urgent need for resilient service standards and continuity planning, which the proposed framework does not adequately address. In a retail market, service interruptions may be inconvenient; in a utility context, they can be economically damaging or life-threatening.

While it is understandable that the regulator does not wish to bear full responsibility for national communications failures, the absence of a clear, empowered entity to diagnose, respond to, and report on such incidents leaves a dangerous gap. In a utility context, that gap poses a systemic risk.

3.8. Ambiguity in Future Planning and Subsidies (Referencing implicit future projections in the Preliminary Report)

The Preliminary Report raises questions regarding how the RA will ensure service upgrades to match improving benchmarks without clear technical standards. If the RA is primarily adjusting the bottom of the market (e.g., through anchor pricing), this implies that as the floor price annually decreases, the pricing of top-line products will also be pressured to decline. This necessitates carriers to continually introduce new, higher-tier products to maintain revenue, which in turn demands significant network investment and equipment upgrades. For example, if 1 Gbps service, currently offered by Digicel for \$150, falls to a medium-speed tier due to market shifts or regulatory pressure, the technological capacity of each provider becomes critical. Digicel's FTTH infrastructure currently offers 1,000 Mbps down / 200 Mbps up, suggesting capacity to scale to 2 Gbps and beyond. By contrast, One Communications relies on a DOCSIS 3.0 network (last news report), offering 1,000 Mbps down / 75 Mbps up — nearing the upper limit of that technology. Without significant investment in DOCSIS 4.0 or a fiber upgrade, OneComm may be constrained in matching future service tiers, risking a structural market imbalance if only one carrier can reliably deliver next-generation speeds. This disparity has implications for competitive parity, pricing flexibility, and service innovation over the coming regulatory cycle.

3.9. Mobile Specific Concerns

3.9.1. Establish Comprehensive and Technically Defined Mobile Anchor Product Standards: (Referencing Section 6: SMP Assessment and Proposed Remedies, specifically "Anchor Product Obligation" and "Adjustment of Anchor Product" in Table 7.1, and implicitly Section 7: Proposed Methodology for International Price Benchmarking)

The RA should provide a clear, specific technical definition for the "entry-level" mobile service anchor product. This definition must detail: Voice minutes, Text messages, GB data bucket size, specific perks (if any), Throttle speed, associated License fee, Overage fees, behavior of Hard caps (causing shut-off), Soft caps (causing slowdown or overage fees), and Regulated speeds (for 4G and 5G). Furthermore, a robust consumer reporting system for service quality and delivery as marketed should be established, especially given that anchor product prices will be under regulatory control.

3.9.2. Ensure Inclusive Benchmarking for All Consumer Segments: (Referencing Section 7: Proposed Methodology for International Price Benchmarking, particularly the "Data Focus for Mobile Services" on SIM-only contract packages; and relevant to Section 5: Summary and Discussion of Responses regarding market dynamics)

The benchmarking methodology for mobile services, particularly the focus on "SIM-only contract packages," must be expanded to holistically consider all consumer segments. It is fundamentally unfair to exclude the significant portion of the community reliant on pre-payment due to economic and social factors (e.g., individuals receiving welfare subsidies, where current postpaid plans are unaffordable). The RA should differentiate between Prepaid and Postpaid subscriber numbers in its market analysis, as these segments function differently. It is strongly recommended that the RA consult with the Financial Assistance department to understand the implications of mobile service subsidies (e.g., the \$50 provision) and to ensure that any anchor pricing program genuinely promotes accessible communication for all citizens, rather than serving solely commercial interests.

3.9.3. Modernize and Expand Anchor Product Information Provision: (Referencing Section 6: SMP Assessment and Proposed Remedies, specifically "Information Provision on Anchor Product" in Table 7.1)

Beyond websites, showrooms, and sales scripts, the RA should mandate that Digicel and OneComm prominently and accessibly include anchor product information within their digital platforms. This includes integration into consumer-facing applications (Apps) and AI-powered services (e.g., chatbots), aligning with the Bermuda Government's national digitization program and the evolving nature of service delivery. Staff training should extend to these digital channels.

3.9.4. Clarify Market Communication and Accountability for Anchor Product: (Referencing Section 1: Introduction regarding the purpose of the report and public consultation; and Section 6: SMP Assessment and Proposed Remedies regarding implementation of remedies)

The RA should clearly articulate its plan for communicating the final anchor product decision to the broader market, including the rationale behind its implementation and the expected impact on consumers. A defined point of contact or formal process should be established for consumers to report issues or seek recourse if the anchor product is not working as intended or marketed.

4. Proposed Recommendations for Consideration

Based on the concerns outlined, we respectfully recommend that the Regulatory Authority consider the following in its Final Decision:

- **Establish Clear Broadband and Mobile Technical Standards:** Define and enforce minimum technical standards for broadband speeds, quality, and reliability across all service tiers, and for mobile services, including voice minutes, text messages, data bucket sizes, throttle speeds, and overage/hard/soft cap behaviors. **These standards should prioritize actual, delivered performance, not just advertised speeds, to bridge the current gap highlighted by independent speed test data.**
- **Expand Regulatory Intervention:** Implement comprehensive regulatory oversight and establish quality standards for all service tiers, not just entry-level anchor products, in both broadband and mobile. This robust regulatory intervention must be explicitly embedded within the definitions of the market plan; otherwise, it will not genuinely be part of the operational framework of a functional and competitive market.

- **Re-evaluate Anchor Pricing Impact:** Analyze the potential for anchor pricing to inadvertently set a price floor for the entire market and explore alternative mechanisms to genuinely foster competition and lower prices. Despite the Preliminary Report mentioning biennial reviews for certain KPIs, it is crucial that the benchmarking for anchor prices, if it is to truly impact market affordability and progression, is reviewed effectively and with sufficient frequency. For instance, we urge the RA to explore "Access prices" where a consumer might be charged \$90 for an access line for 150 Mbps. This price of \$90 is excessive when the Internet Service Provider (ISP) portion for 150 Mbps is approximately \$35. Such landline access charges are grossly excessive when compared to offerings from the same corporate group, One Communications Cayman (\$108 for 300/150 Mbps) and One Communications USVI (\$85 for 200/50 Mbps), where significantly higher speeds are available at comparable or lower prices.
- **Develop Dynamic Market Correction Mechanisms:** Implement mechanisms for real-time market monitoring and intervention to address shifts in dominance or anti-competitive practices within the review cycle for both broadband and mobile.
- **Enhance Consumer Representation:** Actively engage consumers through regular, transparent, and accessible surveys, and consider establishing a consumer advocacy panel or formal mechanism to integrate consumer perspectives into all market planning stages for both sectors. This must include measuring and reporting on actual experienced speeds and service quality, not just subscribed speeds, to ensure consumer insights reflect real-world usage.
- **Publish Regular Consumer Market Reports:** Commit to producing and publishing a comprehensive Consumer Market Report on Electronic Communications biennially, utilizing value-based metrics to assess consumer satisfaction and market performance for both broadband and mobile.
- **Recognize Broadband as a Public Utility:** Adopt a regulatory framework that explicitly acknowledges broadband's status as a critical utility, incorporating provisions for service resilience, public safety, and universal access regardless of profitability. **This framework must ensure that advertised speeds translate into consistent and reliable real-world performance, crucial for supporting essential services like 911 and broader economic activity.**
- **Clarify Funding for Future Build-Outs:** Provide a transparent plan for how broadband infrastructure upgrades will be funded and incentivized, ensuring accountability and long-term sustainability without disproportionate taxpayer burden.
- **Ensure Inclusive Mobile Benchmarking:** Expand the mobile benchmarking methodology to holistically consider all consumer segments, including pre-payment users, and differentiate between Prepaid and Postpaid subscriber numbers in market analysis. Consult with the Financial Assistance department to understand the implications of mobile service subsidies.
- **Modernize Mobile Anchor Product Information:** Mandate prominent and accessible inclusion of mobile anchor product information within digital platforms, including consumer-facing applications and AI-powered services.
- **Clarify Mobile Market Communication and Accountability:** Clearly articulate the plan for communicating the final mobile anchor product decision and establish a formal process for consumers to report issues.

5. Conclusion

We believe that addressing these concerns comprehensively will be vital for Bermuda's digital future, ensuring a competitive, fair, and consumer-centric electronic communications market across both broadband and mobile services. If a resident catches the bus to work, they should be able to track it in real time and pay through a mobile app—without worrying about running out of data. If they need to access a government service online, internet affordability should not be a barrier, especially as more public services move to digital-only platforms. These are not luxuries but essentials in a modern, connected society. We urge the Regulatory Authority to consider this feedback carefully in finalizing its decisions for the 2025 Market Review.

Sincerely,
Raymond Seymour

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June 9, 2025

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Date of Submission: June 9, 2025 (via online form)

Subject: Structural Capacity Constraints in Implementing the Electronic Communications Market Review (2025–2029)

Supplemental Response to the Market Review of the Electronic Communications Sector: Preliminary Report, Preliminary Decision, and Order (Matter: [20250122], Dated: 1 May 2025)

1.0 Executive Summary

This submission responds to the Preliminary Report on the Electronic Communications Market Review (ECMR) for 2025–2029. While the review meets the legal requirements of the Electronic Communications Act (ECA), we respectfully submit that the Regulatory Authority (RA) appears to lack the internal operational capacity and functional structure to implement the review's findings in a transformative, enforceable, and consumer-focused manner. This is not due to a lack of willingness, but rather because current operations do not appear designed or resourced to support such an outcome.

2.0 Main Concern: Structural Constraints on ECMR Implementation

The ECMR plan is procedurally sound but structurally constrained. While it meets legal thresholds, it lacks the organizational and technical depth to execute the kind of proactive, transformative, or protective regulatory actions that the sector requires. The RA is clearly doing what it can with its current budget and staffing—an effort the community appreciates—but without additional investment in internal capacity, the next four years may result in incremental improvements rather than the structural market shifts Bermuda urgently needs.

Bermuda is already behind in the deployment of symmetrical internet and competitive fiber-to-the-home infrastructure. A majority of Caribbean jurisdictions, including Turks and Caicos, offer symmetrical broadband at minimum speeds of 100 Mbps down and up over fiber with two competitors. In contrast, Bermuda's baseline is 25 Mbps down and 10 Mbps up over fiber for one provider. The infrastructure gap is significant, and the operational readiness of the regulator will be key to closing it.

3.0 Notable Undersupply of Sector-Specific Staff

Current staffing levels include:

- One full-time expert in electronic communications
- One shared engineer (also responsible for energy)
- Partial oversight from the Head of Regulation

This staffing level is insufficient to manage a \$193 million market, especially one characterized by:

- Multiple telecom carriers including multi-national offices and staffing regimes attached to Bermuda
- Ongoing competition and market dominance issues
- Required service quality monitoring and enforcement
- Complex tariff and price analysis

- Evolving technologies (5G, fiber, OTT, cybersecurity)
- Consumer complaints and public education responsibilities
- **National GDP of ~\$7 billion and 64,000 residents, most holding dual mobile/internet contracts valued at over \$2,400 per year**

Notably, no regulatory analysts or economists are listed. There is also no policy analyst or dedicated research function to:

- Evaluate carrier-submitted financial reports
- Assess cost models or monitor quarterly filings
- Review anti-competitive behavior

4.0 Risk of Regulatory Failure

If the Senior Manager for Electronic Communications were unavailable, there is no observable bench strength or succession plan. There is no Junior Manager – Electronic Communications. One staff member cannot sustainably manage investigations, license reviews, enforcement actions, and real-time market oversight. The risk of institutional fragility is high.

5.0 Potential Compliance and Quality Gaps

Minimal technical and financial scrutiny could lead to:

- Misreported revenues or data (as indicated in both the current Market Review and the 2020 Market Analysis)
- Anti-competitive pricing (e.g., hidden offers on social media with long-term contracts)
- Poor service quality and degraded reliability
- Weak consumer protection enforcement, including the targeting of vulnerable groups (e.g., seniors) with non-transparent contracts

6.0 Operational Constraints Snapshot

One sector lead is responsible for all electronic communications oversight, with no supporting team—this is unsustainable for a \$193 million industry.

Additional Context:

- The Department of Telecommunications was a dedicated unit before integration into the RA. Since then, the RA has absorbed new sectors (energy, submarine cable, and now gas and oil) without proportionate structural growth.
- In contrast, the Bermuda Monetary Authority (BMA) manages a \$77 million budget with full departmental capabilities, while the RA has a \$3 million budget and no full department dedicated to electronic communications.
- No dedicated policy analysts or researchers
- No full-time telecom engineer (shared across energy)
- No compliance investigators for telecom enforcement
- No robust public engagement systems capable of producing representative, actionable consumer data

7.0 Policy Implications

A well-resourced, consumer-responsive regulator is essential to:

- Address structural market power
- Advance digital equity
- Protect the public interest

Strategic investment is required so that the RA can:

- Lead the benchmarking process for Bermuda's infrastructure and pricing
- Set and enforce minimum service standards
- Respond to market dynamics in real time
- Deliver consumer-centered, data-driven regulation

8.0 Recommendations

8.1 Establish a statutory mechanism for baseline operational funding for the RA.

While regulatory independence is important, it should not come at the cost of operational incapacity. The RA cannot significantly raise carrier fees without negative sectoral impact. The Bermuda Government, as the regulator's largest institutional client, suffers most when core services falter—e.g., four-hour outages of 911, government offices still connected via copper, or staff forced to use personal devices during rainfall.

8.2 Fund at least two sector-specific hires (e.g., a policy analyst and a research officer).

These roles are foundational to regulatory analysis and market oversight.

8.3 Mandate annual consumer-focused outcomes reporting covering:

- Service reliability
- Affordability
- Service quality

9.0 Closing Note

The ECMR plan, while legally compliant, does not acknowledge the internal constraints of the RA. This is not a request for overregulation, but rather for basic functionality—the ability of a regulator to serve the public, enforce existing policy, and ensure fair, modern, and resilient telecom services.

The current 2024–2028 market plan had to be extended by 12 months due to capacity constraints. This, in itself, is a clear signal that structural investment is overdue.

Submitted respectfully for consideration under Matter [20250122].

Raymond Seymour