



**REGULATORY  
AUTHORITY**  
OF BERMUDA

**Fairness • Innovation • Integrity**

## **Market Review of the Electronic Communications Sector**

Preliminary Report, Preliminary Decision & Order

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## DEFINITIONS

**4G:** Fourth generation of mobile communications technology standards, including the Long-Term Evolution (“LTE”) technology standard, which provides faster mobile data speeds than the 3G standards.

**Access services:** The service which links an end-user to the services of an Internet Service Provider (“ISP”). The link in question comprises local access, backhaul and data stream aggregation, terminating at an ISP’s premises.

**Accounting Separation:** An obligation for the electronic communications sector to produce financial statements that report the performance of each business division of a multi-product entity. Accounting Separation enables the Authority to monitor whether an ICOL holder with significant market power (“SMP”) is compliant with certain price-based obligations, such as to ensure prices are Cost Oriented.

**Access and interconnection (“A&I”):** The physical and logical linking of public electronic communications networks (and any other networks specified by the Authority) by the same or a different sectoral provider in order that facilities or services offered by one sectoral provider may be made available to another sectoral provider, under defined conditions, for the purpose of providing electronic communications services.

**Authority:** The Regulatory Authority of Bermuda, or “RA”.

**Average revenue per user (“ARPU”):** A measurement used to indicate the average monthly revenue earned from a subscriber.

**Backhaul:** Relates to the transmission of data between the core or backbone network and the network “edge”. Examples of backhaul include the transmission of data from mobile telephony masts to data centers to enable end-users of mobile services to access the Internet.

**Bill and Keep:** An approach to call termination pricing whereby communications providers make no payments to each other for call termination (that is, where termination rates are zero).

**Bluewave:** A provider of Wi-Fi-based high-speed Internet to residents and businesses in Bermuda. Bluewave is the brand name of Telecommunications Networks Limited, which is owned by East End Group Limited.

**Broadband:** An Internet service or connection generally defined as being “always on”, providing a bandwidth greater than narrowband.

**Bundle:** Communications services sold together in a package (e.g. broadband and mobile phone, or broadband and subscription TV), in contrast to each service sold on a stand-alone basis.

**CAPEX (capital expenditure):** Funds used by an entity to acquire, upgrade, and maintain assets such as property, industrial buildings, or equipment.

**Chains of substitution:** These exist when end-users perceive variants of a specific product type to be reasonably substitutable. For example, if there are three speeds of broadband in the market (20Mbps, 30Mbps and 40Mbps), consumers may be willing to switch between them if the price of one increased. If a consumer was on the 30Mbps tariff, and that tariff increased

significantly, the consumer might switch down to the 20Mbps tariff if the cost saving was worthwhile.

**Churn:** In this context, means the number of customers lost.

**Coaxial cable:** A transmission line that consists of a tube of electrically conducting material surrounding a central conductor held in place by insulators and that is used to transmit telegraph, telephone, television, and Internet signals.<sup>1</sup> Used by cable networks alongside fibre-optic to deliver broadband services, as well as television services, directly to homes. Coaxial cables are capable of delivering superfast broadband speeds.

**Communications Operating Licence (“COL”):** An individual or class licence granted for the provision of some or all regulated electronic communications services.

**Common costs:** Costs an entity incurs in relation to the provision of multiple services.

**Cooling-off period:** A period of time during which a purchaser may cancel a good or service purchased.

**Core network:** The backbone of a communications network, which carries different services such as voice or data.

**Cost causality:** The attribution of costs to components, services and business divisions strictly in accordance with the activities that cause those costs to be incurred.

**Cost Orientation:** The principle that the price charged for the provision of a service should reflect the costs incurred in providing that service.

**Customer premises equipment (“CPE”):** Electronic equipment that is located in a customer’s premises such as an Internet modem or PayTV set-top box.

**Digicel Group:** A group of companies that includes the following Integrated Communications Operating Licence (“ICOL”) holders: Telecommunications (Bermuda & West Indies) Limited, Transact Limited and Bermuda Telephone Company Limited.

**Digital Subscriber Line (“DSL”):** A family of technologies generically referred to as DSL, or xDSL, capable of transforming ordinary phone lines (also known as “twisted copper pairs”) into high-speed digital lines that support advanced services such as fast Internet access and video-on-demand. ADSL (Asymmetric Digital Subscriber Line), HDSL (High data rate Digital Subscriber Line) and VDSL (Very high data rate Digital Subscriber Line) are all variants of DSL.

**DOCSIS (Data Over Cable Service Interface Specification):** A telecommunications standard used to provide Internet access via a cable modem.

**Ducts:** Existing trenches and pipes which hold copper and fibre lines.

**Duct access:** When the owners of ducts and trenches let other service providers pay to access the owners’ ducts and trenches.

**Earnings before interest and taxes (“EBIT”):** A financial measure of an entity’s operating performance.

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<sup>1</sup> Retrieved from <https://www.merriam-webster.com/dictionary/coaxial%20cable>

**ECA:** Electronic Communications Act 2011.

**EOO:** Equivalence of outputs. Services provided to access seekers are no different to those that SMP operators supply to their own business divisions.

**EU:** European Union.

**Ex ante remedy:** A regulatory obligation imposed by the Authority on one or more sectoral providers with significant market power in order to prevent anti-competitive conduct and promote competition.

**Ex post rules:** Rules set by the RAA and imposed by the Authority (in accordance with sections 84-86 of the RAA) prohibiting certain types of anti-competitive conduct. The Authority may take enforcement action against any sectoral provider which violates those prohibitions, after the violation has occurred.

**Fully Allocated Costs (“FAC”):** An accounting method for attributing all the costs of a company to defined activities such as products and services. Typically, this method will follow the principle of cost causality.

**Fibre-to-the-premise (“FTTP”):** A form of fibre-optic communication delivery in which an optical fibre is run directly into a customer’s premises.

**FibreWire:** Broadband services provided by OneComm as part of its upgraded broadband network that is capable of offering download speeds of up to 200Mbps.

**FRAND:** Fair, reasonable and non-discriminatory.

**Generally accepted accounting principles (“GAAP”):** A collection of commonly followed accounting rules and standards for financial reporting.

**Gigabyte (“GB”):** A measure of digital data size. A multiple of the unit byte for digital information. A gigabyte is approximately one billion bytes. A byte is 8 bits.

**GDP:** Gross domestic product.

**General Determination (“GD”):** A statutory instrument made pursuant to section 62 of the Regulatory Authority Act 2011 (“RAA”). The General Determination is applicable to all sectoral participants, or to such sub-category of sectoral participants as falls within the scope of the statutory instrument.

**Headline broadband speed:** The theoretical maximum data speed that can be achieved by a given broadband connection.<sup>2</sup>

**HDS:** High Demand Spectrum.

**HDS-1:** The process for the assignment of HDS-1 Frequencies.

**HDS-1 Frequencies:** The HDS-1 Lots in the 850 MHz, 700 MHz and 2100 MHz bands designated by the Authority as suitable for assignment through HDS-1.

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<sup>2</sup> A number of factors may result in a given customer not experiencing this headline speed in practice. These factors include the quality and length of the physical line from the node to the customer.

**International financial reporting standards (“IFRS”):** A collection of internationally commonly followed accounting rules and standards for financial reporting.

**Integrated Communications Operating Licence (“ICOL”):** A licence granting the licensee the right to establish, construct and operate one or more electronic communications networks and to provide electronic communications services, on an integrated basis, within the territorial limits of Bermuda and between Bermuda and other countries.

**International Comparison Program (“ICP”):** Led by the World Bank, this program collects and compares price data and gross domestic product (“GDP”) expenditure to estimate and publish purchasing power parities (“PPPs”) of the world’s economies.

**Internet:** A global network of networks, using a common set of standards (e.g. Internet protocol), accessed by users with a computer or other devices via a service provider.

**Internet protocol (“IP”):** A family of protocols describing software that tracks the internet address of nodes, routes outgoing messages and recognizes incoming messages.

**Internet protocol television (“IPTV”):** Television and/or video signals that are delivered to subscribers or viewers using Internet protocol (“IP”). IPTV is typically used in the context of streamed linear and on-demand content, but also sometimes for downloaded video clips.

**Internet Service Provider (“ISP”) services:** The provisioning of access to local and international Internet networks together with the provisioning of Internet services such as web hosting and email accounts.

**Key Performance Indicator (“KPI”):** In the context of this document a measurable value that demonstrates how effectively key objectives are achieved.

**Leased line:** A transmission facility that is leased by an end-user from a public Electronic Communications service provider which is dedicated to that user’s traffic.

**Link Bermuda Limited (“Link”):** A local company granted an ICOL, formerly Cable & Wireless.

**Long-run incremental costs (“LRIC”):** The costs caused by the provision of a defined increment of output, taking a long-run perspective, assuming that some output is already produced. The “long run” refers to the time horizon over which all costs (including capital investment) are variable.

**Margin squeeze test:** An assessment of the margin that exists between the wholesale and retail prices set by an entity, in order to determine whether the prices are set so that an efficient entity purchasing the wholesale product would be unable to earn a reasonable return.

**Mbps:** Megabits per second, a measure of data transfer speed. A transfer speed of 8Mbps is equal to one megabyte per second.

**Minister:** The Minister of Home Affairs.

**Mobile voice call termination (“MCT”):** A wholesale service offered by a mobile service provider to connect a customer, i.e. a call recipient, on its network.

**Mobile virtual network operator (“MVNO”):** An entity that provides mobile telephony services to its customers, but which does not have allocation of spectrum or its own wireless network.



**Ofcom:** Office of Communications, the national regulatory authority for the broadcasting, telecommunications and postal industries of the United Kingdom.

**One Communications (“OneComm”):** A group of companies that includes the following ICOL holders: BDB Ltd., Bermuda Digital Communications Ltd., Logic (formerly Bermuda Cablevision Limited) and Cable Co. Ltd., collectively operating under the brand name One Communications.

**Operating expenditure (“OPEX”):** The costs of the day-to-day operation of an entity, such as staff costs, repairs and maintenance expenditure, and other overheads.

**Over-the-top (“OTT”):** The delivery of audio-visual content over the “open” Internet rather than over a managed IPTV architecture or through traditional satellite or antenna-based broadcast technologies.

**PayTV:** Subscription-based television services.

**Predatory pricing:** Pricing below a particular measure of cost which may incur short-term losses in order to eliminate, discipline or discourage one or more actual or potential efficient competitors.

**Preliminary Consultation Document:** The document published by the Authority on 17 October 2017, titled the “Review of the electronic communications sector: Ensuring the delivery of benefits for Bermuda via regulation”. The document sets out the Authority’s view, at that time, on which electronic communications markets in Bermuda may require *ex ante* regulation. The document also sets out the Authority’s first consultation on the Sectoral Review.

**Preliminary Report for the Sectoral Review:** The Preliminary Report on the Electronic Communications Sectoral Review, published on 17 April 2018.

**Price purchasing parity (“PPP”):** The rates of currency conversion that equalize the purchasing power of different currencies by eliminating the differences in price levels between countries. In their simplest form, PPPs are simply price relatives that show the ratio of the prices in national currencies of the same good or service in different countries.

**RA:** The Regulatory Authority of Bermuda.

**RAA:** The Regulatory Authority Act 2011.

**Reference access and interconnection offer (“RAIO”):** An offer to provide Access and Interconnection services and facilities being offered, setting out the particular components according to market needs and all of the terms and conditions for Access and Interconnection to be satisfied by a sectoral provider wishing to enter into an Access and Interconnection agreement.

**RFI:** Request for information.

**RIO:** Reference interconnection offer.

**Second Consultation Document:** The document published by the Authority on 15 February 2019, titled the “Review of the electronic communications sector: Ensuring the delivery of benefits for Bermuda via regulation”. The document sets out the Authority’s view, at that time, on which electronic communications markets in Bermuda may require *ex ante* regulation.

**Sectoral Review:** In the context of this document, the 2018 comprehensive review of the Electronic Communications sector pursuant to section 17 of the RAA.

**Significant market power (“SMP”):** A position of economic strength in the relevant market or markets that affords an entity, either individually or jointly with others, the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers, which may provide a basis for the imposition of *ex ante* remedies.

**Small but Significant Non-transitory Increase in Price (“SSNIP”):** A concept used in assessing relevant economic markets, based on identifying the smallest market within which a hypothetical monopolist or cartel could impose a profitable significant increase in price.

**Substitutability:** Where an increase in the price of one product would lead consumers to switch to other competing products or services (“demand-side substitutability”) or lead producers to switch rapidly into the supply of the good in question (“supply-side substitutability”).

**Superfast broadband:** Sometimes known as next generation broadband, superfast broadband delivers headline download speeds of at least 30Mbps.<sup>3</sup>

**Tariff:** Refers to all relevant characteristics of a service. For example, a pre-pay mobile tariff comprises not only the monthly price, but also the included voice, text and data allowances. In addition, the cost for incremental usage of services, the quality and speed of the service, and service/cancellation fees are all also components of the tariff.

**Throttling:** The intentional slowing of an Internet service.

**VAT:** Value-added tax.

**Virtual unbundled local access (“VULA”):** A broadband access remedy that requires a network operator to provide access to its superfast broadband network. VULA provides a connection from the nearest “local” aggregation point to a customer’s premises.

**Weighted Average Cost of Capital (“WACC”):** The rate that a company is expected to pay on average to all its security holders to finance the company’s assets.

**Wi-Fi:** Short-range wireless technologies that allow an over-the-air connection between a wireless device and a base station, or between two wireless devices. Wi-Fi has a range from the base station of approximately 30 meters indoors, and around 1 kilometer outside.

**Wireless broadband:** Also known as “fixed wireless”, wireless broadband that provides Internet connectivity via a wireless radio receiver rather than a physical wire connection. Similar to Internet access via a mobile device (e.g. 4G), wireless broadband technology can offer superfast broadband speeds, allowing it to compete directly with other modern broadband technologies such as coaxial cable and fibre.

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• <sup>3</sup> Superfast broadband is the term used by Ofcom in the UK for broadband with download speeds of 30Mbit/s and above (see for example the definition in [Ofcom's latest 'Connected Nations' report](#)). This definition is also consistent with the definition of ‘superfast broadband’ by the EU, with the European Digital Agenda adopting this as the name for broadband capable of speeds on 30Mbit/s or more, where there is a target for every European to have access to at least 30Mbit/s connectivity by 2020.

**World on Wireless Ltd (“WoW”):** A local company granted an ICOL offering subscription television services.

## 1 INTRODUCTION

1. This Preliminary Report, Preliminary Decision and Order (the “Preliminary Report”) sets out the preliminary conclusions and decisions of the Regulatory Authority of Bermuda (the “Authority”) following its assessment of the responses to the consultation document named Market Review of the Electronic Communications Sector (the “Second Consultation Document”) and to seek public comment on the Preliminary Report and General Determination (“GD”) set forth at Appendix B.
2. The purpose of the Market Review is to analyse the state of competition in the various electronic communication markets to consider (i) whether any operators have SMP<sup>4</sup> and if so, (ii) whether or not some form of *ex ante* remedy should be applied; and/or (iii) whether existing remedies should be modified or removed.
3. The Authority last concluded a market review in 2013, when several markets were found to not be effectively competitive.
4. This Preliminary Report follows the publication of (1) Review of the electronic communications sector: Ensuring the delivery of benefits for Bermuda via regulation (the “Preliminary Consultation” ) issued by the Authority on 17<sup>th</sup> October 2017; and (2) the Second Consultation Document issued by the Authority on 15<sup>th</sup> February 2019 (collectively the “Consultation Documents”). This Preliminary Report discusses a number of key issues and proposals from the Consultation Documents and sets out the Authority’s preliminary conclusions and decisions following the completion of the Market Review.
5. This Preliminary Report sets out the Authority’s preliminary decisions, with respect to market definition, market power and remedies which are summarised as follows:

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<sup>4</sup> SMP is defined in section 2 of the Electronic Communications Act 2011 as “a position of economic strength in the relevant market or markets that affords an undertaking, either individually or jointly with others, the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers, which may provide the basis for the imposition of *ex ante* remedies”.

**Table 1.1 - Summary of proposed market definitions, SMP and remedies**

Service type	Market #	Market description <sup>5</sup>	SMP operator	Remedies
Broadband	1	<u>Retail</u> provision of fixed broadband	OneComm and Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to offer broadband on a stand-alone basis</li> <li>• Obligation to ensure Accounting Separation</li> <li>• Obligation to provide information to the Authority</li> <li>• Obligation to ensure prices are Cost Oriented</li> <li>• Obligation to publish retail key performance indicators</li> <li>• Obligation to ensure customers can choose the right products for them and do not experience unnecessary difficulties when switching</li> </ul>
	2	<u>Wholesale</u> provision of fixed broadband	OneComm and Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to provide wholesale bitstream access and virtual unbundled local access</li> <li>• Obligation to ensure wholesale access is provided on fair, reasonable and non-discriminatory terms and that it is equivalent in terms of service output (i.e. equivalence of output)</li> <li>• Obligation to publish wholesale key performance indicators</li> </ul>
Mobile	3	<u>Retail</u> mobile services	OneComm and Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to offer mobile services on a stand-alone basis</li> <li>• Obligation to ensure Accounting Separation</li> <li>• Obligation to provide information to the Authority</li> <li>• Obligation to ensure prices are Cost Oriented</li> <li>• Obligation to publish retail key performance indicators</li> <li>• Obligation to ensure customers can choose the right products for them and do not experience unnecessary difficulties when switching</li> </ul>

<sup>5</sup> The market descriptions in the table do not constitute the formal market definition. For these, see section II of Annex 1.

Service type	Market #	Market description <sup>5</sup>	SMP operator	Remedies
	4	<u>Wholesale</u> mobile access	OneComm and Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to provide wholesale access</li> <li>• Obligation to ensure wholesale access is provided on fair, reasonable and non-discriminatory terms and that it is equivalent in terms of service output (i.e. equivalence of output)</li> <li>• Obligation to publish wholesale key performance indicators</li> </ul>
Fixed voice	5	<u>Retail</u> fixed voice services (i.e. call origination)	Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to offer fixed voice services on a stand-alone basis</li> <li>• Obligation to ensure Accounting Separation</li> <li>• Obligation to provide information to the Authority</li> <li>• Obligation to ensure prices are Cost Oriented</li> <li>• Obligation to ensure customers can choose the right products for them and do not experience unnecessary difficulties when switching</li> </ul>
Subscription television	6	<u>Retail</u> subscription TV services	–	
Business connectivity	7	<u>Retail</u> , low-speed leased lines in the city of Hamilton	–	
	8	<u>Retail</u> , low-speed leased lines outside of the City of Hamilton	–	
	9	<u>Wholesale</u> low-speed leased lines in the city of Hamilton	–	
	10	<u>Wholesale</u> low-speed leased lines outside of the City of Hamilton	–	
	11	<u>Retail</u> high-speed leased lines in the City of Hamilton	–	
	12	<u>Retail</u> high-speed leased lines outside of the City of Hamilton	Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to ensure Accounting Separation</li> <li>• Obligation to provide information to the Authority</li> <li>• Obligation to ensure prices are Cost Oriented</li> </ul>

Service type	Market #	Market description <sup>5</sup>	SMP operator	Remedies
	13	<b>Wholesale</b> high-speed leased lines in the city of Hamilton	–	
	14	<b>Wholesale</b> high-speed leased lines outside of the City of Hamilton	Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to provide wholesale access</li> <li>• Obligation to ensure wholesale access is provided on fair, reasonable and non-discriminatory terms and that it is equivalent in terms of service output (i.e. equivalence of output)</li> <li>• Obligation to publish wholesale key performance indicators</li> </ul>
Off-island connectivity	15	International data transmission	–	

## 2 BACKGROUND

6. The Authority initiated the consultation by publishing the Initial Consultation Document on 17 October 2017, which invited responses from members of the public, including electronic communications sectoral participants, sectoral providers, as well as other interested parties. Interested parties were invited to provide responses to the Preliminary Consultation Document by 28 November 2017.

7. The Preliminary Consultation Document asked the following questions:

**Question 1:** Do you agree that the 2013 SMP remedies and the Authority's regulation via the same have not led to expected benefits for consumers or optimal outcomes for competition?

**Question 2:** What are your views on the Authority's assessment of the market provided in section 5 of the Preliminary Consultation Document?

**Question 3:** Do you agree with the Authority's initial views on relevant markets and SMP, as set out in Section 6 of the Preliminary Consultation Document?

**Question 4:** Do you agree with the Authority's proposed remedy options and other regulatory proposals set out in Section 6 and 7 of the Preliminary Consultation Document?

**Question 5:** Do you agree that the Authority should regulate against abuse of dominance and market power by SMP operators across a range of market sectors, by the potential use of both ex ante and ex post regulation?

**Question 6:** Do you believe that there is a need to make changes to the existing MVNO regime? If so, please specifically state what those changes should be.

**Question 7:** Do you think that the submarine cable relevant market should be susceptible to SMP obligations?

**Question 8:** Outside of the SMP *ex ante* remedies, what other regulations and administrative determinations applicable to the electronic communications sector should be made, modified or revoked? Please provide a detailed explanation for the same.

**Question 9:** Are there any areas and issues that you believe have been omitted from this review that should be addressed by the Authority?

8. The Preliminary Consultation Document received five responses from the following:

- i. Deltronics Limited;
- ii. One Communications Limited;
- iii. Digicel Ltd.;
- iv. LinkBermuda Ltd.; and



- v. The Department of Consumer Affairs.
9. These general comments tended to fall into one of five categories:
- i. The nature of the proposed regulatory regime;
  - ii. The impact of any proposals on investment incentives;
  - iii. The findings from the Authority's initial profitability analysis;
  - iv. The scope for bundling in the new regulatory regime; and
  - v. The findings from the Authority's international benchmarking analysis
10. The Authority published the Second Consultation Document on 15 February 2019, which invited responses from members of the public, including electronic communications sectoral participants, sectoral providers, as well as other interested parties.
11. The purpose of the Second Consultation Document was to consult with the public on the Authority's latest findings on the assessment of the relevant markets, with regard to whether there are operators in certain markets that hold a position of market power, such that it is necessary and appropriate for the Authority to intervene and impose regulations in order to prevent or deter anti-competitive effects. It also sought public consultation on the Authority's proposed remedies in relation to market power.
12. The Second Consultation Document asked the following questions:
- Question 1:** Do you agree with the Authority's proposals for relevant markets (as set out in section 4 [of the Second Consultation Document])?
- Question 1.a:** Do you agree with the Authority's proposal not to define a wholesale fixed voice termination market?
- Question 1.b:** Do you agree that it is not appropriate to define any wholesale subscription television markets? If not, what should such market definitions look like, and, on that basis, would OneComm (or any other provider) likely hold SMP?
- Question 1.c:** To what extent do consumers see paid OTT services (such as Netflix, Hulu and Amazon Prime Video) as effective substitutes to more traditional retail PayTV services, such as those offered by OneComm, WoW and Digicel Group?
- Question 1.d:** Do you agree with the Authority's proposal to define "low-speed" business connectivity as below 20Mbps because of the competitive constraint of retail broadband services at speeds below this level? To what extent will high-speed broadband services act as a comparable/substitutable to leased lines? In other words, is a 200Mbps/20Mbps<sup>7</sup> retail broadband service substitutable for a 20Mbps/20Mbps leased line service?

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<sup>7</sup> In other words, 200Mbps download speed and 20Mbps upload speed.

**Question 2:** Do you agree with the Authority's proposals for market power assessment (as set out in section 5 [of the Second Consultation Document])?

**Question 2.a:** To what extent does Bluewave impose an effective competitive constraint on OneComm and Digicel Group in the retail and wholesale broadband markets? How does its presence and market impact affect the proposed joint SMP finding?

**Question 2.b:** To what extent do paid OTT services (such as Netflix, Hulu and Amazon Prime Video) and traditional PayTV providers (such as WoW and Digicel Group) impose a competitive constraint on OneComm?

**Question 2.c:** Do you agree with the Authority's approach to the determination of joint SMP (as opposed to single-provider SMP) in mobile and broadband markets?

**Question 3:** Do you agree with the Authority's proposals for remedies (as set out in section 6)?

**Question 3.a:** Do you agree with the Authority's proposal to require the SMP operators in the wholesale broadband market to provide wholesale access as set forth in paragraph 530 [of the Second Consultation Document]?

**Question 3.b:** Do you agree with the Authority's proposals for the publication of the various suggested KPIs by SMP operators in each of the following markets:

- wholesale broadband;
- retail broadband;
- wholesale mobile;
- retail mobile; and
- business connectivity.

**Question 3.c:** Do you agree with the Authority's proposed lists of information (for each of the wholesale broadband, retail mobile, fixed voice, subscription television and business connectivity markets) that SMP operators will be required to provide to the Authority on a regular basis? Is there any other key information that has not been listed but which should form part of the ongoing information provision?

**Question 3.d:** In relation to retail broadband, what may be considered "significant" when assessing whether the actual/realized broadband speed is "significantly" different from the advised/headline speed? For example, is 20% an appropriate definition of significant?<sup>8</sup> How should the Authority impose such a condition? For example, how should unforeseeable network issues such as flooding or malfunction, as well as peak-hour network congestion, be taken into account?

**Question 3.e:** The Authority is considering removing the obligation for SMP operators to publish a reference interconnection offer ("RIO"), in complement to the

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<sup>8</sup> For example, if a retail broadband tariff advertises broadband download speeds of 100Mbps, should an actual/realised broadband speed (for the customer) of less than 80Mbps be considered to constitute "significantly" different?

wholesale access obligations (i.e. for broadband, mobile and business connectivity)? Should the Authority remove the RIO obligation? Why or why not?<sup>9</sup>

**Question 3.f:** Do you agree with the Authority's proposal to remove the current requirements for prior notification of retail prices and with the Authority's approach to Cost Orientation for retail mobile and broadband markets?

13. The response period commenced on 15 February 2019 and concluded on 29 March 2019.
14. Responses to the Consultation Documents were solicited from the public electronically through the Authority's website at <https://rab.bm/submit-a-response-form/>.
15. The Authority received seven written responses to the Second Consultation Document within the prescribed consultation period from:
  - i. The Bermuda Broadcasting Company Limited (the "BBC");
  - ii. Bermuda Chamber of Commerce;
  - iii. The Department of Consumer Affairs;
  - iv. Link;
  - v. OneComm;
  - vi. Alan Marshal; and
  - vii. Michael Wicks.
16. These general comments tended to fall into one of four categories:
  - i. the appropriate analytical framework for determining joint SMP;
  - ii. the relevant factors for assessing joint SMP;
  - iii. the approach to assessing joint SMP in wholesale markets; and
  - iv. sector developments since 2013.

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<sup>9</sup> A RIO would set out the services that the operator is making available, along with the terms and conditions, such as price, lead-time, and the process for addressing any issues.

### 3 CONSULTATION PROCEDURE

17. This public consultation is undertaken in accordance with sections 62 and 69 to 73 of the RAA and section 20 to 25 of the ECA. The procedure and accompanying timelines (as set out in section 70 of the RAA), under which this consultation is taking place are set out below.
18. Written comments should be submitted before 5:00 p.m. (Bermuda time) on 26 September 2019.
19. The Authority invites written responses from members of the public, participants and providers in the electronic communications sector and other interested parties.
20. Responses to this Preliminary Report should be filed electronically in MS Word or Portable Document Format (pdf). Parties filing comments should go to the Authority's website and follow the link <https://rab.bm/public-consultations> to the Consultations and Response page, and click the "Submit Your Response" icon, which appears on the page. All comments should be clearly marked "Response to Preliminary Report and Proposed GD".
21. The Authority intends to make responses to this Preliminary Report available on its website. If a commenting party's response contains any information that is confidential in nature, a clearly marked "Non-Confidential Version", redacted to delete the confidential information, should be provided together with a complete version that is clearly marked as the "Confidential Version". Redactions should be strictly limited to "confidential information", meaning a trade secret, information whose commercial value would be diminished or destroyed by public disclosure, information whose disclosure would have an adverse effect on the commercial interests of the commenting party, or information that is legally subject to confidential treatment. The "Confidential Version" should highlight the information that has been redacted. Any person claiming confidentiality in respect of the information submitted must provide a full justification for the claim. Requests for confidentiality will be treated in the manner provided for in Rule 30 of the Authority's Interim Administrative Rules.
22. In accordance with section 73 of the RAA, any interested person may make an ex parte communication during this consultation process, subject to the requirements set forth in this paragraph 24. An ex parte communication is defined as any communication to a Commissioner or member of staff of the Authority regarding the matter being consulted on in this Preliminary Report other than a written submission made pursuant to section 73(2). Within two business days after making an ex parte communication, the person who made the ex parte communication shall submit the following to the Authority:
  - (i) a written description of the issues discussed, and positions espoused; and
  - (ii) a copy of any written materials provided.
23. This will be posted on the Authority's website, along with a notice of the ex parte communication.
24. The principal point of contact at the Authority for interested persons for this Preliminary Report is Jozelle Opoku, Head of Regulation. She may be contacted by email, referencing "Comments on Market Review Preliminary Report Consultation" at [consultation@rab.bm](mailto:consultation@rab.bm) or by mail at:

Jozelle Opoku  
Head of Regulation  
Regulatory Authority  
1st Floor, Craig Appin House  
8 Wesley Street  
Hamilton, Bermuda

25. In this Preliminary Report except insofar as the context otherwise requires, words or expressions shall have the meaning assigned to them by the ECA, the RAA and the Interpretation Act 1951.
26. This Preliminary Report is not a binding legal document and does not contain legal, commercial, financial, technical or other advice. The Authority is not bound by this Preliminary Report, Preliminary Decision and Order, nor does it necessarily set out the Authority's final or definitive position on particular matters. To the extent that there might be any inconsistency between the contents of this Preliminary Report and the due exercise by the Authority of its functions and powers, and the carrying out of its duties and the achievement of relevant objectives under law, such contents are without prejudice to the legal position of the Authority.

#### 4 LEGISLATIVE CONTEXT

27. The Authority has been established as a cross-sectoral, “...*independent and accountable regulatory authority to protect the rights of consumers, encourage the deployment of innovative and affordable services, promote sustainable competition, foster investment, promote Bermudian ownership and employment and enhance Bermuda’s position in the global market...*”, as set forth in the First Recital to the RAA.
28. The Authority’s principal functions under section 12 of the RAA include ensuring that the regulation of the electronic communications sector is such as to:
- (a) promote and preserve competition;
  - (b) promote the interests of the residents and consumers of Bermuda;
  - (c) promote the development of the Bermudian economy, Bermudian employment and Bermudian ownership;
  - (d) promote innovation; and
  - (e) fulfil any additional functions specified by sectoral legislation.
29. Pursuant to, and in accordance with, Part 4 of the ECA, particularly sections 20, 23 and 24 of the ECA, and section 70 of the RAA, the Authority published the Preliminary Consultation (i.e. “Review of the Electronic Communications Sector Ensuring the Delivery of Benefits for Bermuda via Regulation”) on 17th October 2017 and the Second Consultation (i.e. “Market Review of the Electronic Communications Sector”) on 15th February 2019.
30. As indicated in the Introduction, this is the Authority’s Preliminary Report which sets forth its preliminary conclusions and proposed general determination following its assessment of responses to the Second Consultation Document.
31. More specifically, this Preliminary Report sets out the preliminary conclusions and decisions regarding the key issues identified by the Authority in deciding which obligations, if any, should be imposed in respect of each relevant market characterised by significant market power (SMP) in order to promote or preserve effective competition, in accordance with the requirements of Part 4 of the ECA.
32. Part 4 of the ECA contains the provisions which set out the process for imposing SMP obligations on an ex ante basis. Namely, ECA section 20(1) enables the Authority:
- “...to make administrative determinations on a communications provider in respect of its provision of electronic communications, or the provision of subscription audiovisual programming content in a relevant market or markets if, individually or together with others, the communications provider has significant market power in that market.”*
33. Further, ECA section 20(2) requires the Authority:
- “...to conduct a review of a relevant market or markets... in accordance with section 23 [of the ECA]...and section 59(2) of the Regulatory Authority Act 2011.”*
34. RAA section 59(1) generally empowers the Authority to impose ex ante remedies on a sectoral provider where that sectoral provider occupies a dominant position in any relevant

market and uses that position so as to abuse it, and also when authorized to impose ex ante remedies by sectoral legislation. Section 59(2) states:

*“In any case in which sectoral legislation directs the Authority to conduct a market review prior to imposing or maintaining ex ante remedies on a sectoral participant, the Authority, in accordance with sectoral legislation, shall –*

- (a) identify those relevant markets in which ex ante remedies may be appropriate;*
- (b) conduct a market review of each relevant market identified to determine whether sectoral provider has significant market power; and*
- (c) determine whether imposition or maintenance of ex ante remedies on a sectoral provider with significant market power is necessary and, if so, impose or maintain proportionate remedies.”*

35. ECA section 21 sets out the principles and objectives the Authority must seek to satisfy when determining whether to impose remedies on one or more SMP providers in a market. These are:

*“(a) develop or maintain effective and sustainable competition for the benefit of consumers with regard to price, innovation and choice;*

*“(b) promote investment in the electronic communications sector;*

*“(c) establish ex ante remedies that are effective but proportionate, taking into account the costs of compliance and the ultimate benefits to consumers;*

*“(d) establish ex ante remedies that apply on a technology-neutral and service neutral basis whenever feasible; and*

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

36. Section 22(1) of the ECA requires the Authority to issue a notice that identifies: “...any relevant product geographic market which in its view appears to be susceptible to the imposition of ex ante remedies, based upon a forward-looking assessment...”. Pursuant to section 22(2) of the ECA, the markets so identified:

*“...may include retail markets and wholesale markets...identified on the basis of the Authority’s preliminary assessment that the markets meet all of the following criteria and any other criteria that the Authority deems to be pertinent –*

- (a) the relevant market is characterised by high and non-transitory barriers to entry;*
- (b) taking into account actual and expected market circumstances during the period under review, the relevant market either -*
  - (i) is not likely to be affected by technological changes or other developments that would render it effectively competitive, or*
  - (ii) is likely to cease to be effectively competitive; and*
- (c) the application of ex post competition rules alone would not be sufficient to promote or preserve effective competition in the relevant market.”*

37. Section 23(1) of the ECA sets out procedures to be followed in a market review. ECA section 23(1) states: -

*“The Authority may publish advisory guidelines that identify or clarify the criteria for—*

- (a) defining relevant product markets based upon demand and supply-side characteristics; defining relevant geographic markets;*
- (b) assessing market power in such markets based on a forward-looking assessment;*
- (c) establishing effective ex ante remedies and obligations; and*
- (d) any other aspect of the market review process.”*

38. Section 23(2) of the ECA provides guidance on the conduct of the of the market assessment pursuant to section 23(1) as follows:

*“The Authority shall, in conducting a market assessment pursuant to subsections (1)(a), (b) or (c), consider all of the factors that it deems relevant under the circumstances, which may include the following-*

- (a) the overall size of the communications provider and its share of the relevant market;*
- (b) the volatility of shares in the relevant market;*
- (c) the communications provider’s control over infrastructure not easily duplicated;*
- (d) the communications provider’s technological advantages or superiority;*
- (e) the degree of countervailing buyer power;*
- (f) the communications provider’s ability to access capital and financial markets relative to that of its competitors;*
- (g) the existence of economies of scale or scope;*
- (h) the diversification of products or services (including bundles);*
- (i) the relative advantages of vertical integration enjoyed by the sectoral provider;*
- (j) the presence of de jure or de facto barriers to market entry or expansion;*
- and*
- (k) evidence of previous anti-competitive behaviour.”*

39. Section 23(3) of the ECA sets out the factors that the Authority must consider when assessing whether two or more communications providers operating in the same relevant market jointly have significant market power in the following terms:

*“In assessing whether two or more communications providers operating in the same relevant market jointly have significant market power, the Authority shall consider, among other relevant factors, whether -*

- (a) the relevant market is concentrated;*
- (b) each provider has a relatively high and stable share of the relevant market;*
- (c) significant and enduring barriers to entry exist; and*
- (d) there are reasonable grounds for concluding that these factors, in combination with any relevant factors set out in subsection (2), are evidence of a market structure that is likely to give rise to tacit coordination and thereby prevent, restrict or distort competition in the provision of products or services in the relevant market.”*



40. Once the market assessments contemplated by sections 23(2) and 23(3) of the ECA have been made, section 23 (4) of the ECA requires the Authority to conduct a public consultation to review those markets identified (i.e. in accordance with ECA section 22) that in its view are susceptible to ex ante regulation, if any. ECA section 23(4) further requires the public consultation to include a review of any relevant product or geographic market identified as requiring ex ante regulation. The purposes of the public consultation are stated as follows:
- (a) *“evaluating whether these relevant markets are, or continue to be, correctly defined based on an economic assessment of supply and demand;*
  - (b) *analysing whether a communications provider, individually or with others, in fact possesses, or continues to hold, significant market power in one or more of these relevant markets based on the applicable facts and circumstances; and*
  - (c) *deciding which obligations, if any, should be imposed in respect of each relevant market characterised by significant market power in order to promote or preserve effective competition, in accordance with ECA section 24.”*
41. Pursuant to ECA section 23(5), the Authority is required to issue one or more general determinations (i) designating any communications provider that has significant market power in each relevant market reviewed pursuant to ECA section 23(4), either individually or jointly; and (ii) specifying any ex ante obligations that shall apply in accordance with section ECA section 24. The Authority is also empowered, acting pursuant to ECA section 24(6), to carry out a further review of any relevant product or geographic market acting either up on its own initiative or, at its discretion, upon the request of an interested party.
42. Section 24(6) of the ECA requires the Authority to conclude a further review of each relevant market within four years of its completion of the previous review where it has made a finding of significant market power. It also requires the Authority to take requests from sectoral participants, the views of consumers and relevant market developments into account when determining when to initiate a further review of a relevant product or geographic market.
43. Pursuant to ECA section 23(7), a general determination made by the Authority finding that a communications provider possesses significant market power in a relevant market shall be considered interim and shall not constitute final Authority action for purposes of the RAA, until the Authority makes a determination specifying the ex ante obligations, if any, that shall apply in respect of such relevant market in accordance with ECA section 24.
44. The Authority’s proposed General Determination (i.e. as to market definition and significant market power is set out in Appendix B to this Preliminary Report. ECA section 23(4)(c) next requires the Authority to conduct a public consultation for the purposes of *“...deciding which obligations, if any, should be imposed in respect of each relevant market characterised by significant market power in order to promote or preserve effective competition, in accordance with (ECA) section 24.”*
45. Section 24(1) of the ECA empowers the Authority to make an Administrative Determination imposing *ex ante* remedies where necessary to prevent or deter anticompetitive effects that are or are likely to be caused by the presence of SMP in a relevant market.

## 5 SUMMARY AND DISCUSSION OF RESPONSES TO THE SECOND CONSULTATION DOCUMENT

46. In February 2019, the Authority published the “Market review of the electronic communications sector: Consultation document”, which constituted the second formal consultation of the current electronic communications market review process. This document is referred to as “the Second Consultation”.<sup>10</sup> The Preliminary Consultation was published in October 2017.<sup>11</sup>
47. Following the publication of the Second Consultation, the Authority received several responses from stakeholders. In total, the Authority received submissions from seven different respondents in compliance with the consultation procedure, the names of which are listed below<sup>12</sup>:
- Mr. Alan Marshal;
  - BBC;
  - the Bermuda Chamber of Commerce;
  - The Department of Consumer Affairs (“Consumer Affairs”);
  - Link;
  - OneComm<sup>13</sup> (with an attached report from economic consultancy NERA, “the NERA report”); and
  - Mr. Michael Wicks.
48. The stakeholder comments received covered a wide range of issues including market definition, SMP and remedies.
49. This section provides an overview of the key themes from the responses to the Second Consultation Document and the related decisions that the Authority has made, taking into consideration the responses.
50. This section is structured as follows:
- **Section 5.1** covers market definition and sets out the stakeholder responses received regarding market definition proposals in the Second Consultation, as well as the Authority’s opinion on the stakeholder comments.
  - **Section 5.2** covers SMP and sets out the stakeholder responses received regarding SMP proposals in the Second Consultation, as well as the Authority’s opinion on the stakeholder comments.
  - **Section 5.3** covers remedies and sets out the stakeholder responses received regarding remedy proposals in the Second Consultation, as well as the Authority’s opinion on the stakeholder comments.
  - **Section 5.4** provides further clarity in response to some of the general concerns raised by respondents.

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<sup>10</sup> The Second Consultation can be found [here](#).

<sup>11</sup> The First Consultation can be found [here](#).

<sup>12</sup> Digicel Group and WoW had submitted responses past the deadline and therefore, were not included within summary of responses.

<sup>13</sup> BDB Ltd., Bermuda Digital Communications Ltd., Logic (formerly Bermuda Cablevision Limited), and Cable Co. Ltd. operating under the brand name One Communications, collectively “OneComm”.

## **5.1 Market definition: stakeholder responses to the Second Consultation and the Authority's opinion on the responses**

51. This section focuses on market definition and summarizes the stakeholder comments received regarding market definition, before the Authority sets out its opinion on the specific issues raised.
52. Following the Authority's market definition proposals in the Second Consultation, only a small number of stakeholder responses commented on market definition. In fact, only the definitions of retail and wholesale broadband markets received comment.
53. As such, no stakeholder comments were received regarding the other proposed market definitions: mobile (retail or wholesale); fixed voice; subscription television; business connectivity; or off-island connectivity.
54. The remainder of this section discusses the comments received regarding the definition of the broadband markets.

### **Broadband**

55. Comments from stakeholders regarding the proposed definitions of broadband markets focused on the proposal to remove the ISP/Access distinction. Overall, stakeholders generally agreed with this proposal, although some stakeholders highlighted the importance of ensuring a clear migration path for existing access users to ensure there was no issue with continuity of service.
56. No stakeholder objected to the proposal to define separate wholesale and retail broadband markets. Furthermore, no stakeholder objected to the proposal to define the product market on the basis of the "provision of fixed broadband Internet connectivity, provided over any technology, and for any speed" as well as the proposal to define the geographic market as "island-wide".

### **Response from the Authority**

57. The Authority recognizes that no stakeholder fundamentally objected to the proposed market definition.
58. The comments received about ensuring a smooth transition from the ISP/Access structure to the new regime are very valid and will form part of the Authority's transitional measures.

## **5.2 SMP: stakeholder responses to the Second Consultation and the Authority's opinion on the responses**

59. This section provides summaries of the stakeholder comments received regarding SMP, before the Authority sets out its opinion on the specific issues raised.
60. The Authority highlights that almost all comments received in relation to SMP were regarding broadband and mobile markets, with very few comments received in respect of proposals on the other defined markets.
61. Stakeholder responses on SMP broadly fell into one of two categories:

- i. general issues that cover the Authority's approach to SMP, which are relevant across a number of relevant markets; and
  - ii. market-specific issues, i.e. SMP comments relevant to a specific market, such as broadband or mobile.
62. Each of these is covered in turn below, with section 5.2.1 covering general issues, and section 5.2.2 covering market-specific issues.

### **5.2.1 General SMP comments received from stakeholders and the Authority's response to them**

63. The general SMP issues raised by stakeholders covered four topics:
- i. the correct analytical framework for determining joint SMP;
  - ii. the relevant factors for assessing joint SMP;
  - iii. the approach to assessing joint SMP in wholesale markets; and
  - iv. sectoral developments since 2013.

64. Each of these is discussed in turn below.

#### **The correct analytical framework for determining joint SMP**

65. Comments from stakeholders raised questions about how joint SMP should be assessed.
66. For instance, in response to the Authority's use of the Airtours criteria, some stakeholder comments suggested that the Airtours criteria was outdated, and that the Authority should consider more recent European Commission positions on joint dominance.
67. Furthermore, OneComm in particular suggested that the burden of proof for demonstrating joint SMP is very high (against the standard of the Airtours criteria) and that the Authority has adopted a "checklist" approach rather than a fully-fledged analysis.<sup>14</sup> For example, the NERA report (submitted by OneComm) set out that:

the Consultation Document contains no such "full-fledged analysis," or even a "coherent explanation of how coordination is maintained," but rather a presents a "check list" of potential disciplining mechanisms which it asserts "could be" effective in the retail markets for broadband and mobile wireless (OneComm response, NERA report, paragraph 16)

#### **Response from the Authority**

68. The starting point for the Authority in assessing joint SMP is section 23(3) of the ECA, which sets out that:<sup>15</sup>

In assessing whether two or more communications providers operating in the same relevant market jointly have significant market power, the Authority shall consider, among other relevant factors, whether:

- a) the relevant market is concentrated;
- b) each provider has a relatively high and stable share of the relevant market;

<sup>14</sup> OneComm response to the Second Consultation, NERA Report, paras 13–16.

<sup>15</sup> ECA 2011 [\[Link\]](#)

- c) significant and enduring barriers to entry exist; and
  - d) there are reasonable grounds for concluding that these factors, in combination with any relevant factors set out in subsection (2), are evidence of a market structure that is likely to give rise to tacit coordination and thereby prevent, restrict or distort competition in the provision of products or services in the relevant market.
69. Section 23(3) of the ECA refers explicitly to preceding paragraph (section 23(2)), which sets out the possible relevant factors that the Authority shall consider in conducting a market assessment. Such factors include:
- i. the communications provider's control over infrastructure that is not easily duplicated;
  - ii. the relative advantages of vertical integration enjoyed by the sectoral provider; and
  - iii. evidence of previous anticompetitive behaviour.
70. In assessing joint SMP, the Authority has considered all the available data at hand to assess all relevant factors, including market concentrated and market shares, as well as the barriers to market entry.
71. In addition to assessing data to test the criteria set out in ECA section 23(2) and 23(3), the Authority considered in the Second Consultation an assessment of joint SMP on the basis of the widely accepted framework established in the Airtours case, which set out an analytical framework for assessing joint SMP.
72. Stakeholder comments to the Second Consultation suggested that the Airtours criteria is outdated and that the Authority should use "more recent EU positions on joint dominance". The Authority notes that the most recent EU guidelines on SMP, published in April 2018,<sup>16</sup> set out explicitly that EU NRAs should use the Airtours criteria when assessing joint SMP:
- "when assessing the presence of joint SMP to determine whether to impose ex ante regulation, NRAs can therefore take into account all market circumstances to establish that a tacit collusive behaviour is likely to emerge as a market outcome, in the absence of ex ante regulation, if (i) these circumstances are consistent with the economics of the tacit collusion theory advanced by the NRA and (ii) when assessed, they are found to be relevant in explaining that the market is conducive to the described hypothetical tacit collusive behaviour, on the basis of an integrated analysis, **based on the criteria set out in the Airtours case and later confirmed and further clarified in the Impala cases**" (paragraph 76) [emphasis added]
73. These latest EU guidelines also set out guidance that is consistent with those set out in the section 23 of the ECA, including that the NRA should assess past behaviour when undertaking an assessment of joint SMP:
- all available relevant information on the characteristics of the markets concerned, including both structural features **and the past behaviour of market participants**, must be taken into account in a prospective analysis. (paragraph 71) [emphasis added]

<sup>16</sup> European Commission (2018), "Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services" [\[Link\]](#).

## The relevant factors for assessing joint SMP

74. Stakeholder comments suggested that the Authority had failed to take account of all relevant data in its assessment of joint SMP.
75. For example, some comments argued that the Authority's proposals fail to analyse supplemental factors that are specifically identified in the European Commission's SMP guidelines for the assessment of joint SMP in electronic markets. This point was expanded on in the NERA report:

"the Consultation Document presents no analysis of elasticity of demand in any of the four markets in which it finds SMP, and fails to give adequate consideration to factors such as rapid technological change and product heterogeneity. Yet the EC Guidelines specifically identify each of these factors as relevant to a determination of joint SMP" (the NERA report, paragraph 18)

### Response from the Authority

76. The latest EU guidance on joint SMP (published April 2018) states that there are a number of market characteristics that a NRA could take into account in assessing joint SMP. However, the EU makes clear that there is no exhaustive list of factors, and that the relevance of any factor will need to be assessed on a case-by-case basis:

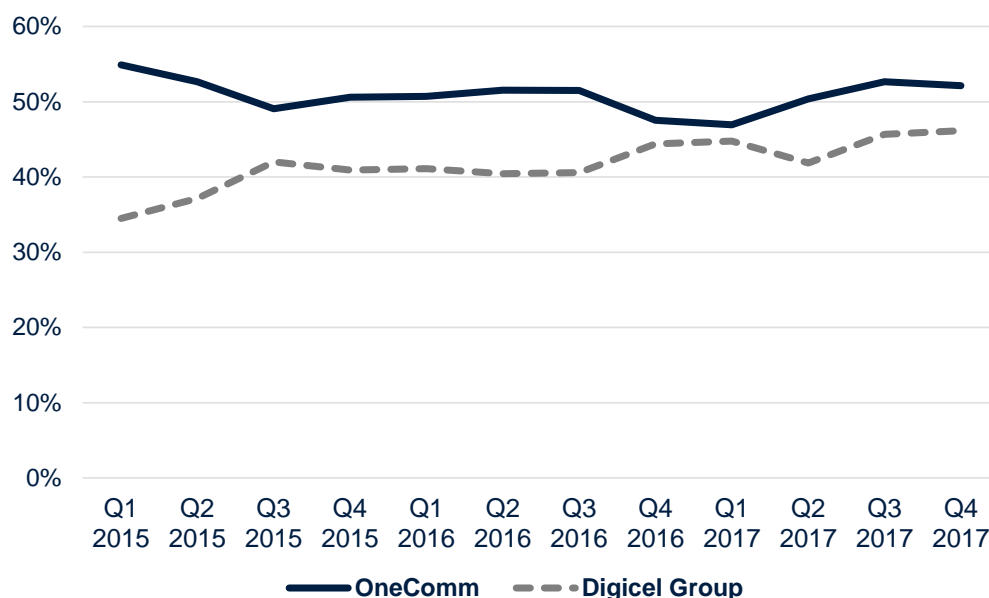
"As stated by the Court of Justice in Impala II, besides market transparency, a market structure conducive to tacit collusion may also be characterised by market concentration and product homogeneity. Other characteristics that may lead to the same conclusion can be extrapolated from case-law or prior regulatory decisions. A non-exhaustive list of market characteristics that the NRAs may consider in their case by case assessment are, by a way of an example, market shares, elasticity of demand, vertical integration, cost and output compatibilities, comprehensive network coverage, profitability and Average Revenue per User (ARPU) levels, relative symmetry of operator and related similarity of retail operations. However, **no exhaustive list is suggested. In addition, the relevance of these parameters should be established and assessed on a case-by-case basis and account should be taken of the national circumstances.**" (paragraph 78) [emphasis added]

77. Throughout the market review, the Authority has taken utmost account of any and all data, including that which the Authority has gathered itself, as well as all the data presented by stakeholders.
78. In this context, the Authority has made significant efforts to gather information to inform the analysis. This includes a Call for Inputs process, in which stakeholders were invited to submit their opinions and supporting evidence on the market review. Following this the Authority engaged with stakeholders, including holding multiple direct discussions.
79. Furthermore, the Authority has utilized its information-gathering powers to send out a number of formal information requests to stakeholders during the course of this market review. Finally, operators have had two formal consultation rounds (to date) in which to submit consultation responses with supporting documentation, as well as ongoing opportunities to present information to the Authority such that the Authority can take the information into regard when making any determinations.
80. Through this process, the Authority has been able to gather some reliable data, including: market shares; market structure, including vertical integration; network coverage, ARPU

and the symmetry of operations between OneComm and Digicel Group, including the characteristics of products offered to consumers and the pricing levels of those products. This data has been useful in understanding the nature of contestability in the relevant markets.

81. Regarding the assessment of SMP, as a starting point, and for context, the Authority notes that OneComm and Digicel Group account for the vast majority of revenues in the electronic communications sector. For instance, OneComm and Digicel Group together accounted for about 98% of all revenues in broadband markets, based on Q4 2017 data.
82. Looking across all electronic communications markets, the Authority observed, based on the data provided by stakeholders, that over time the total share of revenues between OneComm and Digicel Group in the electronic communications sector have been closely aligned, and as of Q4 2017 were each close to 50%.

**Figure 5.1 - Share of electronic communications sector revenues of OneComm and Digicel Group**



Source: Revenue data provided by stakeholders (OneComm, Digicel Group, FKBNNet, Link, WoW, Globenet, Bluewave), across the following markets: broadband, business connectivity, fixed voice, mobile, PayTV (excluding OTT revenues), and subsea connectivity.

83. Regarding the specific points made by OneComm, the Authority notes that while more data, such as elasticity of demand, would help to inform any competition assessment, no stakeholder has presented any such data to the Authority to date. Furthermore, no compelling argument has been presented to the Authority regarding how elasticity of demand (or any other specific piece of evidence that the Authority has purportedly not taken into account) would materially affect the finding of SMP, in light of all other available data.

84. Regarding the point made by OneComm about rapid technological changes in the sector, the Authority has specifically considered this in the relevant markets.<sup>17</sup> The market developments in recent years regarding broadband and mobile network upgrades have been symmetric in that both OneComm and Digicel Group have upgraded at similar times and to similar levels of network capability, enabling them to offer comparable services. As such, it is not clear that the recent technological changes have increased the level of contestability in the markets.
85. Notwithstanding the above, the Authority does recognize that investment by operators is an important development in the market, which over time may result in competitive dynamics that deliver good outcomes for consumers without the need for regulation. However, investment on its own as a result of technological change does not guarantee that markets will tend towards effective competition.
86. Another point of data that the Authority has considered is historical retail prices, which can be informative in assessing whether or not there is evidence of previous anticompetitive behaviour.<sup>18</sup> The data of historical pricing suggests that Bermuda's retail prices for broadband and mobile services has historically been higher than in comparable countries.
87. All else being equal, higher retail prices would lead to higher profits. As such, the Authority also has undertaken its own analysis of profitability of OneComm and Digicel Group. As noted in paragraph 766 of this document, profitability is one of the relevant factors listed in the latest EU guidance on assessing joint SMP.
88. The basis for the Authority's profitability analysis is the financial data provided by OneComm and Digicel Group in response to a formal information request by the Authority.
89. The financial data provided by both OneComm and Digicel Group was not of high quality for a number of reasons. First, neither operator could provide audited separated accounts; therefore, it was not possible to confirm that the data was an accurate reflection of the cost and revenues of the groups. Secondly, the information provided did not set out, with sufficient detail, the methodology that had been used to apportion (fixed and variable) costs. Thirdly, the information was not clearly delineated by Product Group (e.g. mobile, broadband, PayTV, etc.), and as such it was not possible to accurately estimate the profit by Product Group.<sup>19</sup>
90. Notwithstanding these data issues, the Authority undertook an assessment of the financial data in order to see if the data could provide an indication of levels of profitability. The Authority was able to compute broad estimates for a number of financial metrics, including earnings before interest and taxes (EBIT) and return on capital employed (ROCE).

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<sup>17</sup> See paras 309–318 of the Second Consultation regarding broadband, and paragraph 354 with regards to mobile.

<sup>18</sup> For example, the Authority assessed broadband and mobile services offered by OneComm and Digicel Group in 2017 and observed that the prices were well above those observed in comparable countries. For example, international benchmarking analysis conducted by the Authority in 2017 suggested that Bermuda had the most expensive broadband across 13 similar countries. Furthermore, the average price for broadband was more than double that in countries such as Jersey, Maldives, the Isle of Man and Malta. This result was similar for the mobile sector, in which Bermuda appeared to be one of the most expensive countries in the cohort of benchmarked comparators.

<sup>19</sup> In assessing company profitability, high levels of profit margin are indicative of market power. Low levels of profit margin do not necessarily mean that there is no market power, since profit margins could be low as a result of inefficiently high costs.



91. ROCE is routinely used by regulators to assess whether or not an entity is making excessive returns. This can be done by comparing the entity's ROCE against its weighted average cost of capital (WACC). If the ROCE is significantly and persistently above the WACC, then this can be a strong indication that the entity is making returns above that which would be expected in a competitive market.
92. The data analysed by the Authority suggests that from 2013 to 2015, Digicel Group had a ROCE of around 70%, and that OneComm had a ROCE of around 45% over the same period. For comparison, a recent study by Aswath Damodaran of the New York University Stern School of Business<sup>20</sup> estimated that the average WACC for telecom services across 67 firms in the USA is 6.9%.<sup>21</sup> This suggests that these levels of returns of OneComm and Digicel Group could be in excess (and possibly significantly in excess) of their respective WACC.
93. While the Authority recognizes the limitations in the underlying data and the need to benchmark ROCE figures against an entity's own WACC, the Authority considers that the significant divergence between the ROCE values for OneComm and Digicel Group and a benchmark rate computed across USA telecoms operators by a leading university is evidence that levels of profit by OneComm and Digicel Group could be excessive; and therefore, indicative of SMP.
94. However, the Authority recognizes that these are historical ROCE figures, and that the figures correspond to a period before the investment program on the fixed and mobile telecoms infrastructure. Notwithstanding this, the Authority notes that past behaviour can be informative in the assessment of joint SMP (as noted previously), and more recent and accurate financial information is now essential in order to undertake this analysis more thoroughly. This is precisely the reason why the provision of this information is being mandated as part of the remedies package. In other words, analysing more up-to-date profitability information will allow the Authority to deregulate markets more quickly, where the evidence confirms the absence of SMP.

### **The approach to assessing joint SMP in wholesale markets**

95. Some stakeholders argued that if two entities have joint SMP in a downstream (retail) market, this does not demonstrate that they can engage successfully in tacit collusion in an upstream (wholesale) market.
96. On this basis, stakeholders suggested that separate analysis must be conducted of whether conditions in the upstream market meet the Airtours criteria.

### **Response from the Authority**

97. The Authority has followed the latest guidance from the European Commission on assessing SMP, which sets out that the starting point for the identification of wholesale markets susceptible to ex ante regulation should always be the analysis of corresponding

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<sup>20</sup> Damodaran, A. (2019) 'Cost of Capital by Sector (US)', available at [http://people.stern.nyu.edu/adamodar/New\\_Home\\_Page/datafile/wacc.htm](http://people.stern.nyu.edu/adamodar/New_Home_Page/datafile/wacc.htm).

<sup>21</sup> This figure is based on post-tax cost of debt.

retail market(s).<sup>22</sup> If an assessment of retail markets shows that SMP exists, attention is turned to whether SMP also exists in the upstream (wholesale) market.

98. As a starting point, the Authority observes that both OneComm and Digicel Group are vertically integrated operators, operating at both the wholesale and retail levels across all the markets in which the two groups offer services.
99. Furthermore, the Authority understands from information provided by stakeholders that almost all retail sales, especially regarding the broadband and mobile markets, are self-supply, i.e. both OneComm and Digicel Group supply themselves with the requisite wholesale inputs to their own respective downstream retail arms.
100. Given this, the retail market information used to inform retail market SMP can be abstracted upstream, i.e. wholesale market shares will be very closely aligned to those observed in the retail market. This means, for example, that wholesale broadband and mobile markets will likely have high degrees of concentration, consistent with the retail level. To this point, OneComm and Digicel Group appear to account for the vast majority of wholesale broadband market revenues, over 95%, and 100% of wholesale mobile market revenues.
101. Furthermore, the respective symmetry and stability of wholesale market shares for OneComm and Digicel Group will closely match the retail level's market share, as will the market concentration.
102. Regarding barriers to entry, the Authority notes that the high and non-transitory barriers to entry into the retail and wholesale broadband and mobile markets are the reason why both markets were designated as being susceptible to ex ante regulation in the 2017 Preliminary Identification of Markets Notice.<sup>23</sup>
103. The Authority has not received any evidence demonstrating that a different conclusion would have been reached if a detailed assessment of joint SMP under the Airtours criteria had been undertaken at the wholesale level.
104. On the basis of the above, the Authority considers that there is sufficient evidence to demonstrate that if there is joint SMP at retail levels, that finding would also be made at the wholesale level, consistent with the criteria set out in section 23 of the ECA. On that basis, the Authority considers that it is not necessary to conduct a detailed Airtours assessment on wholesale broadband and mobile markets in addition to that conducted on end-to-end retail markets.

### **Sector developments since 2013**

105. Some stakeholders noted that some important market developments have occurred since the market review in 2013. These developments include network upgrades in broadband and mobile markets; the growth of OTT services; the entry of Bluewave into the broadband market; and the entry of Digicel Group into the PayTV market.

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<sup>22</sup> European Commission (2018), "Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services" [\[Link\]](#), paragraph 15.

<sup>23</sup> The Regulatory Authority of Bermuda (2017), "Preliminary Identification of Markets Notice: In accordance with section 22(1) of the Electronic Communications Act (2011)", [\[Link\]](#).

106. Such points were used by some stakeholders to argue that electronic communications markets were now functioning effectively; and therefore, that it was not necessary or appropriate to make SMP findings in certain markets.

*Response from the Authority*

107. As a starting point, an analysis of competition (and a finding of SMP that would indicate the need for ex ante regulation) must be made within a specific and relevant economic market. The analysis cannot be made holistically, at a sector-wide level. This is why all the points raised by stakeholders (including the stakeholders listed above) were taken into account by the Authority in the analysis set out in the Second Consultation, within the assessment of each individual market.
108. Notwithstanding that point, the Authority recognizes that a number of developments in Bermuda's electronic communications sector have occurred over the past few years, and that some of these developments have helped to improve consumer outcomes. For example, the roll-out of broadband network upgrades has led to faster internet connection speeds. Similarly, the launch of 4G mobile services has improved island-wide mobile connectivity.
109. While it could be argued that consumers of electronic communication services in Bermuda are in a better place than consumers were in 2013 in terms of service price and quality, this is not sufficient criteria for determining whether or not there exists SMP in a particular market.
110. The key consideration for the Authority, consistent with the ECA, is whether the level of competition in the market is sufficient to suggest that the market is currently effectively competitive, or that the market is likely to be by the end of the market review period. If it is, then a further consideration is whether the competitive dynamic is sustainable such that it is appropriate to withdraw ex ante regulation. It would only be appropriate for the Authority to withdraw ex ante regulation from a relevant market when both considerations can be proven in that market.
111. Therefore, the Authority makes clear that while market outcomes may have improved in the last few years, there is currently significant evidence indicating that a number of markets (including broadband and mobile) are currently not effectively competitive. On that basis, it is not appropriate to withdraw ex ante regulation from these markets at this time.

**5.2.2 Market-specific SMP issues raised by stakeholders and the Authority's response to them**

112. Further to the above points, there were a number of responses that commented on specific markets. This section sets out those comments and the Authority's response to such comments.
113. This section is structured to be consistent with the SMP analysis in the Second Consultation, in accordance with the defined relevant market groups, which are: broadband; mobile; fixed voice; subscription television; business connectivity; and off-island connectivity.

## **Broadband**

114. Stakeholders made a number of comments and claims specifically on the broadband markets. The stakeholders' comments fall into one of five categories:
- i. recent broadband network upgrades;
  - ii. the stability of broadband market shares;
  - iii. Bluewave as a credible competitive alternative to OneComm and Digicel Group;
  - iv. retail broadband pricing analysis; and
  - v. cost differences between OneComm and Digicel Group.
115. Each of these is discussed in turn below.

### **Recent broadband network upgrades**

116. Some stakeholders commented that the deployment of new technologies in the broadband market, with network upgrades by both OneComm and Digicel Group, demonstrates that both of these operators are engaged in dynamic competition.
117. The stakeholders went on to suggest that entities engaged in tacit coordination would not need to make such big network investments because they would already be earning supra-competitive returns.
118. Stakeholders also commented that to the extent operators, who are engaged in tacit coordination, undertook network upgrades, one might expect them to do so in such a way as to avoid direct competition. For example, the operators might roll out network upgrades in different areas, thereby avoiding head-to-head competition.

### **Response from the Authority**

119. The Authority considers that entities can roll out network upgrades for a number of reasons, including to reduce operating costs. That would be desirable for any firm wishing to increase its profit, whether the entity was in a contestable market or not.
120. The Authority does not discount the possibility that network upgrades could be the result of a degree of contestability. However, the concern around joint SMP is not simply about individual instances of contestability but about the stability of a market structure that gives rise to the risk of tacit coordination.
121. With the network upgrades now largely complete, looking forward, the Authority considers that market conditions are such that the scope for tacit coordination continues to exist. In other words, the recent network investments have resulted in a similar market structure to that which existed before the investments, i.e. two large operators which offer very comparable broadband services in terms of product characteristics and prices, and which account for the vast majority of revenues in the market.

### **Stability of broadband market shares**

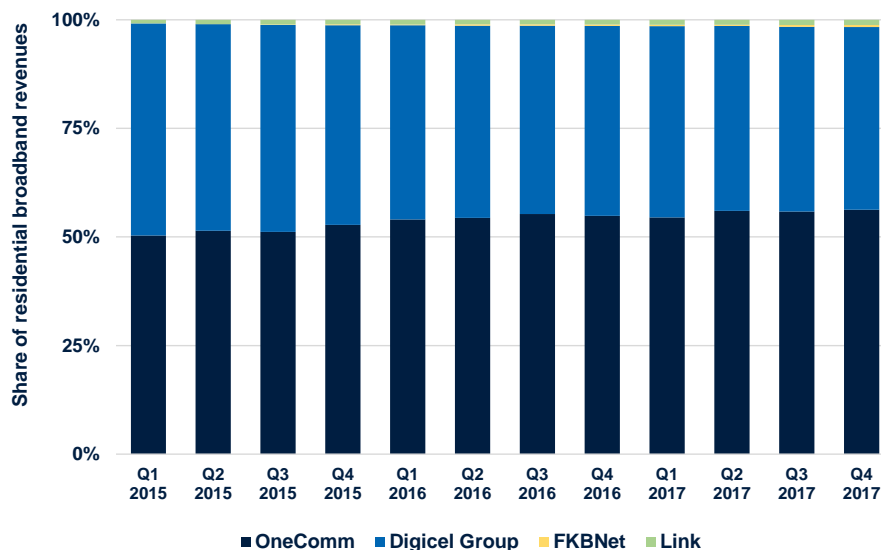
122. Some stakeholders argued that the broadband market share data presented by the Authority in the Second Consultation showed significant market share movement in favour of OneComm in the 2015–17 period. Such statements are used to suggest that market

shares between OneComm and Digicel Group are not stable over time; and therefore, that the evidence is not consistent with a finding of joint SMP.

Response from the Authority

123. The assessment of market shares was used by the Authority as one set of inputs in assessing joint SMP. The data in question relates to Figure 5.3 in the Second Consultation, which is reproduced below.

**Figure 5.2 – Residential broadband market shares, (ISP + Access),  
Q1 2014 to Q4 2017**



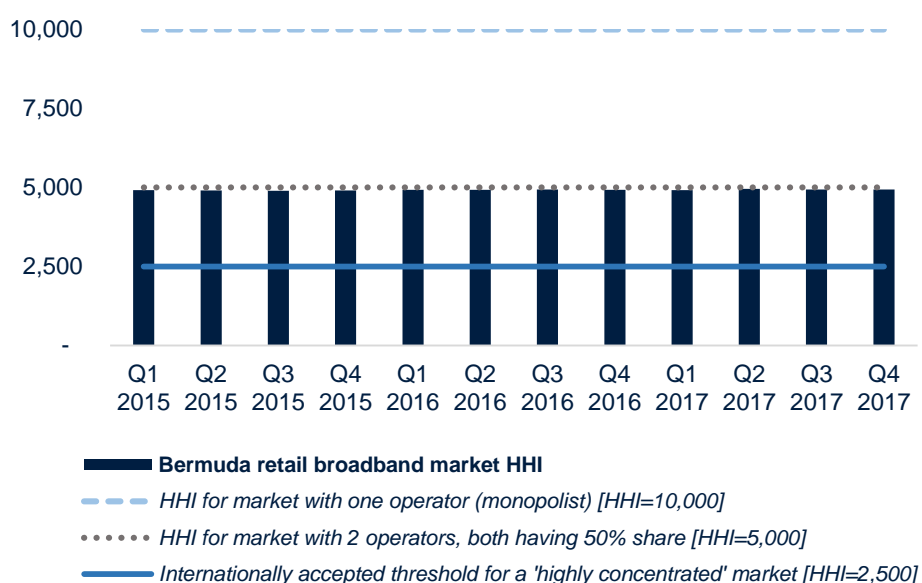
Source: Data provided by OneComm, Digicel Group, FKBNNet and Link in response to an RFI.

Note: Values for the figure have been calculated based on revenues, for the periods between Q1 2015 and Q4 2017.

124. The above figure shows that OneComm and Digicel Group account for the vast majority of revenues, over 95%, in the broadband market. Furthermore, both OneComm and Digicel Group have had a high share of the retail broadband market, over 40%, for every period from Q1 2015 to Q4 2017.
125. While the market shares are not exactly 50/50 between OneComm and Digicel Group in all periods, and despite OneComm's market share increasing slightly in 2016 and 2017, the market share data indicates that each provider has a high market share. While "stability" is a fairly subjective notion, the Authority considers that the market shares have been fairly stable over the period examined.
126. Additionally, the market shares between OneComm and Digicel indicate that the broadband market is very highly concentrated. Furthermore, the levels of concentration have been very stable over time.

127. Perhaps the most common measure of market concentration is the Herfindahl–Hirschman Index (HHI),<sup>24</sup> which provides a score out of 10,000. The higher the score, the more concentrated the market is considered to be. Most regulators and competition authorities around the world consider that any HHI over 2,500 is indicative of a “highly concentrated market”.
128. The retail broadband market in Bermuda had in Q4 2017 an HHI of 4,900. For comparison, the HHI for a market with two entities that have each exactly 50% market share is 5,000. This indicates that the broadband market concentration in Bermuda is very similar to that of a market with only two operators that each have 50% share. Furthermore, the market concentration has been consistent for many years, as shown in Figure 5.2 below.

**Figure 5.3 – Bermuda retail broadband market concentration based on HHI, Q1 2015 to Q4 2017**



Source: Data provided by OneComm, Digicel Group, FKBNet and Link in response to an RFI.

129. Firstly, the above figure clearly shows how the retail broadband market concentration in Bermuda has been very stable for a number of years. Secondly, the level of concentration is very similar to that of a market with two operators each having 50% market share. Thirdly, the level of concentration is well above what one would expect to see in a competitive market, therefore, the evidence indicates that the retail broadband market is highly concentrated.

<sup>24</sup> The Herfindahl–Hirschman Index (HHI) is a commonly accepted measure of market concentration. The HHI is calculated by squaring the market share of each entity competing in the market and then summing the resulting numbers. For example, for a market consisting of four firms with shares of 30%, 30%, 20%, and 20%, the HHI is 2,600 ( $30^2 + 30^2 + 20^2 + 20^2 = 2,600$ ). The HHI takes into account the relative size distribution of the firms in a market. It approaches zero when a market is occupied by a large number of firms of relatively equal size and reaches its maximum of 10,000 points when a market is controlled by a single firm. The HHI increases both as the number of firms in the market decreases and as the disparity in size between those firms increases. The agencies generally consider markets in which the HHI is between 1,500 and 2,500 points to be moderately concentrated, and consider markets in which the HHI is in excess of 2,500 points to be highly concentrated. See U.S. Department of Justice & FTC (2010), “Horizontal Merger Guidelines § 5.3”,[\[Link\]](#).

130. Taken together, the market share and market concentration data does clearly demonstrate that the relevant market is concentrated, that both OneComm and Digicel have high shares of the relevant market, and that those shares are reasonably stable.

### **Bluewave as a competitive alternative to OneComm and Digicel Group**

131. Stakeholders stated their view that the Authority has failed to fully account for the impact of Bluewave on the competitive intensity of the market and suggest that the Authority has given too much emphasis to the fact that Bluewave only has a small market share.
132. One stakeholder suggested that: “[f]rom an economic perspective, [sic] however, it is not necessary for a competitor to have a large market share in order to effectively discipline the prices of other firms in the market – rather, it is enough that, if one provider tries to raise prices above competitive levels, consumers have the choice to shift, thereby defeating the price increase.”

### **Response from the Authority**

133. The Authority agrees with stakeholder comments that from an economic perspective, the relevant consideration in assessing SMP is the degree of competitive constraint operators (such as Bluewave) would impose on others. That is, whether the presence of Bluewave constrains OneComm and Digicel Group from increasing their prices/decreasing quality.
134. However, to date, the Authority has not seen robust evidence that demonstrates that Bluewave is imposing a material competitive constraint on OneComm and/or Digicel Group.
135. Furthermore, there remain concerns regarding Bluewave’s ability to become a sustainable operator in the long run. This is indicated by Bluewave’s very low market share, at less than 1% as of the end of 2017, as set out in paragraph 326 of the Second Consultation. In addition, as the Authority understands, Bluewave does not offer services over a large portion of the island; and therefore, it does not compete on an island-wide basis.
136. Given this, until such time as it is clear to the Authority that: (i.) Bluewave really is imposing a material competitive constraint on OneComm and Digicel Group; and (ii.) that competitive constraint will remain, with high probability, for the duration of the market review period, the Authority would not be minded to conclude that the presence of Bluewave is sufficient to reconsider any finding of SMP or joint SMP in the broadband market.

### **Retail broadband pricing analysis**

137. Stakeholders made a number of points about the Authority’s analysis of retail broadband prices. These points generally fall into one of four categories:
- i. the transparency of broadband prices is the result of regulation; and therefore, not a facet of any tacit collusion;
  - ii. retail broadband prices have not been stable over time, which undermines the idea that stable broadband prices are indicative of tacit coordination around pricing;

- iii. any similarities in historic broadband prices is the result of regulation, and not of the independent choice of OneComm and Digicel Group; and
- iv. recently introduced bundled offerings exhibit significant price differences, which suggests also that there is no coordination around pricing.

138. Each of these points is discussed in turn below.

*Response from the Authority*

139. **Regarding the transparency of retail broadband prices**, the Authority recognizes that ICOL holders are required as part of the licensing conditions to publish clear, transparent and up-to-date information regarding rates, terms and conditions. The condition of pricing transparency as part of an Airtours assessment does not suggest illegality, nor accuse operators of any malfeasance. The condition simply seeks to assess whether or not prices could be used as a focal point for tacit coordination. In retail broadband markets, generally prices are visible for all operators, which is an informative but not sufficient element of an Airtours analysis.
140. **Regarding the stability of retail broadband prices over time**, some stakeholders assert the Authority only analyse a subset of broadband tariffs, and thereby only looking at those plans that fulfilled the criteria of stable pricing.
141. The Authority undertook its analysis of retail broadband prices in 2018, and at that time included all tariffs that were being advertised. During this analysis, the Authority chose to draw a distinction between legacy broadband services and new fibre broadband services. This was because the comparison across the two did not make much sense when looking at prices and speeds. For example, as of May 2018, OneComm's migration plan made clear that a customer who was paying for an 8Mbps broadband service (costing \$105 per month) would be upgraded to a service offering up to 20Mbps. From an economic perspective, it does not make sense to compare the 8Mbps with the 20Mbps service, since it is unlikely that a customer would take the 8Mbps tariff, which offers lower quality at the same price. The data on price-comparable OneComm tariffs was set out in Table 5.2 of the Second Consultation, and is reproduced below.

**Table 5.1 – OneComm's broadband customer migration to FibreWire**

Monthly price	Previous tariff (download speed, Mbps)	FibreWire tariff (download speed, Mbps)	Increase in speed
\$65	4	5	25%
\$85	6	10	66%
\$105	8	20	250%
\$125	10	30	300%
\$170	15	50	666%
\$240	25	200	800%

Source: OneComm's website: [https://onecomm.bm/shop/internet/internet\\_plans/FibreWire-internet](https://onecomm.bm/shop/internet/internet_plans/FibreWire-internet)  
[Accessed May 2018.]

Note: The Authority notes that the 5Mbps FibreWire tariff was available as part of the customer migration program, but has been withdrawn from the alternatives now available for new customers.

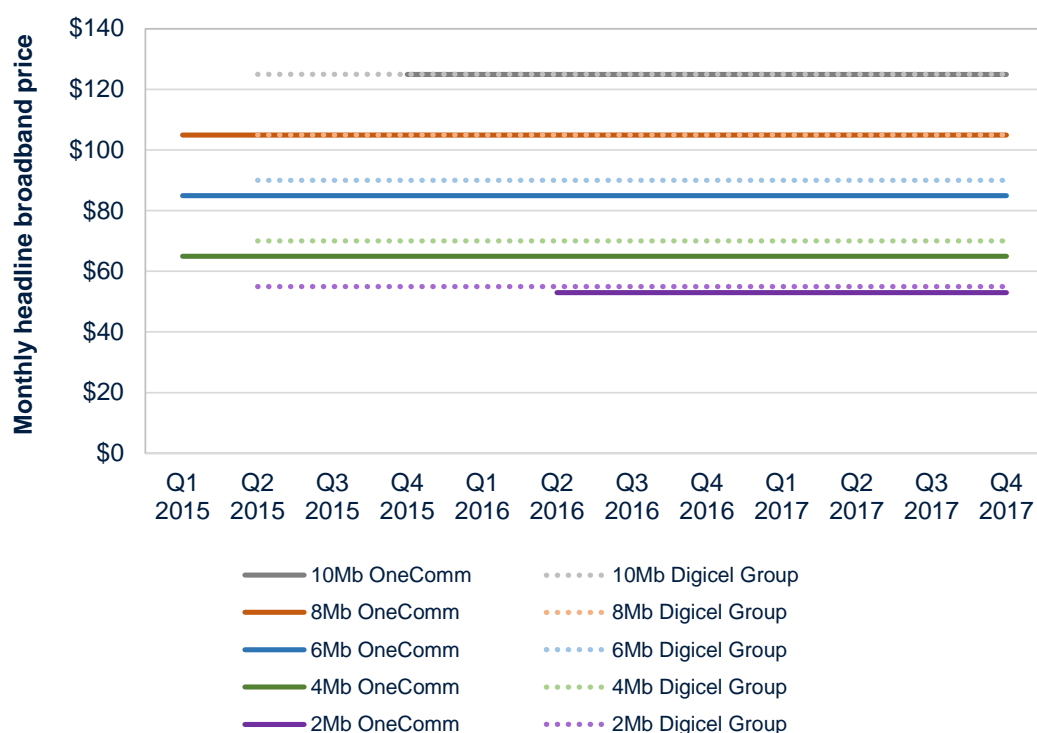
142. The same is true for Digicel Group. According to stakeholder comments as at 15 March 2019, Digicel Group offered a fibre internet plan of 50Mbps for \$170 per month. Of the standard broadband tariffs offered by Digicel Group, 15Mbps would cost \$160 per month



and 25Mbps would cost \$225 per month. Therefore, it is not appropriate to compare the 50Mbps fibre broadband tariff with the legacy tariffs given that it is unlikely that a consumer would choose that legacy service over a higher-quality and lower-cost fibre broadband service.

143. During the Authority's analysis, when comparing OneComm and Digicel Group's prices, the Authority first looked at the prices that both groups charged for legacy broadband services, i.e. those using the older network technology. The Authority observed that historically, prices were very closely aligned, and for many of the most popular tariffs were often identical. This was presented in Figure 5.1 of the Second Consultation, which is reproduced below. The figure only shows tariffs of up to 10Mbps, since over the date range covered, the vast majority of customers took a legacy broadband tariff with a headline speed of no more than 10Mbps.

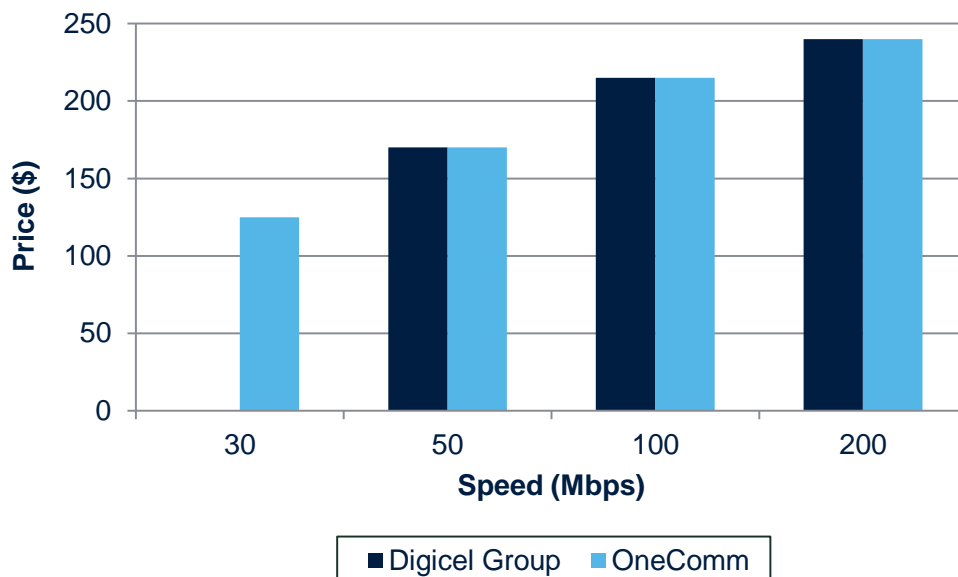
**Figure 5.4 – Retail broadband prices (of up to 10Mbps) for ISP + Access offered by OneComm and Digicel Group, Q1 2015 to Q4 2017**



Source: Analysis by the Authority based on information provided by OneComm and Digicel Group in response to an RFI.

144. Regarding the newer broadband tariffs, the Authority analysed the tariffs advertised by OneComm and Digicel Group on their respective websites, as at October 2018 (see Figure 5.2 of the Second Consultation). At that time, Digicel Group was advertising three tariffs—50Mbps, 100Mbps and 200Mbps—and OneComm was advertising four tariffs—30Mbps, 50Mbps, 100Mbps and 200Mbps. At that time, the prices were identical for all of the fibre broadband tariffs that the two groups advertised—50Mbps, 100Mbps and 200Mbps. The data clearly indicates that prices have been closely aligned between OneComm and Digicel Group. This was presented in Figure 5.2 of the Second Consultation, which is reproduced below.

**Figure 5.5 – Retail broadband prices advertised by OneComm and Digicel Group, October 2018**



Source: Companies' websites (as at October 2018).

145. **Regarding to role that regulation has played in the stability of retail broadband prices over time**, the Authority notes that under the 2013 remedies, SMP operators were required to notify the Authority's ahead of any proposed tariff changes. However, this did not mean that operators were unable to change their tariffs.
146. **Regarding any recently introduced bundled offerings**, while there do appear to be some bundles being offered, the Authority has not been presented with data that would indicate that bundles are the main form in which consumers purchase electronic communication services in Bermuda. While the Authority recognizes that the websites of OneComm and Digicel Group advertise bundles, it is not clear how many consumers actually purchase these services. In this regard, the Authority notes that in a July 2017 formal information request, the Authority specifically requested information from both OneComm and Digicel Group on the number of customers taking different combinations of services. A reproduction of the template sent to both firms is presented below.

**Figure 5.6 – Formal information request sent to OneComm and Digicel Group in July 2017**

Multi service customers		
Please provide the following information in the format below.		
<u>Question 5.1</u>		
<i>Multi service customers - Number of customers in Q2 2017</i>		
<b>Standard</b>		<b>Q2 2017</b>
Voice		number of customers
Voice + Standard Broadband Access		number of customers
Voice + Standard ISP		number of customers
Voice + Standard Broadband Access + Standard ISP		number of customers
Voice + Pay TV		number of customers
Voice + Standard Broadband Access + PayTV		number of customers
Voice + Standard ISP + Pay TV		number of customers
Voice + Standard Broadband Access + Standard ISP + PayTV		number of customers
Voice + Standard Broadband Access + Mobile		number of customers
Voice + Standard ISP + Mobile		number of customers
Voice + Standard Broadband Access + Standard ISP + Mobile		number of customers
Voice + Pay TV + Mobile		number of customers
Voice + Broadband Access + PayTV + Mobile		number of customers
Voice + Standard ISP + Pay TV + Mobile		number of customers
Voice + Standard Broadband Access + Standard ISP + PayTV + Mobile		number of customers
<b>Fibre</b>		<b>Q2 2017</b>
Voice		number of customers
Voice + Fibre Broadband Access		number of customers
Voice + Fibre Broadband Access + Fibre ISP		number of customers
Voice + Pay TV		number of customers
Voice + Fibre Broadband Access + PayTV		number of customers
Voice + Fibre Broadband Access + Fibre ISP + PayTV		number of customers
Voice + Fibre Broadband Access + Mobile		number of customers
Voice + Fibre Broadband Access + Fibre ISP + Mobile		number of customers
Voice + Pay TV + Mobile		number of customers
Voice + Broadband Access + PayTV + Mobile		number of customers
Voice + Fibre Broadband Access + Fibre ISP + PayTV + Mobile		number of customers

Source: Excel template attached to the formal information request that was sent to OneComm and Digicel Group in July 2017.

147. In response to the information request, OneComm stated that it was unable to complete any part of the template (reproduced above) as its “billing systems and customer databases are not designed to provide reports for multiple services. Nor are they cross referenced between wireline and wireless”.<sup>25</sup> Digicel Group was able to complete only a small number of cells, which was not sufficient to provide robust insights into the nature of how consumers purchase Digicel Group’s products. However, the Authority did note from Digicel Group’s data that the most popular service composition that Digicel Group provides data for is a stand-alone service, i.e. not a bundle.

### Cost differences between OneComm and Digicel Group

148. Some stakeholders raised concerns about the Second Consultation’s assessment of cost differences between Digicel Group and OneComm, suggesting that more analysis should

<sup>25</sup> OneComm (2017) “RA August 2017 – Market Data Request – FINAL” [Excel Document], worksheet: “Q5-Multi service customers”.

be undertaken given that significant cost differences could impede efforts to engage in tacit collusion.

*Response from the Authority*

149. The Authority did consider cost differences between Digicel Group and OneComm as part of its assessment of SMP, in order to understand whether material cost differences between the two entities exist, and if so, whether this would impact the potential for any tacit collusion.
150. While data available to the Authority suggested that the cost basis for OneComm and Digicel Group may be different (for example regarding the two group's respective broadband network upgrades) it was not clear that any such cost differences would ultimately impact the ability of both groups to tacitly collude. Furthermore, the market outcomes that the Authority observes are consistent with tacit coordination. For this reason, the Authority does not consider that cost differences between OneComm and Digicel Group would on their own undermine a finding of joint SMP in the broadband market.

**Mobile**

151. Stakeholders made a number of comments and claims specifically in respect to mobile markets. The comments fall into one of four categories:
- i. recent mobile network upgrades;
  - ii. mobile market structure and entry of additional operators;
  - iii. symmetry of retail mobile market shares between OneComm and Digicel Group; and
  - iv. mobile retail price analysis.
152. Each of these is discussed in turn below.

**Recent mobile network upgrades**

153. Broadly consistent with those comments made in respect of broadband, some stakeholders commented that the recent mobile network upgrades by both OneComm and Digicel Group, i.e. to achieve island-wide coverage of 4G, demonstrate that these operators are engaged in dynamic competition.

*Response from the Authority*

154. While the claim being made is similar to that for broadband, that recent investments could indicate the presence of dynamic competition, the context of each is very different.
155. In the case of broadband, recent network investments by operators has been of their own choosing, in that operators made the voluntary choice to invest. In the case of mobile, investment in 4G was an explicit requirement in the HDS-1 license; and therefore, it was mandatory.
156. Given that the mobile network investment was a license requirement, and that both OneComm and Digicel Group had the same coverage obligation, the recent mobile

network investment by these operators does not provide any information about dynamic competition in the mobile market.

### **Mobile market structure and entry of additional operators**

- 157. Stakeholder comments discussed the current market structure and the recent HDS-1 spectrum award, in which only OneComm and Digicel Group acquired a spectrum license.
- 158. Comments raised the point that the moratorium on issuance of ICOL licenses is the root cause of the problem, and that without that, the market would flourish and become effectively competitive.

#### *Response from the Authority*

- 159. Within the HDS-1 spectrum release, the Authority was specifically minded to seek to improve contestability in the mobile markets by securing the entry of a third mobile operator. Unfortunately, this was not possible as there was, at the time, no credible third mobile operator.
- 160. Notwithstanding this, the Authority recognizes the barrier that the moratorium had on ICOL licenses imposed, and the possible impact on market structure. As such, following recommendation from the Authority, the Minister lifted the moratorium on 12<sup>th</sup> March 2019. The Authority issued a process for new licences, as set by general determination, on 16<sup>th</sup> August 2019. This process will open up the mobile market for potential entrance of credible and efficient mobile operators who wish to compete with OneComm and Digicel Group.
- 161. While the Authority hopes that greater competition will emerge in the mobile markets, following the establishment of the licence application and issuance process, it is not possible to say at this time how many, if any, operators may enter the market. Therefore, the Authority is in no position to determine that the market will tend towards effective competition.

- 162. When the Authority observes that the mobile markets are effectively competitive, e.g. as a result of successful entry by alternative operators, then the Authority would seek to revoke *ex ante* remedies on the basis of no longer finding SMP in the relevant market.

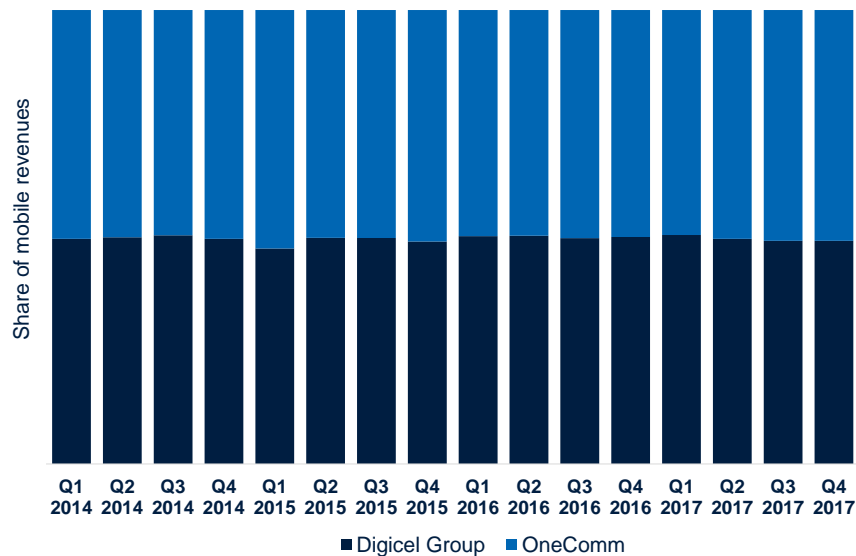
### **Symmetry of retail mobile market shares between OneComm and Digicel Group**

- 163. With respect to the market for mobile, some stakeholders commented that the fact that Digicel Group and OneComm have approximately equal market share, is consistent with robust competition, especially since the high fixed costs of operating a mobile network gives each group a powerful incentive to maximize the size of its customer base.

#### *Response from the Authority*

- 164. In the Second Consultation, the Authority set out data on market shares, which showed that OneComm and Digicel Group have almost exactly 50% market share each. Furthermore, this market share symmetry has prevailed for a number of years. This was presented in Figure 5.7 of the Second Consultation, which is reproduced below for convenience.

**Figure 5.7 – Mobile market shares, Q1 2014 to Q4 2017**



Source: Based on information provided by OneComm and Digicel Group in response to an RFI. To preserve confidentiality, values on the Y-axis have been removed.

165. The above figure shows that since Q1 2014 the revenue shares for Digicel Group and OneComm have been almost completely symmetrical. In fact, 12 of the 16 quarters from Q1 2014 to Q4 2017 show an exactly even (50%/50%) revenue split between OneComm and Digicel Group. Of the other four quarters, the biggest asymmetry is in Q1 2015, when the split was 53% to 47%, respectively. In short, mobile market revenues are shared almost perfectly symmetrically across OneComm and Digicel Group.
166. Symmetry of market shares is just one form of inputs that the Authority took into account in making a determination of joint SMP. Consistent with the ECA and guidance from the European Commission, no single input should be relied upon to make a SMP finding. Instead, the finding should be based on the totality the market data that is available. Consistent with this approach, the Authority has analysed all data available in the mobile market.
167. In addition to the data on market shares, the Authority also considered the levels of profitability of OneComm and Digicel Group. Discussion on the Authority's profitability analysis is set out above in paragraphs 164-166. As noted in those paragraphs, the Authority observed high levels of ROCE, relative to WACC benchmarks, indicative of entities making returns above that would be expected in a competitive market.
168. The Authority noted that the data provided by operators did not enable the Authority to achieve robust estimates of profitability by different Product Groups. While this is the case, the Authority was able to observe from the data that profits in the mobile market appeared to be higher than in other markets. This was based on one of the operators providing some data broken down just for mobile operations, which indicated an estimated ROCE that was higher than the average ROCE across that operator's whole operation. This evidence indicated that operators in the mobile market could be making profit significantly in excess of what would be expected in a competitive market.

169. In addition to considering market shares and profitability with the SMP assessment, the Authority also analysed retail prices, to determine if prices between OneComm and Digicel Group were; a) high relative to benchmarks, and b) broadly comparable with each other. Both points informed an assessment of joint SMP. This retail pricing evidence is discussed under the below sub-section.

### **Mobile retail price analysis**

170. Some stakeholders noted that in their view, mobile retail prices have not been stable in recent years, and that there are differences across the competitors that undermine the view that retail price symmetry between OneComm and Digicel Group could be the result of tacit collusion.

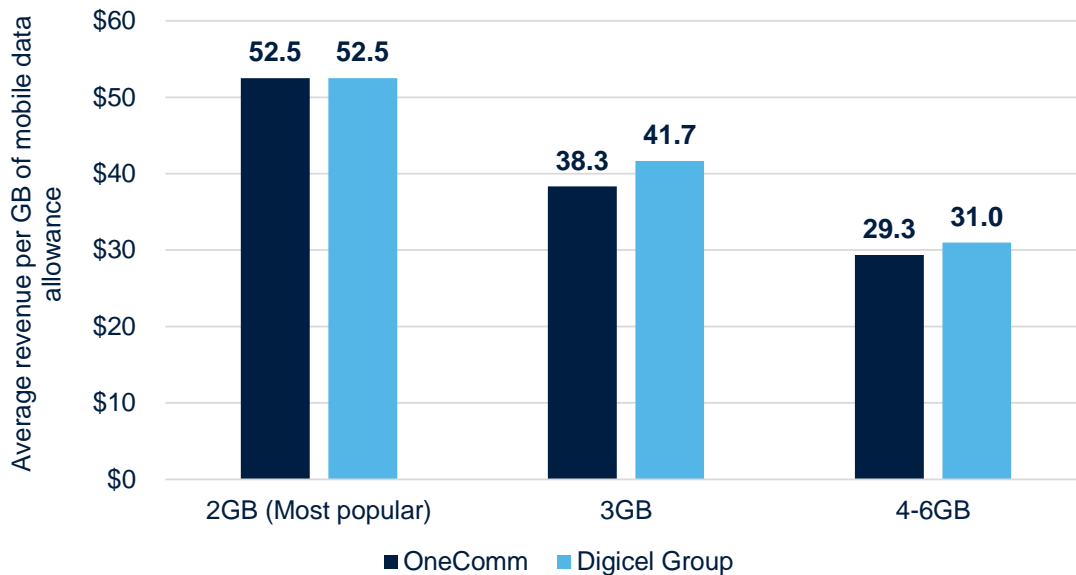
#### *Response from the Authority*

171. In the Second Consultation, the Authority set out data on retail mobile prices of OneComm and Digicel Group. The data was gathered from OneComm and Digicel Group's websites in June 2018.
172. The Authority recognizes that there are a large number of mobile tariffs currently offered by OneComm and Digicel Group. As a result, and to make the analysis tractable, the Authority focused on the most popular mobile tariffs. For instance, focusing on post-pay tariffs, the Authority compared mobile plans offering between 2GB and 3GB of inclusive data allowance, noting that the 2GB allowance tariffs were the most popular. As noted in paragraph 362 of the Second Consultation, 66% of Digicel Group's post-pay customers were on a 2GB or 3GB plan at that time. For OneComm, the figure was a little over 50% of post-pay customers.<sup>26</sup>
173. As a result, the Authority considered that by comparing these tariffs, insight could be reached over how OneComm and Digicel Group compare in terms of mobile tariff prices, for a large proportion of their respective subscriber bases.
174. With respect to these specific tariffs, the Authority observed close price alignment between OneComm and Digicel Group. The Authority sought to widen the analysis by also including mobile pre-pay tariffs with higher inclusive allowance, such as between 4GB and 6GB. The Authority observe a similar result, that both OneComm and Digicel Group have closely aligned prices. This data was presented in Figure 5.6 of the Second Consultation and reproduced below for convenience.

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<sup>26</sup> Based on information provided by OneComm and Digicel Group in response to an RFI.

**Figure 5.8 – Average revenue per GB of monthly mobile data allowance, across mobile tariffs**



Source: Digicel Group and OneComm websites. [Accessed June 2018.]

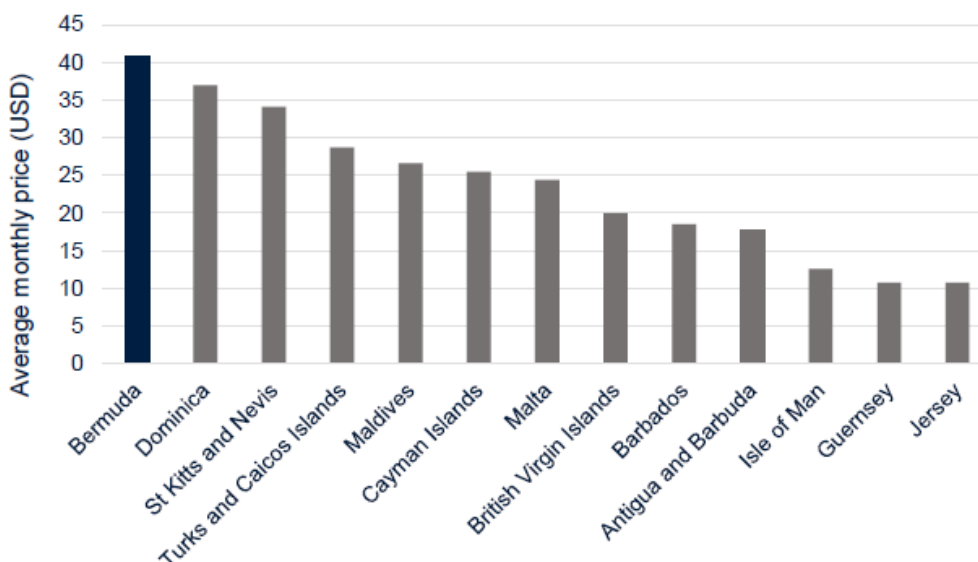
Note: Digicel Group tariffs relate to the “Core” (2GB), “Standard” (3GB) and “Select” (5GB) plans. OneComm tariffs relate to the 2GB, 3GB, 4GB and 6GB plans. The 4-6GB figure in respect of OneComm is computed based on a subscriber number-weighted average per GB of the 4GB and 6GB plans.

175. As noted above, while the retail pricing analysis did inform the Authority’s joint SMP analysis, the proposed joint SMP finding was based not on any one set of inputs, but instead on the totality of data that was available to the Authority which included, in addition to retail prices, market shares and profitability information, as discussed above.
176. Further to the above evidence, the Authority also considered as part of its retail pricing analysis how Bermuda compared to other countries in terms of retail mobile prices. The data indicates that relative to countries with similar characteristics,<sup>27</sup> such as Cayman Islands, Dominica, Guernsey, Maldives, Malta, and Turks and Caicos Islands, Bermuda has the most expensive mobile tariff prices. This data was presented in Figure 5.7 of the Second Consultation and reproduced below for convenience.

<sup>27</sup> The relevant characteristics the Authority used to select comparator countries included, population size, land mass, and whether or not the country was an Island nation.



**Figure 5.9 – Average monthly PPP-adjusted price per GB of mobile data allowance, August 2017**



Source: ISP websites.

Note: Tariffs included are those with 2-5GB of inclusive data allowance (PPP-adjusted US\$).

177. The above figure shows that the average monthly price of a GB of mobile data allowance in Bermuda is higher than all twelve other countries included in the benchmarking exercise. In some cases, Bermuda is significantly higher than other countries. For example, the Bermuda price is over twice the price of the British Virgin Islands and Barbados, and over three times the price in Guernsey and Jersey.

### **Fixed voice**

178. The Authority received no comments specifically on the SMP proposals in the fixed voice market, with most comments relating to the market definition and remedies proposals.

### **PayTV**

179. Overall, stakeholders agreed with the Authority's determination that there is no SMP in the retail television subscription market.
180. Some stakeholders praised the Authority's use of consumer research to better understand the use of over-the-top ("OTT") services and the degree to which OTT services impose a competitive constraint on traditional PayTV operators.

### **Business connectivity**

181. The Authority received no comments specifically on the SMP proposals in the business market, with most comments relating to the market definition and remedies proposals.

### **Off-island connectivity**

182. Few stakeholder responses discussed off-island connectivity. Overall, however, stakeholders agreed with the Authority's determination that there is no SMP in the market for off-island connectivity.

### **5.3 Remedies: stakeholder responses to the Second Consultation and the Authority's opinion on the responses**

183. This section provides summaries of the stakeholder comments received regarding remedies, before the Authority sets out its opinion on the specific issues raised.
184. Following the Authority's remedies proposed in the Second Consultation, stakeholder responses fell into one of two categories:
- i. general issues that cover the Authority's overall approach to remedies, which is relevant across a number of relevant markets; and
  - ii. remedy-specific issues, i.e. comments relevant to specific remedies such as Cost Orientation or Accounting Separation.
185. Each of these is discussed in turn below, with section 5.3.1 covering general issues on the approach to remedies, and section 5.3.2 covering remedy-specific issues.

#### **5.3.1 General issues on approach to remedies raised by stakeholders and the Authority's response**

186. The more general comments made by stakeholders regarding remedies fell into one of four categories:
- how the proposed remedies will be implemented in practice;
  - imposing remedies in both retail and wholesale markets;
  - proportionality of remedies given their intended objectives; and
  - balance between ex ante and ex post regulation.
187. As set out in section 24 of the ECA, if, as part of the market review process, the Authority concludes that the imposition of one or more *ex ante* remedies is necessary to prevent or deter anticompetitive effects that are caused or are likely to be caused by the presence of SMP in a relevant market, the Authority may make an administrative determination to impose one or more obligations on any communications provider found to have SMP in a relevant market.
188. Therefore, the Authority has sought to ensure proportionality in any proposed intervention, to ensure that the proposed remedy is proportionate to the competition concern it seeks to address.
189. In this context, the Authority responds to each of the general issues outlined above in turn below, followed by a response to more specific comments on particular remedies.

### **How the proposed remedies will be implemented in practice**

190. Comments from stakeholders noted that some of the remedies are "vague and unclear", and that there is limited guidance given on how these regulations would be implemented.

191. Some stakeholders argued that greater clarity was needed on the SMP obligations, as well as on how the Authority would assess SMP operator compliance

*Response from the Authority*

192. The Second Consultation set out the remedies considered by the Authority to be necessary to address identified competition concerns. The Second Consultation provided the first description of what the remedies would look like in practice. Following the publication of the Second Consultation, the Authority began working on Guidance Notes and/or Regulatory Instructions for each of the major proposed remedies, which provide greater detail on how the remedies would work in practice. The Guidance Notes and Regulatory Instructions also seek to address the specific issues raised in stakeholder responses to the Second Consultation.
193. Therefore, the Authority has chosen to publish Guidance Notes and Instructions shortly following the release of this document in order to allow the public to comment on them. The Authority also intends to issue the Regulatory Instructions via Administrative Determination. Specifically, guidance and/or instructions have been prepared in relation to the following remedies:
- Accounting Separation;
  - Cost Orientation;
  - FRAND and Margin Squeeze;
  - Consumer Switching; and
  - Information Provision.
194. These Guidance Notes and Regulatory Instructions set out further legal background of the remedies and further explain the objectives and principles of the remedies. The Guidance Notes and Regulatory Instructions also provide guidance to SMP operators on how to ensure compliance with the obligations and how the Authority will assess compliance.
195. The Authority has decided to provide explicit guidance and instructions on these remedies in order to:
- provide more clarity and certainty on how the Authority will expect the SMP operators to act in order to ensure that they are compliant with their regulatory obligations;
  - provide greater clarity and certainty to the SMP operators on how the Authority will investigate compliance with these obligations; and
  - assist interested stakeholders contemplating making a complaint to the Authority in relation to non-compliance with these obligations in understanding the evidential threshold that needs to be met and the information that the Authority will require.
196. Regarding the respondents' requests for further information and clarity, the Authority refers those respondents to the Guidance Notes and Regulatory Instructions.
197. In response to requests for clarification, further details regarding specific remedies are provided in the Authority's responses in Section 5.3.2 below.

**Imposing remedies in retail and wholesale markets**

198. Stakeholder comments suggested that imposing remedies at the retail level and the wholesale level in parallel would be duplicative, unnecessary and counterproductive. It

was argued that if the Authority determines that *ex ante* intervention is required, the Authority should intervene at either the wholesale level or the retail level, but not both.<sup>28</sup> Some stakeholders argued that priority should be given to wholesale remedies:

The preference for wholesale over retail remedies arises from the desire to promote competition, and the economic benefits it generates in the form of lower prices, more choices and more rapid innovation, in as much of the value chain as possible. (OneComm response to the Second Consultation, NERA Report, paragraph 38)

199. With reference to the approach taken by the European Commission, it was argued that the conditions under which a national regulatory authority would be permitted to designate a retail market for *ex ante* regulation are not satisfied in the retail markets for broadband and mobile in Bermuda given that:

[...] both markets exhibit vigorous competitive rivalry and dynamic competition [and];

[...] the *ex ante* interventions in wholesale markets since 2013 have been clouded by regulatory uncertainty and accompanied by highly distortionary retail price regulations and regulatory barriers to entry that have distorted market outcomes at every level. In my opinion it is impossible to conclude that wholesale interventions have been tried and failed. Rather, they have not been fairly tried. (OneComm response to the Second Consultation, NERA Report, paragraph 41)

#### Response from the Authority

200. The Authority recognizes that the objective of *ex ante* regulatory intervention is to produce benefits for consumers by making retail markets effectively competitive on a sustainable basis.
201. The key consideration for the Authority, consistent with the ECA, is whether the level of competition in the market is sufficient to suggest that the market is currently effectively competitive, or that it is likely to be by the end of the market review period.
202. If it is, then a further consideration is whether that competitive dynamic is sustainable such that it is appropriate to withdraw *ex ante* regulation. It would only be appropriate for the Authority to withdraw *ex ante* regulation from a relevant market once both considerations can be proven in that market.
203. As described in the Second Consultation document, the Authority considers that the wholesale markets were not working effectively under the previous regulatory regime; therefore, it has revised the wholesale access remedies proposed. The objective of these wholesale remedies is to promote competition by allowing access to key upstream inputs that will support operators wishing to compete in the retail markets, thus stimulating competition on retail markets to the benefit of end users.
204. By revising the wholesale remedies and issuing Guidance Notes to provide further clarity regarding how these remedies will be imposed and monitored, the Authority has sought to remove uncertainty and improve transparency at the wholesale level such that the

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<sup>28</sup> OneComm response to the Second Consultation, NERA Report, paragraph 36.

wholesale market will be more attractive to potential new entrants to the electronic communications market in Bermuda. The Authority believes this provides an opportunity for wholesale interventions to be “market tested” over the course of the next market review period.

205. However, the Authority remains concerned that in the short term the demand for wholesale access services may not be sufficient to drive a thriving wholesale market that could support competition at the retail level. As such, retail remedies (including Cost Orientation obligations) are proposed as a safeguard until an effective and sustainable wholesale access market emerges.
206. If wholesale remedies do prove effective and effective competition in the retail markets becomes established, the Authority would consider revoking retail remedies such that only wholesale remedies are imposed.
207. Despite some very recent developments in the market (such as network upgrades) that might indicate that consumer outcomes are starting to improve, deregulation cannot be justified until positive consumer outcomes are achieved. To justify withdrawing *ex ante* remedies, the consumer outcomes would need to be equivalent to what would be expected in an effectively competitive market, as well as being sustainable and enduring.
208. Given the analysis of the markets in Bermuda to date, the Authority remains of the view that regulatory intervention at the wholesale level is required to promote competition. Additionally, consumers should be protected at the retail level with safeguard remedies, such as to ensure that retail prices remain cost-oriented.
209. The Authority recognizes that in Europe, the European Commission has slowly shifted to a position where regulatory interventions are provided only at the wholesale level.<sup>29</sup> However, this relatively recent phenomenon has been observed after decades of regulatory intervention at both the wholesale and retail levels. The removal of retail regulation has been made possible as a result of the success of wholesale remedies. As noted in the European Electronic Communications Code:

The advances in the functioning of competition since the regulatory framework for electronic communications has been in place are demonstrated by the progressive deregulation of retail markets across the Union. (European Electronic Communications Code paragraph 173)

### **Proportionality of remedies given their intended objectives**

210. Some stakeholders argued that the remedies proposed would be costly to implement and had limited foreseeable benefit. Some stakeholders argued that the new remedies are too onerous, burdensome, and disproportionate to their intended objectives given that the need for *ex ante* remedies has not been proven.

### **Response from the Authority**

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<sup>29</sup> For example, see the European Commission (2014), ‘Commission Recommendation of 9 October 2014 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services’, October (Recommendation 2014/7120/EU).

211. The Authority has demonstrated that the relevant markets are not sufficiently competitive and that there are operators with significant market power (SMP) in the markets for broadband, mobile, fixed voice and business connectivity services.
212. As set out in the ECA, specifically Part 4, where the Authority identifies an operator in a relevant market or markets that, individually or together with others, has SMP in that market, the Authority may make administrative determinations that impose *ex ante* remedies on that operator.
213. Having found SMP, the Authority must consider what *ex ante* remedies could address the underlying competition concern. As noted in section 21© of the ECA, any imposed *ex ante* remedy must be “effective but proportionate, taking into account the costs of compliance and the ultimate benefits to consumers”.
214. The Authority disagrees that the remedies proposed are too onerous. The Authority has sought to reduce the burden on SMP operators relative to those proposed in the 2013 Market Review by removing a number of SMP obligations. This includes tariff pre-notification and prescriptive wholesale price controls.
215. While the Authority has sought to ensure that the *ex ante* obligations the Authority has imposed on operators are not too onerous or disproportionate, the Authority recognizes that the obligations do require the provision of further information and reporting by SMP operators. However, such information is necessary to improve the Authority’s ability to monitor the functioning of the market.
216. For example, the Authority emphasizes that the new regulatory approach would significantly increase the amount of information that the Authority has, especially in relation to market outcomes, including profitability of services, based on cost and revenue information, as well as the quality of the services being delivered. The information required has been identified as being strictly necessary to equip the Authority with detailed information on the market. This will allow the Authority to observe competition problems as they arise, as well as to have clear evidence to support any finding of improved competition that would justify removal of regulation in the future.
217. The Authority recognizes that it is introducing a number of SMP remedies for the first time in the Bermuda electronic communications market and that SMPs will require some time to build up the capabilities to be able to comply with these obligations. This is particularly the case for remedies such as Accounting Separation and Cost Orientation. However, the Authority had acknowledged that implementation of these remedies, as described through the Guidance Notes and Regulatory Instructions, will be subject to a dialogue with SMP operators and industry stakeholders.
218. Furthermore, and in direct response to assertions that the Authority’s proposed remedies are burdensome, the Authority notes that, from a practical standpoint, OneComm and Digicel Group are already required to comply with much of the proposed remedies. Therefore, these remedies will not significantly increase the administrative burden beyond what should already exist today. For example, the conditions of the market concentrations approved in 2014 and 2015, and which led to the emergence of two main market operators (OneComm and Digicel Group), included obligations on cost accounting and accounting separation. The obligation explicitly sets out that operators would need to provide regular financial data, including on costs, separated by each merged entity.

219. The provision of this sort of accounting information is now required as part of the SMP obligations. However, if OneComm and Digicel Group are complying with their merger obligations, then the Accounting Separation obligation proposed in this market review will impose little additional administrative burden.
220. Finally, in response to comments about the remedies not factoring in the specific context of Bermuda, the Authority notes that the design of the proposed remedies specifically seeks to account for the context of Bermuda. For instance, the FRAND and margin squeeze obligations would include an adjustment for operational scale—for example, to estimate the costs of a new entrant which had achieved a reasonable level of operating scale. Such adjustments will seek to ensure that remedies are effective and sustainable, and that wholesale access seekers are reasonably efficient.

### **Balance between ex ante and ex post regulation**

221. Some stakeholders argued that *ex ante* regulation should only be imposed where ex post competition rules alone would not be sufficient to promote or preserve effective competition, and that the Authority should rely on market forces rather than regulation to deliver better consumer outcomes.

### **Response from the Authority**

222. As set out in section 22(2)c of the ECA, *ex ante* remedies should be considered only in cases where the application of ex post competition rules alone would not be sufficient to promote or preserve effective competition in the relevant market.
223. As part of this market review, the Authority published the list of markets susceptible to *ex ante* regulation in its Preliminary Identification of Markets Notice.<sup>30</sup> In this document, the Authority gave its assessment of the extent to which competition would be promoted or preserved by ex post competition rules.
224. The Authority noted that in general, ex post rules alone would be insufficient where a form of wholesale access is required in order to promote effective competition in downstream markets.
225. Furthermore, by the very nature of being ex post, the rules would be enforced after an event. Therefore, where the extent of market power in a market is such that it is likely that consumers will be harmed in the absence of *ex ante* regulation or that there will be irreversible damage to competition, ex post intervention will likely not be sufficient to promote or preserve competition.

### **5.3.2 Remedy-specific issues raised by stakeholders and the Authority's response to them**

226. Further to the above points, a number of respondents made comments relevant to specific remedies proposed in the Second Consultation. This section sets out those comments and the Authority's response.

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<sup>30</sup> Regulatory Authority of Bermuda, Preliminary Identification of Markets Notice In accordance with section 22(1) of the Electronic Communications Act (2011), 17 October 2017.

227. This section is structured to be consistent with the remedies assessment in the Second Consultation. Comments were made in relation to the following:
- i. the obligation to ensure Accounting Separation and to provide information to the Authority;
  - ii. the Cost Orientation obligation;
  - iii. the obligation to ensure that wholesale access is provided on fair, reasonable and non-discriminatory terms and that it is equivalent in terms of service output.
228. While the Authority also proposed the following relevant remedies in the Second Consultation, no stakeholder comments were received regarding them: the obligation to provide wholesale mobile access; the obligation to offer broadband on a stand-alone basis; the obligation to offer mobile services on a stand-alone basis; and the obligation to offer fixed voice services on a stand-alone basis.

**Obligation to ensure Accounting Separation and to provide information to the Authority**

229. The obligation to ensure Accounting Separation applies to SMP operators in the following relevant markets in which SMP has been found: retail provision of fixed broadband, retail mobile services, retail fixed voice services and retail high-speed leased lines outside of the City of Hamilton.
230. Most comments and arguments made by stakeholders on the Accounting Separation remedy were not focused on a specific relevant market and instead considered the Accounting Separation remedy more generally.
231. This is consistent with the approach that the Authority has taken, in that an overview of key remedies in Section 6.2 of the Second Consultation, was the specific markets. Overall comments made regarding the Accounting Separation remedy fell into one of the following categories:
- guidance on the Accounting Separation remedy; and
  - the administrative burden of providing the separated accounts.
232. Each of these comments are discussed in turn below.

***Guidance on the Accounting Separation remedy***

233. In line with the general comments on remedies, as discussed above, stakeholders noted that there was limited information in the Second Consultation Document on how the regulated operators should implement Accounting Separation.

**Response from the Authority**

234. Accounting Separation is an important remedy because it will enable the Authority to gather relevant financial and operational information in a format that can be used to assess compliance with a number of key regulatory obligations.
235. Such obligations include Cost Orientation and the provision of wholesale access on FRAND terms (including by not engaging in a margin squeeze), as well as obligations under competition rules in accordance with sections 84(1)(a), 85 and 86 of the RAA. As



such, the Authority considers Accounting Separation to be a core building block of the regulatory regime.

236. Given its importance and following the comments from stakeholders, the Authority recognizes the need to provide further guidance on each of the main remedies, including the requirement to provide separated accounts. Therefore, the Authority will publish the Guidance Notes and Instructions shortly following the issuance of this document.
237. The Guidance Note on Accounting Separation provides further details on:
- the objectives and principles of the Accounting Separation obligation;
  - how SMP operators can ensure compliance with the Accounting Separation obligation;
  - example templates for how the SMP operators may wish to present their separated accounts; and
  - the information that SMP operators will need to include in the documentation that must accompany their separated accounts.
238. The Authority refers respondents to this guidance in light of the respondents' requests for further information and clarity.

#### ***Administrative burden of providing the separated accounts***

239. One stakeholder responded that the accounting information being requested is materially different from the financial information it gathers and reports under the U.S. generally accepted accounting principles ("GAAP") it has adopted. The respondent argued that complying with the Authority's proposed accounting remedies clearly represents a material burden.<sup>31</sup>
240. Stakeholders also noted that the Authority and SMP operators will need to employ additional staff and invest in new tools to develop the separated accounts and that additional audits will be needed. These could create significant costs.

#### ***Response from the Authority***

241. The obligation to provide separated accounts does not impose an obligation on SMP operators to create new financial information, such as in respect of product-specific incremental costs, which is often required under more traditional charge control remedies.
242. Instead, the Authority is requiring SMP operators to provide standard accounting information, and to arrange it into a format that will enable the Authority to carry out its duties, which include monitoring compliance with SMP obligations and generally monitoring the development of the market.
243. Furthermore, the information in the separated accounts will enable the Authority to assess, in the first instance, levels of profitability for different Product Groups,<sup>32</sup> and thereby to understand the degree to which there may be competition concerns in certain markets.

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<sup>31</sup> OneComm response to the Second Consultation, pp.32–33

<sup>32</sup> Product Groups are the major groups of products offered by an operator and include broadband, mobile, fixed voice, subscription television, business connectivity (i.e. leased lines) and off-island connectivity (i.e. submarine capacity).

For these reasons, the Accounting Separation remedy is an essential building block of the regulatory regime, including in allowing the Authority to carry out its duties.

244. The Authority has now published a Guidance Note setting out how SMP operators can ensure they are compliant with the Accounting Separation obligation. In addition to explaining how to ensure compliance, the Accounting Separation Guidance Note includes example templates for how the SMP operators may wish to present their separated accounts to the Authority.
245. The Authority considers that the financial information that will need to be included in the separated accounts of the SMP operators is proportionate and necessary to inform the Authority's decisions going forward. This includes ensuring that the Authority is able to monitor market developments and check compliance with other SMP remedies, such as Cost Orientation and ensuring wholesale access is provided on FRAND terms (including by not engaging in a margin squeeze).
246. Furthermore, the Authority notes that the information that is being required as part of the Accounting Separation remedy is very similar to the accounting separation obligation imposed on both OneComm and Digicel Group as part of their merger commitments in 2014 and 2015 respectively.
247. As such, the Accounting Separation remedy should impose little additional administrative burden compared to that which should already exist as a result of OneComm and Digicel Group meeting their merger commitments.

#### ***The method for allocating costs across products***

248. Some stakeholders stated that under the Accounting Separation obligation, allocating costs between various Product Groups will be tantamount to establishing a product costing model, since products and services will need to be defined across all parts of the business in order to attract costs and revenues.
249. Furthermore, some stakeholders noted that while allocating revenue by Product Groups could be possible, the allocation of capital and operating costs would be arbitrary.

#### ***Response from the Authority***

250. As set out in the Accounting Separation Guidance Note, the SMP operator should allocate costs to the different Product Groups in the separated accounts using an activity-based costing ("ABC") approach. ABC views the services and products as a series of activities, each of which uses resources and incurs costs.
251. This approach, based on the cause of costs (i.e. the cost driver), traces and allocates costs through the activities performed, establishing a clear cause and effect relationship between activities, their associated costs and the resulting output from those activities. When allocating costs to services and products, the SMP operator should use the following approach:
- costs shall be directly allocated, where possible, based on an analysis of the cost driver; and
  - common or shared costs that cannot be directly assigned shall be attributed to services and products based on an appropriate direct or indirect cost driver.

252. The revenues from providing the product or service should be allocated directly to the product or service bought by the customer.
253. In the case of bundles, revenues and costs should be allocated to each Product Bundle Group in a similar way to standalone Product Groups. Given this approach, the Authority would expect that the unit cost of any given product sold on a standalone basis or in a bundle should be the same. Therefore, the unit cost of a bundle should be equal to the sum of the unit costs of each of its constituent products.
254. The only exception is where small divergences are due to the different composition of standalone and bundled sales—for example, if broadband sold in bundles was predominantly faster than standalone broadband, and this drove a higher allocation of capacity costs.
255. The exact approach to the production of the separated accounts must be outlined to the Authority through the provision of supporting documentation, as outlined in Annex 2 of the guidance note.
256. The Authority recognizes that SMP operators will require some time to build up the capabilities to be able to comply with these obligations, and the Authority expects to have an open dialogue with the SMP operators about the SMP operators' implementation of the guidance.

### ***Cost Orientation***

257. The obligation to ensure that prices are cost-oriented is proposed to apply in the markets for:
- retail provision of fixed broadband;
  - retail mobile services;
  - retail fixed voice services; and
  - retail high speed leased lines outside of the City of Hamilton.
258. While there were no comments specifically in relation to the application of Cost Orientation in these specific markets, there were a number of comments and claims made by stakeholders on the Cost Orientation remedy more generally. The comments made fall into one of the following three categories:
- the relationship between cost and price;
  - the application of the FAC standard; and
  - the impact of Cost Orientation on investment and innovation.
259. Each of these categories are discussed in turn below.

### ***The relationship between cost and price***

260. Some stakeholders argued that cost-oriented price regulation in the telecommunications market, which is characterized by high fixed costs shared across multiple outputs, would result in prices that are “inherently inefficient”.<sup>33</sup> In particular, OneComm (in the NERA

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<sup>33</sup> OneComm response to the Second Consultation, NERA Report, paragraph 5

report) argued that the Authority's requirement that pricing must be cost-oriented misunderstands the economic relationship between cost and price. The response noted:

"It is a central principle of regulatory economics that, in markets with high fixed costs which are shared across multiple outputs (like telecommunications), the efficient price for each output will be based not just on costs but on the elasticity of demand. Initially developed by Frank Ramsey, this principle - called "Ramsey Pricing" - requires that price-cost margins be higher on services with less elastic demand, lower on services where demand is more sensitive to price" (OneComm response to the Second Consultation, NERA Report, paragraph 30)

261. Stakeholders also commented that cost-oriented retail prices at a granular level is not practicable given the variations in willingness to pay by end-users for different available services. In reality, the stakeholders argued, retail prices are different from a uniform unit costing approach.

*Response from the Authority*

262. The responses from stakeholders appear to be based on an assumption that the Authority's proposals are for the price of each and every product to be set on a cost-oriented level. However, this is not the intention of the Authority. Instead, the SMP operator will be free to set individual prices as it see fit, provided that the overall price for that Product Group does not break the Cost Orientation standard.
263. This is explained in the Cost Orientation Guidance Note, which also explains the objectives of the Cost Orientation obligation and provides guidance to SMP operators on how the Authority will assess compliance with Cost Orientation.
264. As set out in the Guidance Note, in the first instance, the Authority will assess compliance with the Cost Orientation obligation for the groups of products for which the SMP operator has been found to have SMP, i.e. the SMP Product Groups. The SMP Product Groups are broadband and mobile services for both OneComm and Digicel Group and fixed voice and high speed leased lines (outside of the City of Hamilton) for Digicel Group alone.
265. This approach is akin to a broad-basket approach to charge controls, which is common in regulatory intervention and allows the flexibility to balance prices within the basket. This includes the ability for operators to adjust the allocation of fixed and common costs across multiple outputs in accordance with the Ramsey pricing principle.<sup>34</sup>
266. The initial screening test for compliance with the Cost Orientation obligation will be made on the basis of Fully Allocated Cost (FAC) information provided in the separated accounts for each SMP Product Group. Therefore, within the Product Group there is flexibility of how individual products are priced within the Product Group or "basket".
267. However, while the Authority recognizes that pricing below FAC may be economically rational, and that it would not result in the foreclosure of efficient rivals, individual prices should not be too low. The Authority considers that individual prices should not fall below Long-Run Incremental Cost (LRIC), as outlined in the Guidance Note discussed below.

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<sup>34</sup> Ramsey pricing is an approach to recovering fixed costs on the basis of charging prices to customers on the basis of their demand elasticity. In economic theory, it can be an efficient way of recovering fixed costs.

268. Failure to recover LRIC indicates that the SMP operator is not recovering all the (attributable) fixed costs of producing the good or service in question, and that an equally efficient competitor could be foreclosed from the market. Therefore, in line with these principles, the Authority will assess compliance with Cost Orientation in relation to the risk of excessively low prices by reference to the LRIC standard.
269. Furthermore, to avoid the risk of vulnerable customers being exploited or the exclusion of specific entrants through prices targeted below cost pricing, it may be necessary to test at the sub-Product Group or individual product level. The Authority may launch an investigation based on representations that the Authority receives from stakeholders, or on the Authority's own initiative.

### ***The application of the FAC standard***

270. Stakeholders considered that further clarity should be provided on the application of the FAC standard as it applies to the Cost Orientation obligation. Stakeholders sought clarification on two main points:
- i. the exact FAC standard to be used; and
  - ii. the flexibility afforded to the SMP operators under the FAC standard, including clarity on what would constitute "significant" or "persistent" deviations from cost:

[the Authority] concludes that "strict application" of the FAC standard is "not appropriate" in any case, and that therefore the RA will consider the Cost Orientation standard violated only if revenues "are significantly and persistently above FAC." Yet it provides no guidance on what would constitute either "significant" or "persistent" deviations from cost. (OneComm response to the Second Consultation, NERA Report, paragraph 10).

"we would like to understand how flexibility would be afforded to SMP operators under the FAC standard. While Link appreciates that flexibility may be appropriate in consideration of fluctuations in costs, we submit it will be important to ensure that appropriate checks and balances are in place to prevent operators from overstating the investment cost or impact where to do so may deny access to important wholesale inputs." (Link response to the Second Consultation, paragraph 8.)

### ***Response from the Authority***

271. The Authority notes that in relation to the Accounting Separation obligation and associated Guidance Note, financial information on the SMP operators' costs will need to be provided on a FAC basis. That data will then be used to run initial screening tests and more detailed assessments of compliance with other SMP obligations, such as Cost Orientation.
272. FAC is an accounting method for attributing all the costs of a company to defined activities such as products and services. This typically follows the principle of cost causality. FAC is the total cost allocated in the Profit & Loss statement.
273. On the basis of the above, the Authority considers that in cases where prices are significantly and persistently above FAC or below LRIC, and where there are no objective justifications for such divergence, the Authority is likely to reach a finding of non-compliance with the Cost Orientation obligation.

274. The Authority will however not automatically determine that the SMP operator has breached the Cost Orientation obligation if prices are outside of the LRIC and FAC boundaries mentioned above. This is for two main reasons:
- i. Costs could fluctuate over time, including in response to changing prices for inputs and economic cycles. As such, it could be that prices have remained stable but there has been an unexpected cost shock in one period that is causing a short-term divergence between prices and costs.
  - ii. The Authority is minded to ensure that the operators maintain the incentive to undertake network investments, and the Authority recognizes the risk of dampening investment incentives if the Cost Orientation obligation is applied too rigidly. This includes ensuring that operators are not penalized for achieving superior efficiency and are fairly rewarded for taking on significant downside investment risks.
275. Furthermore, the Authority would seek submissions from the SMP operator to explain the reasons for the divergence and what measures were being taken to ensure that such divergence does not persist in the future.
276. Given the Authority's intention to ensure that operators have the correct investment incentives and given that the cost standard for assessing high prices under the Cost Orientation obligation is FAC, there is a risk that permitted cost recovery may allow SMP operators to recover inefficiently incurred costs. Inefficiently high costs ultimately harm consumers—through high prices, for example.
277. As a result, the Authority intends to monitor the cost efficiency of SMP operators. In the first instance, the Authority intends to conduct international benchmarking of prices in order to indirectly monitor the levels of operational efficiency of the SMP operators. The Authority intends to do this by comparing the prices charged by operators in countries with characteristics similar to Bermuda, adjusted for economic productivity and standards of living between countries (such as purchasing power parity), to see whether the prices charged by the SMP operators in Bermuda are in line with these comparators. This analysis, in conjunction with analysis on profitability of OneComm and Digicel Group, will inform the Authority whether both are incurring costs efficiently or not.

### ***The impact of Cost Orientation on investment and innovation***

278. Stakeholders commented that the ambiguity and uncertainty about how exactly the Cost Orientation obligation would apply could undermine the incentives to innovate and invest:

the requirement for cost-oriented prices, combined with the regulatory uncertainty that would result from the Consultation Document's vague and poorly defined cost standards, would significantly reduce incentives for investment and innovation by the regulated firms (OneComm response to the Second Consultation, NERA Report, paragraph 35)

### **Response from the Authority**

279. The Authority recognizes that regulatory uncertainty introduced through a lack of clarity on the cost standards applied in an assessment against the Cost Orientation obligation could have an adverse impact on investment incentives. However, the Authority has provided further guidance on the Cost Orientation obligation in its Guidance Note and believes this should address questions about how the obligation will be implemented and how compliance will be assessed.

280. Furthermore, consistent with the Authority's duty to "promote investment in the electronic communications sector",<sup>35</sup> included within the Cost Orientation obligation is a clear objective to allow SMP operators the opportunity to recover relevant costs and earn a reasonable rate of return.
281. However, the Authority also has a duty to "develop or maintain effective and sustainable competition for the benefit of consumers with regard to price, innovation and choice".<sup>36</sup> Therefore, in setting the Cost Orientation obligation, the Authority must strike a balance between providing investment incentives that can deliver long-term consumer benefits from the provision of better services and ensuring that services remain affordable, which delivers direct benefits to consumers, especially in the short term.<sup>37</sup>
282. As such, any view that the Authority takes on whether or not prices are cost-oriented will need to factor in the costs that SMP operators have incurred in providing the product or service, as well as taking a view on what is a reasonable rate of return for the operators.

**Obligation to ensure wholesale access is provided on fair, reasonable and non-discriminatory terms and that it is equivalent in terms of service output**

283. The obligation to ensure wholesale access is provided on fair, reasonable and non-discriminatory terms and that it is equivalent in terms of service output applies to SMP operators in the following markets:
- wholesale provision of fixed broadband;
  - wholesale mobile access; and
  - wholesale high-speed leased lines outside of the City of Hamilton.
284. While there were no comments specifically in relation to the application of Accounting Separation in these specific markets, there were a small number of comments and arguments made by stakeholders more generally. The issues raised fell into one of the following two categories:
- further guidance on FRAND obligations; and
  - what is meant by "equivalence of outputs".
285. The Authority notes that Link's response was broadly supportive of the FRAND and EEO obligations.

***Further guidance on FRAND obligations***

286. OneComm submitted that the Second Consultation provides at best limited guidance on how many of these regulations would be implemented in practice. It also considered that the FRAND obligation for wholesale services is ambiguous.<sup>38</sup>

**Response from the Authority**

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<sup>35</sup> Section 21.b of the ECA.

<sup>36</sup> Section 21.a of the ECA.

<sup>37</sup> From an economics perspective, this corresponds to the trade-off between "allocative" efficiency (i.e. low prices to consumers) and "dynamic" efficiency (i.e. higher quality for consumers in the long run).

<sup>38</sup> OneComm response to the Second Consultation, NERA Report, paragraph 10.

287. The Authority recognizes the need to provide guidance on each of the main remedies, including the requirement to provide access on fair, reasonable and non-discriminatory (FRAND) terms, including the obligation not to engage in a margin squeeze. Therefore, the Authority has now published a Guidance Note on the FRAND and margin squeeze obligations together with this document.
288. The Guidance Note on FRAND and margin squeeze provides further details on the objectives and scope of the obligation, how the Authority will assess compliance with the FRAND requirements including the obligation not to engage in a margin squeeze. This includes the approach to assessing the non-price and price dimensions of FRAND.
289. The Authority refers respondents to this Guidance Note in light of their requests for further information and clarity on this obligation.

### ***What is meant by equivalence of outputs***

290. Stakeholders questioned the Authority's approach to the application of "equivalence of outputs" (EOO) when assessing compliance with the non-discriminatory requirement. It was argued that the Authority's approach to EOO appears to be at variance with the well-established approach of the Body of European Regulators for Electronic Communications (BEREC), which adopts the following definition for EOO:

Equivalence of Output (EOO): The access products offered by the incumbent operator to alternative operators are comparable to the products it provides to its retail division in terms of functionality and price, but they may be provided by different systems and processes. (BoR (10) 44 Rev1, p. 8)

291. Stakeholders highlighted that while the BEREC suggests that products must be comparable, the Authority outlined in the Second Consultation that services must be "no different".

### ***Response from the Authority***

292. The Guidance Note on the requirement to provide access on FRAND terms, provides more information on the proposed application of EOO. The Authority has adopted the BEREC definition, set out above, within the Guidance Note. Therefore, there should be no discrepancy between the BEREC definition and the Authority's interpretation of the EOO requirement.
293. The Authority will assess whether the terms of wholesale access offered by the SMP operator provide the same level of functionality and service as the SMP operator offers to its own downstream divisions. As such, the SMP operator must not offer a reduced service to access seekers relative to the service that the operator provides to itself. The external and internal services must be identical on all key service and quality dimensions.
294. While the Authority recognizes that the services may be provided by different systems and processes, the services an SMP operator offers to alternative operators must be comparable to the products the SMP operator provides to its retail division.
295. In assessing whether services are deemed to be comparable, the Authority will refer to both price and non-price terms. For the non-price dimensions of the offer, in the first instance, the Authority will refer to information published by the SMP operators regarding



specific wholesale KPIs, as required under the obligation to publish wholesale KPIs.<sup>39</sup> This obligation requires that KPIs can be compared between services provided internally and those provided externally to third-party access seekers.

### **Obligation to provide access in the wholesale broadband market**

- 296. Some stakeholders made specific comments in relation to the obligation to provide a full range of access products in the wholesale broadband market, from access to ducts and poles through to bitstream, VULA and resale products.
- 297. It was argued that given the large investments involved and the limited size of the market in Bermuda, an access product that would require additional infrastructure investment—such as mandating the SMP operators to have a civil infrastructure access offer e.g. to ducts and poles, or physical unbundling facilities—is disproportionate.
- 298. Some stakeholders suggested that SMP operators should only be required to supply a limited range of wholesale products for resale and to do so only when there has been a clear commitment from at least one wholesale buyer to purchase it.
- 299. Finally, comments noted that wholesale access based on resale, bitstream and VULA are more likely to stimulate some level of competition in the fixed market than access at higher levels of the network, such as to ducts and poles.

### **Response from the Authority**

- 300. The Authority intends to require the SMP providers to meet any reasonable request for all forms of wholesale broadband access. The Authority anticipates that bitstream and VULA are the most relevant for fibre-based broadband networks and are likely to be by far the most popular access products. However, SMP providers would also be required to provide pure re-sale, physical unbundling or infrastructure access, if requested.
- 301. While the wholesale access obligation requires SMP operators to meet all reasonable requests for wholesale access, the Authority does not intend this obligation to lead to an inefficient outcome whereby SMP operators are forced to maintain old or legacy networks purely because the SMP operators need to meet any request for access to these networks. Therefore, wishes to make it clear that the obligation to provide access would be on a technology-neutral basis, and that the SMP operator could choose to decommission a legacy network. The SMP operator would need to ensure the continued provision of services to access seekers on the SMP operator's new/alternative network, and that consumers were no worse off. In other words, the service to consumers must be at least as good as before, for no greater price.<sup>40</sup>

### **Obligation to ensure customer can choose the right products for their needs and do not experience unnecessary difficulties when switching**

- 302. Only a small number of comments were noted regarding this proposed remedy.
- 303. Link was very supportive of the proposals:

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<sup>39</sup> The key wholesale KPIs are presented in Annex 1 of this Guidance Note for reference.

<sup>40</sup> For instance, Digicel Group could choose to decommission its copper network provided that it allowed equivalent services to be made available on its new (fibre) network

Link supports the Authority's proposals that SMPs have some limitation in relation to the length of contract and to prohibit automatic renewal of contracts for an additional minimum period. These provisions will ensure that consumers are not inappropriately tied to longer term contracts where they may have otherwise exercised choice to switch service providers in the market. Enabling consumers to switch providers with ease is not only consumer friendly, but it will encourage more competitive response in the market, perhaps via innovation or new offers. [Link response, paragraph 11]

#### Response from the Authority

304. The Authority hopes that this proposal will promote competition in the market and make a material improvement to consumer outcomes in the form of lower prices and higher quality services.

### **5.4 General Issues Raised by Respondents**

305. The Authority noted many objections from some respondents to the proposed relevant markets and SMP obligations that appeared to be due to a lack of understanding of the market review process. Therefore, the Authority would like to provide further clarity on the purposes of the Market Review by responding to the concerns those raised.

#### **Market Review Purposes and Scope**

306. One respondent noted that "the RA's [Authority's] decision to stay neutral means they cannot indicate to the market when they will expect technology deployments to occur or at what levels". The respondent also noted concerns over relatively high prices for electronic communications services such as broadband and mobile data.

#### Response from the Authority

307. The Authority would like to clarify that the purpose of the Market Review is not to dictate to the market what technology it should be deploying in the future. Technology deployments should be driven by an effectively competitive market and the Authority will only intervene if necessary. However, where there are competition concerns that could threaten positive outcomes, such as investments by an operator into its network, the Authority will seek to correct them through regulatory tools such as SMP ex ante remedies.
308. The ECA requires the Authority to complete a Market Review process in order to determine what, if any, ex ante regulatory remedies are required to address significant market power in the supply of electronic communications services. The Market Review process involves an assessment of the relevant markets, operators with SMP in those markets and ex ante regulation of the same. Data is collected from the market at a point in time and historic trends are used to provide insight into those relevant markets. In accordance with the ECA, the Authority considers whether the relevant market is likely to be affected by technological changes or other developments that would render it effectively competitive in the near future. This is the greatest extent to which technological advancements are considered when defining relevant markets.
309. In order to ensure that prices are not excessive, the Authority proposes to impose a cost orientation obligation on SMP providers' retail pricing. In markets that lack effective competition, providers with SMP are likely to have the ability and incentive to set prices that can act to distort or restrict competition, as well as exploit consumers.

## **Consumer Switching**

310. One respondent had a number of concerns around the consumer switching obligations. It does not believe that it is fair that the customer should have the right to exit the contract after a 20% threshold of underperformance of subscribed internet speed is realized. Instead, it is believed that “the loss [of internet speed] should reflect a price reduction to the customer until the service restoration to the advertised level”. It also believed that “an early termination fee should be no more than 25% of the outstanding contract.”

### **Response from the Authority**

311. The Authority believes that a price reduction would place a disproportionate burden on the operators to track such losses and apply the reduction to their billing. Instead, the threat of losing a customer should be incentive enough to address the customer’s internet speed. The Authority notes Consumer Affairs suggestion regarding a reduced early termination fee and refers to the provisions that allow consumers to terminate their contracts early for certain causes, as set forth in the consumer switching remedies. This strikes a balance between holding service providers accountable to provide services in accordance with the relevant contract and providing consumers with flexibility to switch service providers while still guaranteeing contracted upon revenue streams to service providers that have lived up to their promised contractual service levels.

## **Broadband Speed**

312. One respondent wanted the Authority to set a numeric definition for broadband speed.

### **Response from the Authority**

313. It is not the purpose of the Market Review to define a numeric speed when defining relevant markets, including for broadband. The Authority references the Preliminary Market Review issued on 17 October 2017, in which the Authority conducted the fibre benchmark analysis by looking at fixed fibre broadband tariffs offering speeds of between 30Mbps and 50Mbps. This comparison provided a useful comparison of the relative prices, as well as the possible outcome for consumers, assuming prices were to remain the same.

## **Oversight of Wholesale Market**

314. One respondent did not agree with the Authority’s proposal not to define a wholesale fixed voice termination market. It stated that the Authority should have oversight and input.

### **Response from the Authority**

315. Whether or not a market is defined within this Market Review, the Authority retains oversight of the electronic communications sector through the powers granted by the relevant legislation.

## 6 MARKET DEFINITIONS

316. Market definition provides a framework for competition analysis. It is a key step in identifying the competitive constraints that impact the activities of a supplier of a given product or service.
317. This section sets out the Authority's preliminary proposal of the market definitions with respect to the electronic communications sector.
318. Throughout the Market Review process, the Authority has conducted analysis on market and financial data submitted by electronic communications providers and considered consultation responses to better assess the specific markets that should form the basis of an assessment of market power.
319. As such, the Authority is proposing to identify 15 distinct market definitions.

**Table 6.1 - Proposed relevant market definitions**

Service type	Relevant markets
<b>Broadband</b>	<ol style="list-style-type: none"> <li>1. Retail provision of fixed broadband Internet connectivity, provided over any technology, and for any speed, on an island wide basis</li> <li>2. Wholesale provision of fixed broadband Internet connectivity, provided over any technology, and for any speed, on an island wide basis</li> </ol>
<b>Mobile</b>	<ol style="list-style-type: none"> <li>3. The island wide provision of retail mobile services (voice, text and data)</li> <li>4. The island wide provision of wholesale mobile access</li> </ol>
<b>Fixed voice</b>	<ol style="list-style-type: none"> <li>5. The island wide provision of retail fixed voice services (i.e. voice call origination from a fixed location)</li> </ol>
<b>Subscription television</b>	<ol style="list-style-type: none"> <li>6. The island wide provision of retail subscription television services</li> </ol>
<b>Business connectivity</b>	<ol style="list-style-type: none"> <li>7. Retail low-speed leased lines in the city of Hamilton</li> <li>8. Retail low-speed leased lines outside of the City of Hamilton</li> <li>9. Wholesale low-speed leased lines in the city of Hamilton</li> <li>10. Wholesale low-speed leased lines outside of the City of Hamilton</li> <li>11. Retail high-speed leased lines in the city of Hamilton</li> <li>12. Retail high-speed leased lines outside of the City of Hamilton</li> <li>13. Wholesale high-speed leased lines in the city of Hamilton</li> <li>14. Wholesale high-speed leased lines outside of the City of Hamilton</li> </ol>
<b>Off-island connectivity</b>	<ol style="list-style-type: none"> <li>15. The provision of off-island connectivity (i.e. international data transmission)</li> </ol>

### 6.1 Approach to market definition

#### 6.1.1 Introduction

320. The purpose of defining relevant markets is to structure and inform the forward-looking assessment of whether any sectoral provider has SMP in these markets. Therefore, market definition is not an end unto itself, but should be carried out with the aim of understanding whether, during the course of the review period, customers will benefit from effective competition, or whether *ex ante* remedies are required.

321. The Authority's assessment of the relevant markets is set out in this section, under six headings:

- Section 6.2: broadband;
- Section 6.3: mobile;
- Section 6.4: fixed voice;
- Section 6.5: subscription television;
- Section 6.6: business connectivity;
- Section 6.7: off-island connectivity.

## **6.2 Broadband**

322. Broadband Internet services can be provided via a range of technologies, including the following.

- digital subscriber line ("DSL");
- coaxial cable;
- fibre; and
- wireless broadband technology ("fixed wireless").

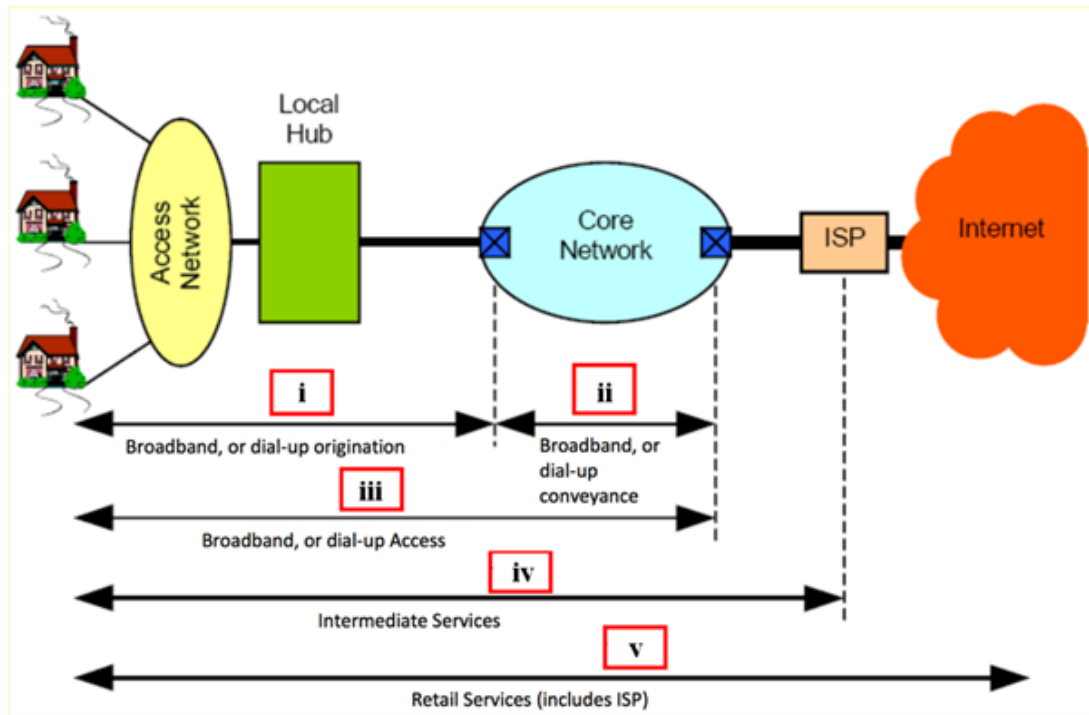
323. The difference between ISP and Access is not obvious from the end user's perspective, since it relates to the layers of network that are managed by the respective service providers.

324. In general, Access services relate to the management of the physical network that exists in Bermuda, in terms of the cabling and electronics that are required to link an end-user's home to the point of interconnection with the ISP.

325. ISP services provide the connectivity to the Internet, including offshore capacity, along with customer-facing functions such as marketing, sales and customer care.

326. In many cases, consumers choose to buy both ISP and Access from the same provider because it is simpler than having to deal with two separate companies for invoicing and fault management.

**Figure 6.1 - Graphical Depiction of broadband network structure, including ISP and Access distinction**



### 6.2.1 Definition of relevant markets

327. The Authority observes that two operators, OneComm and Digicel Group, have broadband network coverage that is currently offered as a service across the entire island of Bermuda.
328. These two incumbent networks differ in terms of technology:
  - OneComm operates a broadband network based on fibre and coaxial cable technology; and
  - Digicel Group operates a FTTP broadband network.
329. Both incumbents have upgraded their networks in order to offer broadband speeds in excess of 30Mbps.
330. The Authority understands that other companies, such as Link and Bluewave, do not have wide-scale broadband networks. Such companies have a very small number of broadband customers.
331. Despite the range of technologies that are used to provide broadband services in Bermuda, from the perspective of consumers, the technology is largely irrelevant. The Authority's view is that the factors that are important to consumers apply irrespective of the technology, and instead relate to service characteristics such as speed, data allowance, latency, and uptime, as well as other service quality elements such as customer service.
332. On these grounds, it would not be appropriate to define markets on the basis of technology. The Authority is therefore proceeding with establishing market definitions for broadband that are neutral to the technology used to deliver the service.

333. In terms of the appropriate product market, the Authority proposes to define the market to include any broadband speed. This is consistent with the approach taken in many other jurisdictions,<sup>41</sup> and with the idea that broadband services of different speeds will act to constrain each other due to the chain of substitution that exists across such services.<sup>42</sup>
334. Regarding the geographic market definition, the Authority considers that the competitive conditions do not vary materially across specific localities in Bermuda. This is because the two largest providers, Digicel Group and OneComm, offer island wide broadband coverage. They also have national pricing policies such that they have a single national price for each broadband tariff. Given the apparent island wide nature of competition, the Authority is proposing to adopt a relevant geographic market definition that is island wide.
335. Finally, for the sake of clarity, the Authority is not proposing to define separate relevant markets for ISP and Access services. The Authority considers that these two services currently exist separately as a result of a previous licensing regulatory framework that is no longer in effect.

### **6.2.2 Conclusion on relevant markets**

336. The Authority proposes to adopt the following market definitions in its General Determination:

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

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

## **6.3 Mobile**

### **6.3.1 Introduction**

337. Mobile operators provide mobile communications services which broadly fall into three categories:

- i. voice calls;
- ii. text messaging; and
- iii. mobile data.

338. At present, two providers offer 4G LTE<sup>43</sup> mobile services, Digicel Group and OneComm.

### **6.3.2 Definition of relevant markets**

339. The Authority, in reaching its view regarding the mobile market definition, has aimed to strike a balance between specificity and proportionality. In particular, the Authority notes

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<sup>41</sup> For example, in 2014 the Office of Communications (“Ofcom”) in the UK stated that broadband services (which ranged in speed from 10Mbps to 100Mbps) all formed a single market. See paragraphs 3.43-3.55 of Ofcom’s 2014 Wholesale Broadband Access Market Review Statement. [Link]

<sup>42</sup> Chains of substitution exist when end-users perceive variants of a specific product type to be reasonably substitutable. For example, if there are three speeds of broadband in the market (20Mbps, 30Mbps and 40Mbps), consumers may be willing to switch between them if the price of one increased. If a consumer was on the 30Mbps tariff, and that tariff increased significantly, the consumer may switch down to the 20Mbps tariff if the cost saving were worthwhile.

<sup>43</sup> LTE stands for long-term evolution and is the technical standard for 4G mobile services.

that market definition is not an end in itself, but instead a key step in identifying any potential competition concerns that could require *ex ante* regulation.

340. The Authority also notes that within any market definition the Authority maintains the powers to apply remedies that address specific competition concerns within a subset of the overall market. The resulting effect is that it is not necessary for the Authority to define the narrowest possible market in order to address competition concerns.
341. The Authority continues to believe that defining distinct retail and wholesale markets is appropriate given that the competitive constraints in these markets may not evolve in the same way over time.
342. The Authority has specifically considered whether the Authority ought to define a market for mobile call termination.<sup>44</sup> While the industry continues to operate a “Bill and Keep” model<sup>45</sup> for mobile call termination, the Authority considers that the application of *ex post* competition rules is likely to be sufficient to deal with any concerns in this market. This is in accordance with the tests for markets susceptible to review under section 22(2) of the ECA. If there are any observed changes to the applicability of the market tests contained within section 22(2) of the ECA, the Authority would be minded to reconsider the need to define a market for mobile call termination.

### **6.3.3 Conclusion on relevant markets**

343. The Authority proposes to adopt the following market definitions in its General Determination:

***The island wide provision of retail mobile services (i.e. voice, text and data).***  
***The island wide provision of wholesale mobile access.***

## **6.4 Fixed voice**

### **6.4.1 Introduction**

344. The fixed voice market provides the consumer with the ability to make, as well as receive, phone calls between a fixed location in Bermuda and any other phone number, be it a local or long-distance (i.e. international) phone call.<sup>46</sup>

### **6.4.2 Definition of relevant markets**

345. The Authority considers that it is unlikely to be appropriate to define a fixed voice market that includes both call origination and call termination. Specifically, the two services are very different and not substitutable in any way.
346. The Authority considers that fixed voice origination is a relevant market in its own right because fixed voice origination provides the means for retail fixed voice customers to

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<sup>44</sup> Wholesale mobile voice call termination (“MCT”) is the service necessary for a network operator to connect a caller with the intended mobile recipient of a call on a different network.

<sup>45</sup> A pricing scheme for the two-way interconnection of two networks under which the reciprocal call termination charge is zero. That is, each network agrees to terminate calls from the other network at no charge.

<sup>46</sup> The calls can be made to another fixed phone line or to a mobile phone.



make calls. In other words, fixed call origination is synonymous with retail fixed voice services.

347. By contrast, call termination is a wholesale product that is provided by one operator, to another, for the purposes of allowing incoming calls onto the network. The Authority does not intend at this time to define a wholesale call termination market.
348. This is on the basis that the wholesale call termination market is likely to be effectively competitive because of the competitive constraint that operates when callers have the choice to contact the same person via a landline or via a mobile number, if the cost of calling the landline is too high. In light of this existing competitive constraint, the market does not meet the “three criteria”<sup>47</sup> test in section 22(2) of the ECA and so is not suitable for *ex ante* regulation.
349. With regard to the market for fixed voice origination (i.e. retail fixed voice services), the Authority does not consider, at this time, that the relevant market should include mobile voice services. The Authority’s decision is based on evidence, gathered from ICOL holders through request for information, indicating an increasing number of fixed voice subscribers and an increase in the average revenue per user (“ARPU”) for fixed voice subscribers in 2017. This evidence is not consistent with the hypothesis that there is ongoing fixed to mobile substitution in Bermuda.
350. On this basis, the Authority finds that fixed voice services are not being constrained by mobile and therefore form a single relevant market.

### **6.4.3 Conclusions on relevant markets**

351. The Authority proposes to adopt the following market definition in its General Determination:

***The island wide provision of retail voice services (i.e. voice call origination) from a fixed location.***

## **6.5 Subscription television**

### **6.5.1 Introduction**

352. The subscription television (or PayTV) sector encompasses services and technologies capable of delivering audio-visual content to end-users.
353. Traditional subscription television services can include the following delivery mechanisms:

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<sup>47</sup> In accordance with section 22(2) of the ECA, identified markets must meet all of the following criteria, as well as any other criteria that the Authority deems to be pertinent:

1. the relevant market is characterised by high and non-transitory barriers to entry;
2. taking into account actual and expected market circumstances during the period under review, the relevant market either—
  - a. is not likely to be affected by technological changes or other developments that would render it effectively competitive, or
  - b. is likely to cease to be effectively competitive; and
3. the application of ex post competition rules alone would not be sufficient to promote or preserve effective competition in the relevant market.

- i. **cable-based subscription television**, in which a coaxial cable connection is used to access television services;
  - ii. **satellite-based subscription television**, in which a satellite dish (and associated decoder box) is used to access television services;
  - iii. **antennae-based subscription television**, in which digital signals are “broadcast” from a local transmission tower and received at the subscriber’s home using a small outdoor antenna;
  - iv. **Internet protocol television (“IPTV”)**, in which live television is streamed through an Internet connection.
354. As a result of the increase in the speed and capacity of broadband networks, audio-visual content is increasingly consumed through over-the-top (“OTT”) services, where content is streamed via an online service (for example, Netflix, Amazon Prime, Hulu)

### 6.5.2 Definition of relevant markets

355. This section sets out the Authority’s assessment of the relevant subscription television markets, for both retail and wholesale markets.
356. The recent decline in traditional PayTV customers and high penetration of OTT services suggest that consumers are systematically leaving traditional PayTV and instead favouring OTT services for their content consumption requirements.
357. The Authority considers that the levels of claimed switching appear to be high enough to suggest that the relevant retail market is wider than just traditional PayTV.
358. On the basis of this analysis, the Authority considers that the relevant retail market includes paid OTT services. Regarding free OTT services, while there does appear to be switching, it is not clear that they would form part of the relevant market.
359. The Authority intends to continue to monitor the subscription television market and gather further information. If new data becomes available that suggests that consumer switching away from traditional PayTV and toward paid OTT services in response to a 10% price rise is not above critical levels, the Authority would reopen the question of the relevant retail market definition in respect of subscription television services in a future market review.

### 6.5.3 Conclusion on relevant markets

360. The Authority proposes to adopt the following market definition:
- The island wide provision of retail subscription television services.***
361. The Authority clarifies that this definition would include retail paid OTT services.
362. As noted above, the Authority at this time is minded not to define a wholesale subscription broadcast market, and to proceed instead in assessing market power in a retail subscription broadcast market only.

## **6.6 Business connectivity**

### **6.6.1 Introduction**

363. Business connectivity services (often called “leased lines” services) provide fixed, symmetric data connection between two points, offering a dedicated connection with reserved bandwidth. Such services are primarily used by business customers.

### **6.6.2 Definition of relevant markets**

364. Business connectivity services (leased lines) are usually defined as symmetric, uncontended data connectivity services between two network aggregation nodes or business premises, or connectivity to cloud-based services. These connections can be point-to-point or point-to-multipoint. The primary users of these services are larger businesses and telecommunications service providers.
365. Businesses use these services to connect multiple offices to remote business servers located in Bermuda, or to connect with international data transmission networks in order to access data centers outside of Bermuda.
366. Telecommunications service providers might use these services to connect different parts of their own networks, for example backhaul from a regional aggregation node to the core network,<sup>48</sup> or for connecting to submarine cable landing points to enable off-island connectivity to the Internet.
367. Since mid-2017, the Authority has been gathering information from operators to inform the Authority’s assessment of the relevant business connectivity markets. Specifically, the Authority issued formal RFIs to providers of electronic communications services, including OneComm, Digicel Group and Link. The requests sent to these operators asked for detailed network information to enable the Authority to conduct a comprehensive assessment of the relevant leased line markets.
368. While some operators were able to provide high-level data on their business connectivity networks, specifically regarding the location of endpoints and flexibility points, none were able to provide details. As such, the Authority does not currently have sufficiently detailed data with which to conduct a comprehensive assessment of the relevant markets, particularly in relation to the relevant geographic markets.
369. As a result of its initial analysis, the Authority concluded that it did not have sufficient information to determine whether it is appropriate to depart from the prevailing geographic market distinctions. As currently constructed, the existing market is defined according to services provided within the City of Hamilton and contiguous suburbs, and those provided outside of Southside and the City of Hamilton and contiguous suburbs. Upon further reflection, the Authority noted that there is a lack of clarity as to the geographic borders of the relevant market, given that the “contiguous suburbs” and Southside are not explicitly defined within the market review in 2013 or geographically within Bermuda. The Authority is therefore proposing to maintain these two geographic markets in relation to the City of Hamilton. The Authority does, however, intend to remove the references to “Southside”

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<sup>48</sup> Including by mobile network operators that need to use such connections to link together their mobile masts and provide the necessary backhaul.

and “the contiguous suburbs” in order to eliminate confusion about the geographic scope of the relevant markets.

370. The Authority continues to consider that it is appropriate to distinguish between retail and wholesale leased line services. The Authority has reached this view on the basis that the retail and wholesale markets are separate in their function and operation; and therefore, it proposes to maintain the distinction between the two markets.
371. The Authority also notes that since 2013 there has been significant investment in the networks of OneComm and Digicel Group. This investment has afforded OneComm and Digicel Group the ability to offer customers faster broadband services, with download speeds of up to 200Mbps. This investment in the networks has been complemented by increasing offshore capacity in order to meet the growing data consumption demands of consumers utilizing these faster broadband services.<sup>49</sup>
372. In relation to the faster broadband services now available, these improved speeds are likely to be more than sufficient for many small businesses. The Authority recognizes that upload speeds are more important for business users than they are for residential broadband users. Business connectivity (leased line) services tend to be symmetric, in that the upload and download speeds are the same.<sup>50</sup>
373. On the basis that business customers will now have the option to substitute lower-speed business connectivity services with residential broadband, and that such services can offer the equivalent of a 20Mbps symmetric service, the Authority is minded to draw a distinction between leased line services under 20Mbps<sup>51</sup> and those above this threshold.
374. The Authority defines leased lines services with speeds of 20Mbps or less as “low-speed” and clarifies that low-speed lease lines are reflective of observed download and upload speeds that are less than or equal to 20Mbps. “High-speed” leased lines correspond to leased lines where both the download and the upload speeds are in excess of 20Mbps.
375. The Authority now proposes to include on-island submarine cable interconnectivity and backhaul services within the definition of “high-speed” leased lines, given that such services require capacity well in excess of 20Mbps.

### **6.6.3 Conclusions on relevant markets**

376. The Authority is proposing to define eight relevant markets. These are consistent in wording with those defined in 2013. However, the Authority notes that it is proposing a new definition of low- and high-speed leased lines as set out above

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<sup>49</sup> Internet usage (in terms of number of Internet users, time spent on the Internet, and amount of data used) has been increasing over time. With the increasing use of fibre-based telecommunications networks and the general trend toward higher bandwidth demand in the residential broadband market, the Authority would expect to see this effect mirrored in the business connectivity market.

<sup>50</sup> In contrast, residential broadband will generally have a higher download speed. For example, a broadband tariff with a headline download speed of 50Mbps may have a headline upload speed of only 5Mbps.

<sup>51</sup> In the event that further network investments are implemented that offer higher upload speeds and afford sector providers the ability to provide broadband services that replicate business connectivity services, the Authority is open to revisiting this market definition.

**Table 6.2 - Proposed business connectivity (leased line) market definitions**

	Retail leased lines markets	Wholesale leased lines markets
<b>Low speed</b>	In the City of Hamilton	In the City of Hamilton
	Outside of the City of Hamilton	Outside of the City of Hamilton
<b>High speed</b>	In the City of Hamilton	In the City of Hamilton
	Outside of the City of Hamilton	Outside of the City of Hamilton

## **6.7 Off-island connectivity**

### **6.7.1 Introduction**

377. Off-island (submarine cable) connectivity is an essential input into many on-island electronic communications services. As such, access to submarine connectivity can act as a bottleneck and has implications for the level of competition observed in both the wholesale and retail markets. It is therefore essential to review the market for submarine connectivity in order to ensure that providers' conduct, pricing and investment decisions are not distorting competition in other markets. In the 2013 market review process there was no defined market for off-island connectivity. As part of the Authority's market review, the Authority has been assessing this essential input, and whether there are any competition concerns warranting regulatory intervention.

### **6.7.2 Definition of relevant markets**

378. The Authority has seen no evidence to date that would lead it to believe that the market definition proposed in the Preliminary Consultation Document is not correct.

### **6.7.3 Conclusion on relevant markets**

379. The Authority therefore proposes to adopt the following market definition in its General Determination:

***The provision of off-island connectivity (i.e. international data transmission).***

## 7 MARKET POWER

380. The purpose of defining relevant economic markets is to assess whether, during the review period, an operator has SMP in any of those markets. The principles for the determination of SMP are set out in section 23 of the ECA.
381. The Authority's determinations on SMP in each of the relevant markets identified in the previous sections are summarized in Table 7.1 below. In the remainder of this section, the Authority sets out the conclusions that lead to these determinations.

**Table 7.1 - Proposed relevant markets and SMP operators**

Service type	Market #	Relevant markets	SMP operator(s)
<b>Broadband</b>	1	Retail provision of fixed broadband Internet connectivity, provided over any technology, and for any speed, on an island wide basis	OneComm and Digicel Group
	2	Wholesale provision of fixed broadband Internet connectivity, provided over any technology, and for any speed, on an island wide basis	OneComm and Digicel Group
<b>Mobile</b>	3	The island wide provision of retail mobile services (voice, text and data)	OneComm and Digicel Group
	4	The island wide provision of wholesale mobile access	OneComm and Digicel Group
<b>Fixed voice</b>	5	The island wide provision of retail fixed voice services (i.e. voice call origination from a fixed location)	Digicel Group
<b>Subscription television</b>	6	The island wide provision of retail subscription television services	-
<b>Business connectivity</b>	7	Retail low-speed leased lines in the City of Hamilton	—
	8	Retail low-speed leased lines outside of the City of Hamilton	—
	9	Wholesale low-speed leased lines in the City of Hamilton	—
	10	Wholesale low-speed leased lines outside of the City of Hamilton	—
	11	Retail high-speed leased lines in the City of Hamilton	—
	12	Retail high-speed leased lines outside of the City of Hamilton	Digicel Group
	13	Wholesale high-speed leased lines in the City of Hamilton	—
	14	Wholesale high-speed leased lines outside of the City of Hamilton	Digicel Group
<b>Off-island connectivity</b>	15	The provision of off-island connectivity (i.e. international data transmission)	—

382. The Authority summarizes the approach to market power assessment in the following section.

## 7.1 Approach to market power assessment

383. The purpose of the market analysis, conducted in accordance with section 23 of the ECA and section 59(2) of the RAA, is to determine whether a market is effectively competitive.
384. After having identified the relevant product and geographic markets, the Authority is required to analyse each market in order to assess whether any sectoral providers have SMP as defined in section 23 of the ECA.
385. Where the Authority determines that a market is not effectively competitive, and identifies operators with SMP, it may make administrative determinations that impose appropriate and specific regulatory ex ante obligations on SMP operators. The purpose of such an administrative determination is to prevent or deter the potential anti-competitive effects of the identified existence of an SMP operator or operators.
386. One important characteristic of some of the markets that the Authority has identified is the presence of two principal competitors; this market structure is often referred to as a “duopoly”. Such a market structure inherently raises questions about defining the potential existence of any competition concerns given that the market is largely dominated by two sectoral providers, rather than one.
387. In the case of duopoly markets, the concern may not be of a single provider possessing market power, but of both large incumbent providers possessing market power. As such, a market assessment should consider if there is joint SMP.
388. Joint SMP does not require, or imply, that the two sectoral providers are engaging in illegal collusion, but refers to whether they constitute a collective entity, i.e. there is “tacit coordination” between them, relative to their competitors, trading partners and customers.
389. In accordance with section 23(3) of the ECA, joint SMP may be found if: (i) the relevant market is concentrated; (ii) each provider has a high and stable share of the market; (iii) significant and enduring barriers to entry exist; and (iv) there are grounds for thinking that these factors, together with others, are likely to give rise to tacit coordination and thereby prevent, restrict or distort competition.
390. The Authority, in its assessment of the existence of providers with joint SMP, referred to precedence established in the European Courts. The four criteria (the “Airtours”) used are summarized below:
- i. Identifying focal points for coordination
  - ii. Ability to monitor potential deviations by participants in the common policy
  - iii. External destabilizing factors
  - iv. Effective punishment mechanisms

The Airtours are explained further in the table below.

**Table 7.2 - The Airtours**

Criteria	Criteria #	Description
<b>Identifying focal points for coordination</b>	1	The providers must have the ability to reach terms of coordination around a focal point. For two providers to coordinate tacitly, the competitive factor(s) must be easily identifiable (i.e. there must be clear structural links between the competitors, or market transparency). In electronic communications markets, possible focal points include price, quality, innovation, and market shares. In consumer markets there is often more transparency with regard to advertising and pricing. In the case of price and quality, coordinating tacitly will be harder if the operators offer differentiated services and/or operate different technologies. If operating costs based on different technologies vary, prices are unlikely to be aligned or to follow a parallel trend. On the other hand, if network technologies are similar, it is easier to use price and/or quality as focal points for tacit coordination.
<b>Ability to monitor potential deviations by participants in the common policy</b>	2	The operators must have the ability to monitor partners for any deviation from the coordinated outcome. In order for tacit coordination to be viable in the context of joint SMP, the time between deviation by one operator and the perception of that deviation by the other operator must be relatively short. This condition is necessary in order to limit the incentives of either provider to deviate from the unspoken agreement around the focal point. Indeed, the longer it takes for deviations to be made public, the greater the benefit that can be obtained from deviating.
<b>External destabilizing factors</b>	3	There must be sufficient stability of the coordination in the face of external factors. The presence of external destabilizing factors hinders the probability that two providers can effectively operate under a common policy and establish joint SMP. In electronic communications, external destabilizing factors may include the entry of new operators to the market, technological breakthroughs, significant demand shocks and unstable political environments.
<b>Effective punishment mechanisms</b>	4	The providers must be capable of imposing a credible punishment if a deviation is detected. For tacit coordination between jointly dominant providers to pass this test, there must be credible, timely and effective disciplinary mechanisms in place for any behaviour that is not in line with the common policy. In general, the punishment must be strong enough for the payoff of deviating to be smaller than the payoff of maintaining internal discipline.

391. The remainder of this section is structured according to the same six service areas set out in Section 6.

- vi. Section 7.2: broadband;
- vii. Section 7.3: mobile;
- viii. Section 7.4: fixed voice;
- ix. Section 7.5: subscription television;
- x. Section 7.6: business connectivity;
- xi. Section 7.7: off-island connectivity.



## **7.2 Broadband**

### **7.2.1 Introduction**

392. In section 6 the Authority proposed that the relevant market includes the island wide provision of broadband services. Furthermore, the Authority considers that the broadband market consists of both retail and wholesale broadband markets.
393. The evidence presented suggests that OneComm and Digicel Group are likely to have engaged in tacit coordination in the past. The recent program of investments in fibre networks by both sectoral providers is a welcome development and good news for consumers. However, the Authority remains concerned that, despite the improvement in the price/speed ratio received by consumers, overall prices may still not be aligned with costs, and OneComm and Digicel Group continue to have the incentives and ability to coordinate and sustain such an outcome. The continued alignment in pricing on the new, faster networks is clear evidence of tacit coordination. Therefore, despite the investments in fibre networks, the Authority is not confident that the market conditions are such that the risk of tacit coordination in the future has been eliminated.

### **7.2.2 Conclusion**

394. The Authority therefore concludes that OneComm and Digicel Group hold joint SMP in the retail broadband market.
395. A finding of joint SMP at the retail level is highly indicative of joint SMP at the wholesale level. This is because, if the wholesale market were competitive, the Authority would be more likely to observe a competitive retail market. The observable evidence is consistent with the hypothesis that OneComm and Digicel Group enjoy joint SMP at the wholesale broadband level.
396. A corollary of being the sole owners of the infrastructure, and the fact that the sectoral providers self-supply, is that there is an almost one-to-one correlation between market shares at the retail level and at the wholesale level. Thus, it is possible to extrapolate the stability of market shares from the wholesale level to the retail level.
397. Access seekers that are able to access the market on FRAND terms is one source of evidence that would indicate that the wholesale market is competitive.
398. The Authority sees no evidence to suggest that the wholesale market is functioning effectively. Furthermore, the finding of joint SMP at the retail level is likely to be strengthened by the absence of a thriving wholesale access market, for the reasons outlined above. The Authority therefore considers that OneComm and Digicel Group have joint SMP at the wholesale level.

## **7.3 Mobile**

### **7.3.1 Introduction**

399. With respect to mobile services, in section 6, the Authority proposes that the relevant markets include the island wide provision of retail mobile services, as well as wholesale mobile access.

400. As discussed in section 7.1, a four-step assessment of joint SMP was used.

### **7.3.2 Conclusion**

401. The Authority concludes that OneComm and Digicel Group have joint SMP in the retail mobile market. This conclusion is based on the market evidence considered below:

- i. Closely aligned prices of OneComm and Digicel Group for the most popular mobile tariffs;
- ii. High mobile data prices relative to relevant international comparators;
- iii. Evidence of high profitability in the provision of mobile services; and
- iv. Almost perfect symmetry in market shares over time.

402. The wholesale mobile market is directly relatable to the retail mobile market on the basis that both retail operators are vertically integrated and only self-supply.

403. Unless there are competitive constraints present at the wholesale level that suggest otherwise, the joint SMP finding from the retail level would indicate joint SMP at the wholesale level as well.

404. On the basis of the analysis outlined above, the Authority concludes that both Digicel Group and OneComm possess joint SMP in the wholesale and retail markets.

405. This SMP finding is consistent with the observable market outcomes, including the evolution of market shares, prices and profits.

406. In addition, the competitive conditions in the mobile market, such as the lack of external destabilizers and their disciplining power, incentivise and allow Digicel Group and OneComm to maintain stable tacit coordination.

## **7.4 Fixed voice**

### **7.4.1 Introduction**

407. Historically, the fixed telephony market has been largely served by Bermuda Telephone Company Ltd (now operated by Digicel Group), with sectoral providers such as Link and TeleBermuda International Limited serving, and operating in, small parts of the market. This continues to be the case.

408. In the market review in 2013, Bermuda Telephone Company Ltd was deemed to have SMP in the market for fixed voice services, which was defined as “narrowband access lines and local calls”.

409. The evidence that fixed voice customer numbers are increasing, and that ARPU increased in 2017, supports the hypothesis that fixed customers are not migrating away to mobile services. This evidence also reinforces the conclusion that fixed voice is a separate market from mobile.

410. There is no indication that joint SMP could be present in this market, and as such the Authority proceeds with an assessment of single SMP.
411. Digicel Group is the dominant provider of fixed services, and also note that its revenues have been increasing over time.

#### **7.4.2 Conclusion**

412. The Authority concludes that Digicel Group has SMP in the fixed voice market.

### **7.5 Subscription television**

#### **7.5.1 Introduction**

413. In section 6, the Authority defined subscription television markets. In this section the relevant subscription television markets for both retail and wholesale are assessed for SMP operators.
414. In 2013 Bermuda Cable Vision, a subsidiary company now owned by OneComm, was identified as having SMP in the subscription television market at both the wholesale and retail level.
415. Since 2013, there have been a number of changes in the subscription television market, including the growing use of OTT services and the recent entry of Digicel Group and its IPTV service.
416. At the present time, and for the next few years, it seems as though OneComm, despite having a high market share, may be limited in its ability to profitably increase prices because of the competitive constraints of alternative providers and the willingness of large cohorts of consumers to switch.

#### **7.5.2 Conclusion**

417. The Authority concludes that there are currently no SMP operators in this market but notes that it intends to monitor market outcomes closely over the next few years given that current market trends may lead to a situation where OneComm would have SMP.

### **7.6 Business connectivity**

#### **7.6.1 Introduction**

418. In section 6, the Authority defined business connectivity markets. In this section each of these markets is assessed to identify whether they have any SMP operators.
419. The Authority has identified eight relevant markets for business connectivity according to all the possible combinations of the following three criteria:
- i. market level: retail versus wholesale;
  - ii. product: high-speed versus low-speed (leased lines); and
  - iii. geographic: in the city of Hamilton versus outside it.

420. The Authority has not received any information from operators that would allow the Authority to assess these geographic markets differently. In 2013, high-speed leased lines in the city of Hamilton and contiguous suburbs were considered effectively competitive. The Authority has no grounds to depart from this finding, except to the extent the geographic market has been modified as set forth in section 6. Therefore, the only defined markets in which the Authority concludes that there is SMP are high-speed leased lines outside of the city of Hamilton.
421. As set out in the market definition analysis in section 6, the Authority has not received any information from operators that would allow the Authority to assess these geographic markets differently. In 2013, high-speed leased lines in the city of Hamilton and contiguous suburbs were considered effectively competitive. On the basis that the Authority has no grounds to depart from this finding, except to the extent the geographic market has been modified as set forth in section 6. Therefore, the only defined markets in which the Authority concludes that there is SMP are high-speed leased lines outside of the city of Hamilton.

## 7.6.2 Conclusion

422. The Authority concludes that Digicel Group holds SMP in the high-speed wholesale and retail markets of leased lines that provide at least 20Mbps upload and 20Mbps download speeds outside of the City of Hamilton. See Table 7.3 below.

**Table 7.3 - Proposed relevant markets and SMP operators**

<b>Wholesale leased lines markets</b>	<b>Retail leased lines markets</b>
Low-speed leased lines in the City of Hamilton <b>No SMP</b>	Low-speed leased lines in the City of Hamilton <b>No SMP</b>
Low-speed leased lines outside of the City of Hamilton <b>No SMP</b>	Low-speed leased lines outside of the City of Hamilton <b>No SMP</b>
High-speed leased lines in the City of Hamilton <b>No SMP</b>	High-speed leased lines in the City of Hamilton <b>No SMP</b>
High-speed leased lines outside of the City of Hamilton <b>Digicel Group has SMP</b>	High-speed leased lines outside of the City of Hamilton <b>Digicel Group has SMP</b>

## 7.7 Off-Island connectivity

### 7.7.1 Introduction

423. In section 6, the Authority defined the off-island connectivity market. In this section this market is assessed to identify whether they have any SMP operators.
424. As an essential input into on-island electronic communications services, access to submarine connectivity is critical to the full functioning of many core electronic communications services such as broadband and mobile.
425. The Authority also understands that at present there are no capacity constraints that would limit the ability of any of the three submarine cable owners to win business from the other

providers of submarine connectivity. As such, on the basis of the evidence, the market conditions currently appear to be sufficient to deliver a competitive outcome.

### **7.7.2 Conclusion**

426. The Authority concludes that there are currently no SMP operators in this market.

## 8 REMEDIES

427. In section 6 the Authority defined fifteen markets across six services, and concluded, in section 7, that there were competition concerns in eight of these fifteen markets across five of the six services: broadband, mobile, fixed voice, subscription television and business connectivity.<sup>52</sup> The Authority highlights that it has not found SMP in the market for the provision of off-island connectivity (i.e. international data transmission) or in a number of business connectivity markets. This was summarized in Table 6.1 at the start of section 6.
428. The Authority may, in accordance with section 20(1) of the ECA, make administrative determinations that impose ex ante remedies. The Authority's proposed ex ante measures aim to promote effective and sustainable competition in the markets in which a sectoral provider(s) was deemed to have SMP.
429. The proposed General Determination attached at Annex 1 below seeks to solicit public comment on its proposals regarding remedies ahead of issuing the final General Determination.
430. Each remedy proposed here fulfils the Authority's statutory duties and satisfies the legal tests for imposing such remedies.
431. The section is structured as follows:
- **Approach to remedies (section 8.1)** sets out the Authority's approach to remedies, as well as its statutory duties in markets where it has found SMP;
  - **Overview of key remedies (section 8.2)** summarizes new remedies that the Authority proposes should apply to the SMP operators in certain markets;
  - **Broadband remedies (section 8.3)** sets out the remedies that the Authority proposes should apply to the SMP operators (OneComm and Digicel Group) in the provision of broadband services;
  - **Mobile remedies (section 8.4)** sets out the remedies that the Authority proposes should apply to the SMP operators (OneComm and Digicel Group) in the provision of mobile services;
  - **Fixed voice remedies (section 8.5)** sets out the remedies that the Authority proposes should apply to the SMP operator (Digicel Group) in the provision of fixed voice services; and
  - **Business connectivity remedies (section 8.6)** sets out the remedies that the Authority proposes should apply to the SMP operator (Digicel Group) in the provision of business connectivity services.

### 8.1 Approach to remedies

432. As set out in section 21 of the ECA, in determining whether to impose, modify or withdraw SMP obligations with respect to a particular provider or providers, the Authority should seek to:

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<sup>52</sup> Off-island connectivity services were not identified as having SMP.

- i. develop or maintain effective and sustainable competition for the benefit of consumers with regard to price, innovation and choice;
  - ii. promote investment in the electronic communications sector;
  - iii. establish ex ante remedies that are effective but proportionate, taking into account the costs of compliance and the ultimate benefits to consumers;
  - iv. establish ex ante remedies that apply on a technology-neutral and service-neutral basis wherever feasible; and
  - v. rely on market forces and withdraw, reduce or limit ex ante remedies in circumstances where the Authority concludes that markets are effectively competitive or likely to become so within a reasonable period of time, taking into account actual and expected market circumstances.
433. The Authority notes that, in some circumstances, these objectives may compete with one another. While a remedy such as imposing wholesale access can promote service-based competition and lead to lower prices for consumers (i.e. promoting objective i), it may act to reduce incentives for incumbents to invest (i.e. conflicting with objective ii).
434. Given these trade-offs, in considering the most appropriate form of regulation, the Authority has endeavoured to strike a balance to achieve the best overall outcome for all stakeholders in the short term and long term.
435. Furthermore, the Authority understands the important role that ex post competition powers, as specified in sections 85 and 86 of the RAA, can play in effective market regulation. As the Authority is seeking to ensure that the overall regulatory framework utilizes ex post regulation appropriately and effectively, the Authority plans to issue separate guidance on its use of ex post competition powers. In any event, the Authority has the power and capability to investigate infringements and impose penalties for breaches of competition law in regulated sectors.
436. Notwithstanding this, in markets where sectoral providers hold single or joint SMP, competition law alone may not be sufficient to develop and sustain effective competition. This consideration is important in identifying markets that are susceptible to ex ante regulation, as set out in section 22 of the ECA.
437. In markets with SMP operators, there may be ongoing competition concerns that could result in undesirable market outcomes in the absence of regulation. These concerns could relate to excessively high prices, poor quality services, and a lack of innovation. Addressing such concerns solely with ex post regulatory tools would create a significant risk of consumer harm.
438. Specifically, if the Authority is able to intervene only after the fact, this may be too late to ensure access for a potential new entrant. In contrast, ex ante regulation can promote the existence of the right industry environment to facilitate efficient market entry for access seekers. For instance, ex ante regulation will help ensure that the terms of wholesale access are transparent and do not favour the incumbent's own retail business division.

439. Furthermore, when close market monitoring is required to determine whether competition is effective in the market, *ex ante* powers enable the Authority to oblige SMP operators to provide accurate and timely information on a regular basis.
440. Finally, *ex ante* regulation allows for more timely intervention, which can be critical in a fast-moving market.

## **8.2 Overview of key remedies**

441. The Authority notes both that a number of the proposed remedies did not exist under the 2013 market review and that the proposed remedies are applied across multiple markets.
442. Given these two points, the Authority is providing a general overview of five remedies that it is proposing to apply to some of the SMP operators:
- An obligation to maintain Accounting Separation;
  - An obligation to provide regular, timely and accurate information to the Authority;
  - An obligation to ensure prices are Cost Oriented;
  - An obligation to provide wholesale access on FRAND and EOO terms; and
  - An obligation to ensure that customers have freedom of choice and do not experience unnecessary difficulties when switching.
443. These remedies are described below, together with a high-level explanation of: (i) the concern that the remedy addresses; and (ii) how the Authority proposes that the remedy would work in practice.

### **8.2.1 Accounting Separation**

444. Accounting Separation is a regulatory tool that enables the Authority to ascertain whether there are anti-competitive cross-subsidies among services provided by an SMP operator, or whether the operator is engaging in any form of anti-competitive pricing.
445. This remedy is based on an obligation to prepare separate accounts for each of the business divisions and/or product lines operated by the SMP provider, including retail and wholesale activities where relevant. The provider will bear the responsibility of having to identify and allocate the costs and revenues associated with each business division, as well as the business transactions between the divisions.
446. Accounting Separation is also an important component of a broader objective of the Authority, namely, to ensure that charges for electronic communications services are transparent, non-discriminatory and cost-based (see the section below on Cost Orientation).
447. In implementing Accounting Separation, the Authority is proposing the following:
- Separated accounts must be prepared bi-annually and must be based on a transparent cost allocation method;



- The transparent cost allocation method must be based on the principle of cost causality.<sup>53</sup> This requires costs to be attributed to components, services and business divisions strictly in accordance with the activities that cause those costs to be incurred. The Authority would not allow the cost of any financial penalties or of outage compensation paid to customers to be included in such costs;
  - Specifically, allocations under this methodology must not have the intention, or effect, of providing an advantage to the SMP operator at the expense of its competitors;
  - Separated accounts must be prepared in accordance with generally accepted accounting conventions, unless such conventions are shown to be irrelevant;
  - The allocation methodology must be applied consistently between accounting periods. Alternatively, where a change in the method of application can be objectively justified, it must be noted and comparative data provided according to the revised basis of allocation; and
  - The separated accounts must be subject to annual audit.
448. These requirements will ensure that the Authority has a good understanding of the FAC associated with providing the services in question. As such, this remedy will support other remedies that the Authority is proposing in a number of markets, in particular Cost Orientation and the requirement to provide access on FRAND terms, both of which are discussed below.

### **8.2.2 Information provision**

449. In order for the Authority to regulate effectively and to monitor compliance with ex ante remedies, it is critical that the Authority has market information that is up to date, accurate and provided in a timely fashion.
450. This accurate and timely information is of particular importance in assessing compliance with regulations relating to prices. Timeliness and accuracy are essential in ensuring that prices for products sold are Cost Oriented, as discussed below.
451. Furthermore, such information will support effective regulation more widely, by ensuring appropriate and effective regulation from an ex post perspective. In other words, having this information available will allow the Authority to intervene in a timely fashion and with a strong evidence base, should the Authority need to do so.
452. As such, in markets where there is SMP, the Authority is proposing to require SMP operators to provide information on a regular basis. The sort of information requirements that the Authority proposes to include in such a remedy are:
- The menu of tariffs offered to customers, including information such as prices, the services provided (e.g. broadband speed) and contract terms;
  - Customer numbers and revenues associated with each tariff;

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<sup>53</sup> 'Each cost or revenue item should be reviewed, and the business activity that caused the cost to be incurred or the revenue to be earned should be identified, with the cost or revenue allocated to that business division (e.g. wholesale, retail service or mobile, fixed networks).'

- The costs of providing services, sub-divided by cost type (e.g. fixed, variable and common). The Authority notes that this relates to the Accounting Separation obligation as well; and
  - Customer churn—i.e. the number of new subscribers minus the number of subscribers who have cancelled or not renewed their subscription. Providers will need to provide both figures as well and not just the net figure.
453. Further details of this remedy are provided below under each specific market in which the Authority proposes that the remedy would apply.

### **8.2.3 Cost Orientation**

454. In markets that lack effective competition, providers with SMP are likely to have the ability and incentive to set prices that can act to distort or restrict competition, as well as exploit consumers. Examples of such pricing practices include excessively high pricing and excessively low (predatory) pricing.
455. Such pricing practices ultimately harm consumers by denying them the benefits that would result from an effectively competitive market.
456. In order to address the risks of such anti-competitive conduct, in addition to the existing regulatory competition powers which the Authority has in a number of markets, including broadband and mobile, the Authority is proposing to impose an obligation on SMP operators to ensure that their retail prices are Cost Oriented.
457. Furthermore, in combination with the retail Cost Orientation obligation<sup>54</sup>, the FRAND requirement on wholesale access will ensure that wholesale access prices are Cost Oriented. This is because the compliance of the sectoral provider with the retail Cost Orientation remedy will be measured against the costs actually incurred by SMP providers, on an end-to-end basis, rather than by reference to notional internal transfer prices. Hence, if the retail price is set with reference to costs, and the FRAND requirement on access ensures that the margin between retail and wholesale prices is also set with reference to costs, it follows that the wholesale access prices will need to be Cost Oriented to comply with this obligation.
458. The Authority notes that while this Cost Orientation remedy does act to constrain retail price-setting to some degree and does seek to address the same concerns as charge controls<sup>55</sup> the way in which the obligation would be imposed means that the constraint on SMP operators will be very different from a standard charge control. For instance, a traditional charge control would entail:
- Building a detailed costing model to assess the incremental costs of each individual product/tariff on a forward-looking basis, forecasting potential subscribers and the likely incurred costs over the coming years, and making assumptions about asset depreciation;

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<sup>54</sup> This is because concerns about wholesale prices are largely to do with concern about the ability of access seekers to purchase the wholesale input and compete at the retail level. As such, the Authority simply needs to ensure that the margin between retail and wholesale prices provides sufficient economic space for efficient access seekers to compete at the retail level using that wholesale input.

<sup>55</sup> Charge controls seek to address concerns about an operator's ability to set abusive (e.g. excessively high) prices.

- Making assumptions about operational efficiency improvements that could be achieved in the short term and long term;
- Estimating the costs of each individual product in each respective market (e.g. mobile/broadband tariffs);
- Assessing the appropriate charge control basket<sup>56</sup> of products, and whether there is a need to impose a sub-cap on each separate basket, and;
- Potentially imposing restrictions on pricing that act to undermine incentives to undertake network investment, given that providers may fear being unable to recover such investments.

459. By contrast, the proposed Cost Obligation would entail the following:

- The Authority would not require operators to build detailed product costing models, or to conduct any cost forecasting;
- The Authority would not make any assessment of future efficiency improvements that could be achieved by operators;
- The Authority would not regulate prices for individual tariffs or products;
- The Authority, when considering prices, would include allowances for network investment so that the costs of this investment would be recoverable; and
- The Authority would take a flexible approach to pricing, to ensure that any regulatory intervention does not risk undermining investment incentives or distorting market outcomes.

460. The Authority sets out below how the Cost Orientation remedy would be applied in practice.

461. In simple terms, the Cost Orientation obligation builds on the Accounting Separation and information provision remedies described above. The Authority will use the information provided by sectoral providers to compare the costs and revenues of the market in question.

462. In the case of broadband, the Accounting Separation remedy would require broadband accounts to separate the costs and revenues associated with all subscribers utilizing broadband services. This would include customers subscribing to broadband only, or in combination with other services (i.e. a bundle).

463. In respect of the appropriate cost benchmark for the application of this Cost Orientation remedy, the Authority considers that the FAC standard should apply<sup>57</sup>. The UK telecommunications regulator, Ofcom, describes the FAC standard as follows<sup>58</sup>:

FAC is an accounting concept designed to ensure that all of a firm's relevant costs (both incremental and common) are attributed to its activities. If a firm set all its charges equal to

<sup>56</sup> Charge control baskets refer to the grouping together of products such that the operator must ensure compliance of the charge control conditions. As such, the average revenue from/price of products in the basket may not exceed the price cap. However, the sectoral providers have freedom to set different prices for the products in the basket.

<sup>57</sup> One of the key reasons for this proposed cost standard, over other alternatives such as long-run incremental costs ("LRIC"), is that FAC can be derived from simple accounting data, whereas other cost standards require specific costing models to be built.

<sup>58</sup> Ofcom. "Cost orientation: Review", paragraph 3.37 [[Link](#)].

FAC for each unit, all things being equal, it would be expected to recover (but not over-recover) all its costs, including all of its common costs. These costs typically also include an allowance for a return on capital which is measured at the firm's cost of capital (i.e. its [weighted average cost of capital, or] WACC).

464. However, the Authority considers that a strict application of the FAC cost standard is not appropriate in this case. If such a test were strictly applied in every calendar year, providers would not be able to account for market variables year on year, such as cost uncertainties and fluctuations. This could ultimately deter sectoral providers from undertaking efficient investment.
465. Given the above, the Authority is likely to find a breach of the Cost Orientation obligation only in cases where revenues are significantly and persistently above FAC.
466. When it comes to assessing compliance with the Cost Orientation obligation, the Authority notes the following:
- The Accounting Separation remedy will provide the basis for the assessment of compliance, in that it will enable the Authority to see the total revenues associated with subscribers to the service in question, as well as the allocated costs;
  - Given that some customers may utilize the SMP service stand-alone while others take it as part of a bundle, the Authority proposes to assess Cost Orientation on all formats in which subscribers take the SMP service in question, whether on its own or in a bundle;
  - In computing the costs, the Authority will divide the total number of subscribers by the total costs associated with providing the SMP service. The Authority will include in the calculation subscribers who utilize the service on a stand-alone basis, or as part of a bundle. This will afford the Authority the ability to compute the FAC per subscriber for the provision of those SMP services;
  - In computing revenues, the Authority will consider the total revenues across both stand-alone subscribers and bundle subscribers; and
  - Finally, in addition to the service costs of the SMP product in question, the Authority will include the costs associated with providing the other bundle services, in order to compute a full cost basis against which to compare the revenues.
467. To set out more clearly how this would work in practice, a sample case is provided below.
468. Suppose there are 100 customers utilizing broadband from a SMP provider, where 50 customers are stand-alone broadband subscribers, and the other 50 subscribe to broadband as part of a bundle with mobile and PayTV.
469. Based on the information provided by the SMP operator, in conjunction with the Accounting Separation obligation, the Authority would be able to see the costs attributable to the provision of broadband to these 100 customers. Assume in the above example that the total broadband network costs are \$100 for the present fiscal year, and the average cost for each customer is therefore \$1. This corresponds to the FAC. The Authority needs to consider the costs of providing the bundle customers with the other services (i.e. mobile and PayTV).

470. Suppose that the average cost per customer for providing mobile services is \$0.50, and the average cost for providing PayTV is \$0.50. This means that the cost of providing the bundle is \$2 per customer (\$1 for broadband, and \$0.50 for each of mobile and PayTV). In this circumstance, the total costs for bundle customers are calculated as 50 (customers) x \$2 = \$100. Additionally, there are the 50 customers who take broadband stand-alone, and the cost to serve them is \$1 each, giving a total of \$50. Therefore, the total cost for providing all services to all 100 customers who subscribe to broadband in some form is \$150.<sup>59</sup>
471. Having determined the FAC to service broadband customers, in any form, the Authority would turn to the revenues. Further expanding on the example above, suppose that across all 100 customers the total revenue is \$150. This means that the total revenue is equal to the total estimated FAC. Given that revenues in this case do not even exceed the FAC, there would be no basis for finding that the prices charged are not Cost Oriented.
472. In contrast, suppose total revenues are \$300 across the same 100 customers. This would mean that total revenue was double the total cost estimate based on FAC. This is a material divergence between revenues and costs and could be a strong indication that the Cost Orientation obligation has been breached. However, before reaching such a conclusion, the Authority would need to investigate whether there are valid reasons to explain this divergence. For example, there may have been an unexpected cost shock, or the product may be in its early stages of development with low adoption, resulting in high unit costs.
473. As can be seen from the above, the Authority does not intend to apply this test mechanistically. Therefore, even if it does find that revenues are above FAC, this does not automatically mean that the prices are not Cost Oriented. Instead, only in cases where revenues are significantly and persistently above FAC, and there are no compelling explanations for the divergence, will the Authority consider that the operator has not complied with the Cost Orientation obligation.
474. Finally, the Authority clarifies that in order to carry out the test, the Authority will require information on all services within the bundle. If services within the bundle are not regulated, in order to ensure that the services that are regulated (on the basis of Cost Orientation) are compliant with SMP obligations, the Authority will need to gather cost and revenue data on all services within that bundle. In effect, therefore, the imposition of Cost Orientation on a single market (in conjunction with Accounting Separation and information provision) will require the SMP operator to provide cost and revenue breakdowns for all services in the bundle, whether or not these services are subject to *ex ante* regulation.
475. In an assessment of an SMP operator's costs, the Authority would not allow the cost of any financial penalties imposed by regulation or of outage compensation paid to customers for poor quality of service to be taken into account.
476. While the remedies are applied within each SMP market, to the extent that SMP services are sold in bundles, the Accounting Separation and information provision remedies will also apply to markets in which no SMP has been found. This is because the information required to assess Cost Orientation compliance in any one market requires an understanding of the costs of all services included in such bundles.

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<sup>59</sup> 50 customers taking stand-alone: 50 x \$1 = \$50. 50 customers taking bundle: 50 x \$2 = \$100. Total is \$150.

477. The Cost Orientation obligation will also seek to ensure that prices are not predatory. Predatory pricing occurs when incumbent sectoral providers “use aggressive pricing strategies in order to deter entrants and/or force competitors out of their industry”.<sup>60</sup> Such pricing behaviour can be remedied by imposing limits on how low sectoral providers are able to price, i.e. a pricing floor. Predatory pricing floors are usually set on the basis of some cost standard, such as LRIC.<sup>61</sup>
478. The Authority will use a pragmatic approach to assessing predatory pricing, using the available cost information. For example, the cost floor could be based on the cost information which could be computed from the provider’s financial accounts.
479. One approach could be to take the FAC value (as discussed above) and apply a LRIC/FAC ratio, likely to be benchmarked from other regulated jurisdictions where LRIC and FAC values are available, such as the UK. Applying this ratio to the computed FAC will provide an estimate for the LRIC, which could be the basis for the cost floor.
480. Regardless of the specific cost standard used for the price floor, the SMP provider will be responsible for ensuring that its prices are not significantly and persistently below that price floor.

#### **8.2.4 Wholesale access on FRAND and EOO terms**

481. Market players with SMP are likely to have the ability and incentive to refuse or restrict access to their networks to other operators who wish to use the network to provide retail services. This restriction can harm consumers by limiting the scope for competition at the service level. As a result, the Authority is proposing to require SMP operators in certain markets (i.e. broadband, mobile and business connectivity) to provide wholesale access to their networks.
482. As part of this obligation, SMP providers will be required to offer commercial terms to access seekers in accordance with FRAND.
483. The FRAND obligation is intended to ensure that SMP providers offer access on price and non-price terms that are fair and reasonable, and do not discriminate between different access seekers, or between the SMP provider’s own retail arm and other sectoral providers. The FRAND obligation also means that SMP providers must negotiate in good faith with potential and existing access seekers and must therefore meet any reasonable request for access. The FRAND obligation is therefore intended to promote efficient and sustainable competition at the service level.
484. In the context of wholesale access and the prices charged for such access, FRAND obligations include the requirement not to initiate a “margin squeeze”. This means that the difference in price between the wholesale access service and the corresponding retail price charged by the SMP provider must be large enough to cover all relevant and efficiently incurred costs<sup>62</sup>, plus an appropriate profit margin.

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<sup>60</sup> Motta, M. (2004). *Competition Policy: Theory and Practice*. Cambridge University Press.

<sup>61</sup> Other cost standards include average variable cost and average avoidable cost.

<sup>62</sup> This includes retail costs (e.g. the costs of marketing, customer acquisition and any equipment provided to the customer, such as a broadband modem) as well as any other necessary costs (e.g. the costs of international connectivity).

485. Furthermore, SMP operators will be required to comply with the EOO obligation and ensure that the wholesale access services provided to an individual access seeker are equivalent to those that it provides to itself and other access seekers.
486. The aim of the EOO obligation is to ensure that access seekers are not disadvantaged (relative to the SMP operators who self-supply) in relation to the quality of the service received. The service provided must be identical on all key service dimensions, including speed, reliability and the time taken to install new lines and fix faults. The SMP operator must thereby not offer a reduced service to access seekers relative to the service that the operator provides to itself.
487. Where both the SMP operator and access seekers have made efforts to reach a commercial agreement but have been unable to do so, the Authority will have the power to intervene and make a determination as to whether or not the terms offered by the SMP operator comply with the FRAND/EOO obligation. Subsequently, the Authority could determine, after due process, the terms of the access agreement.

### 8.2.5 Consumer switching and choosing the right product

488. The Authority wants to ensure that consumers do not experience unnecessary difficulties when switching providers. The Authority is of the opinion that consumers should be able to exercise choice and take advantage of competition in electronic communications markets by being able to switch providers easily. Unnecessary difficulties in switching providers can give rise to consumers suffering harm, or even prevent switching entirely.
489. Therefore, the Authority will require SMP operators to meet certain minimum standards regarding their management of consumers who are considering moving to another provider. The obligations under this remedy seek to ensure that consumers can purchase services that best meet their needs. This should subsequently drive effective competition and achieve better consumer outcomes, such as lower prices and higher quality.
490. The key pillars of the Authority's approach to consumer switching are as follows:
- **Having a “right to exit” and a maximum permitted contract length:** consumers should be protected from being locked into contracts with burdensome cancellation policies or excessive contract lengths;
  - **Prohibiting automatically renewable contracts:** consumers should be protected from being automatically locked into contracts beyond the minimum contract period. Contracts that automatically “roll over” for another minimum contract period will be prohibited; and
  - **Enabling straightforward and timely switching:** consumers should be able to switch providers easily and quickly, without significant transaction costs.
491. In addition to the above, the Authority plans to ensure that customers are always able to choose the product that is most suitable for them, even if the product is advertised as being primarily for other types of customers. For example, businesses should be able to purchase broadband that is targeted at residential customers. This will avoid unnecessary restrictions on choice of service, and thus help to ensure that consumers can choose the best-value product.

492. The remainder of this section sets out the remedies that the Authority is proposing with respect to those markets where it has identified SMP (in section 5). The proposed remedies are structured on the basis of the five service areas in which the Authority identified SMP in the defined relevant markets.

- Section 8.3: broadband;
- Section 8.4: mobile;
- Section 8.5: fixed voice;
- Section 8.6: subscription television; and
- Section 8.7: business connectivity.

### 8.3 Broadband

493. The Authority determined that OneComm and Digicel Group hold joint SMP in both the retail and wholesale broadband markets.

494. Given this joint SMP finding, the Authority is required to consider appropriate and proportionate remedies in each of the markets. Table 8.1 below summarizes the proposed remedies.

**Table 8.1 - Proposed remedies in the broadband markets**

Market level	Operator(s) with SMP	Remedy
Wholesale	OneComm, Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to provide wholesale bitstream and virtual unbundled local access</li> <li>• Obligation to ensure that wholesale access is provided on FRAND and EOO terms</li> <li>• Obligation to publish wholesale key performance indicators</li> </ul>
Retail	OneComm, Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to offer broadband on a stand-alone basis</li> <li>• Obligation to ensure Accounting Separation</li> <li>• Obligation to provide information to the Authority</li> <li>• Obligation to ensure that prices are Cost Oriented</li> <li>• Obligation to publish retail key performance indicators</li> <li>• Obligation to ensure that customers can choose the right products and do not experience unnecessary difficulties when switching</li> </ul>

#### 8.3.1 Wholesale broadband remedies

495. The Authority is proposing to impose the following obligations on the SMP providers in the wholesale broadband market (i.e. OneComm and Digicel Group):

- To provide wholesale access;
- To ensure that wholesale access is provided on FRAND and EOO terms; and
- To publish wholesale KPIs.



## **The obligation to provide wholesale access**

496. Given recent developments in the market and the Authority's finding of joint SMP, as well as the scope for improving consumer outcomes by increasing service-based competition, the Authority considers that it is necessary to continue to impose wholesale broadband access obligations on OneComm and Digicel Group.
497. Wholesale access obligations will encourage retail competition at the service level by giving efficient access seekers the opportunity to compete for customers. This can deliver significant consumer benefits, particularly in terms of lower prices to consumers.

## **What the proposed wholesale broadband access obligation would cover**

498. "Wholesale broadband access" refers to the provision of wholesale broadband services by the owner of the network infrastructure to allow sectoral providers to access that network in order to offer their own retail broadband services.
499. Wholesale access can come in several forms, including the following:
- Re-sale: the access seeker buys a service that is identical to the incumbent's retail service, and simply re-brands it;
  - Bitstream: the access seeker interconnects at a single point in the network for the purposes of providing broadband services whereby the access seeker offloads traffic onto its own core network to enable Internet connectivity;
  - Physical unbundling: the subscriber's fixed connection is "unbundled", allowing direct ownership by the access seeker. This requires the access seeker to install equipment at the location of the unbundled wiring. This form of access is relevant mainly to legacy forms of broadband;
  - VULA unbundling: a virtual form of unbundling whereby the subscriber's connection (i.e. fibre broadband connection) is virtually unbundled, allowing the access seeker to take ownership of the "last mile" of the individual subscriber's connection. This form of access is relevant to newer (i.e. fibre-based) broadband networks; and
  - Infrastructure access: access seekers can install their own cables into the SMP provider's civil infrastructure (e.g. underground ducts and overhead poles). This is a purely passive form of access that requires the access seeker to have its own fully independent active broadband network but does negate the need for the access seeker to conduct its own civil works in order to install cabling in its own ducts.
500. The Authority is proposing to require that the SMP providers meet any reasonable request for all forms of wholesale broadband access listed. The Authority anticipates that bitstream and VULA are the most relevant for fibre-based broadband networks and are likely to be by far the most popular access products. However, SMP providers would also be required to provide pure re-sale, physical unbundling or infrastructure access, if requested.
501. The Authority wishes to make it clear that the proposed obligation to provide access would be on a technology-neutral basis, and that the SMP operator can choose to decommission a legacy network. The SMP operator would need to ensure that it continues to provide

services to access seekers on its new/alternative network, and that consumers are no worse off. In other words, the service to consumers must be at least as good as before, for no greater price.

### **Wholesale access must be provided on FRAND and EOO terms**

502. The Authority proposes that SMP operators, OneComm and Digicel Group, will also be required to meet any reasonable request for wholesale broadband access. As part of this obligation, OneComm and Digicel Group must also ensure that all wholesale broadband services are provided in accordance with FRAND and EOO.
503. The FRAND obligation is intended to ensure that the SMP provider offers access on price and non-price terms that are fair and reasonable, and does not discriminate between different access seekers, or between the SMP provider's own retail arm and other sectoral providers. The FRAND obligation also means that SMP operators have to negotiate in good faith with potential and existing access seekers. At a minimum, the Authority considers that wholesale access should be available for each and every broadband tariff that the SMP operators offer at the retail level. Furthermore, any requests for other wholesale access services should also be met, if they are reasonable.
504. The EOO obligation is intended to ensure that the SMP operator offers access in a way that ensures that the SMP operator does not unduly favour its own business divisions. This is essentially a strengthening of the non-discrimination obligation within FRAND and requires that the service output offered at the wholesale level is equivalent, both across access seekers and when compared with the self-supplied wholesale service of vertically integrated SMP operators. Ultimately, the EOO obligation attempts to ensure that access seekers are not disadvantaged in terms of the quality of service received, relative to the incumbents that self-supply. In short, the service provided must be the same across all key dimensions, including speed, reliability and the time taken to install new lines and fix faults. This means that access seekers should not suffer a reduced quality of service relative to the service that the SMP operator provides to itself.
505. To monitor compliance with the EOO obligation, the Authority plans to require SMP operators to publish wholesale KPIs.

### **Ensuring that prices do not lead to a margin squeeze**

506. As part of this wholesale access proposal, the Authority would lift the wholesale price cap currently set at the retail price minus 15%. However, the Authority wishes to clarify that SMP operators will need to ensure that they do not engage in a margin squeeze for wholesale broadband access, as part of the FRAND obligation. A margin squeeze would occur if the SMP operator were to set wholesale and retail prices leaving insufficient room to recover all relevant and efficiently incurred costs, plus an appropriate profit margin.
507. The Authority will assess compliance with this "no margin squeeze" condition following a complaint by any access seeker, although the access seeker would need to support its complaint with evidence.

### **Obligation to publish wholesale KPIs**

508. In order to track the service quality that SMP operators are offering to wholesale access seekers, the Authority proposes to require the SMP operators to publish on their websites

specific wholesale KPIs according to the service offered to access seekers, as well as the services that the operators provide to their own retail business divisions.

509. The Authority's proposed wholesale broadband KPIs are:

- The time taken to connect and/or migrate a retail customer, according to the retail business division of the SMP provider and for each access seeker;
- The time taken to address network faults, from when the fault was first identified, according to the retail business division of the SMP provider and access seekers. Faults are defined here as lost or impaired service due to issues in the wholesale network (i.e. faults that are the responsibility of the SMP operator);
- The number of faults that need to be fixed according to the retail business division of the SMP provider and access seekers.

### **8.3.2 Retail broadband remedies**

510. The Authority considers it appropriate and proportionate to impose six retail broadband market remedies:

- an obligation to offer broadband on a stand-alone basis;
- an obligation to ensure Accounting Separation;
- an obligation to ensure prices are Cost Oriented;
- an obligation to provide information to the Authority;
- an obligation to publish retail KPIs; and
- an obligation to ensure that customers can choose the most appropriate product and do not experience unnecessary difficulties when switching.

#### **Obligation to offer stand-alone retail broadband service**

511. Stand-alone broadband refers to the offering of retail broadband services that allows the consumer to access the Internet. SMP operators would be allowed to bundle these services together.

512. However, SMP operators under this proposed obligation would be required to offer a retail broadband service that is unbundled from any other telecoms service (e.g. fixed phone, mobile or PayTV).

513. The Authority notes that if it saw evidence that operators were seeking to evade this regulation through pricing strategy, it would consider intervening through use of its ex post powers.

#### **Accounting Separation**

514. The Authority proposes to oblige SMP operators to maintain Accounting Separation. This obligation will enable the Authority to observe, inter alia, the costs and revenues of providing broadband services on an end-to-end basis in the retail and wholesale market.

## **Obligation to ensure prices are Cost Oriented**

515. The Authority proposes requiring SMP operators to ensure that retail broadband prices are Cost Oriented. Under the Cost Orientation obligation, revenue that is attributable to broadband services must not be significantly and persistently above the FAC of providing the broadband services, and prices must not be significantly and persistently below a price floor (hence preventing predatory pricing).

## **Obligation to provide information**

516. In coordination with the Accounting Separation obligation, the Authority proposes to require SMP providers to submit regular and detailed information to the Authority.
517. With this information, the Authority will be able to assess whether the prices charged for broadband at the retail level are Cost Oriented. Additionally, the financial information obtained will assist the Authority in determining whether the SMP operators are complying with all other obligations (such as not engaging in a margin squeeze). Access to regular and detailed information will ensure that the Authority is better informed about the market developments. Having access to this information will also enable the Authority to quickly respond to any dispute that may arise, and ultimately to intervene on an ex post basis where appropriate.
518. These proposed reporting obligations involve the requirement to provide both retail and wholesale information. The Authority notes that despite this being a retail remedy, it is not unreasonable to also request wholesale information, given that wholesale services are an essential input into the retail services. Furthermore, compliance with some remedies requires comparison of retail and wholesale information.
519. The Authority therefore proposes that SMP providers submit the following information every six months. Furthermore, the submitted information must be audited annually.

### **Wholesale information**

- Total costs of submarine cable connectivity, sub-divided by capital expenditure ("CAPEX") and operating expenditure ("OPEX"), and the proportion of these costs that are allocated to the provision of broadband services.
- Total costs of the core network, sub-divided by CAPEX and OPEX, and the proportion of these costs that are allocated to the provision of broadband services.
- Total costs of the access network, sub-divided by CAPEX and OPEX, and the proportion of these costs that are allocated to the provision of broadband services (including on a per-household basis).
- Total overheads, and the proportion of these costs that are allocated to the provision of wholesale broadband services.
- Network coverage, in the form of the number of premises connected.
- The number of premises connected, sub-divided according to the retail arm of the SMP provider and for each access seeker.

- The number of wholesale broadband access lines sold, sub-divided by type of access, speed and access seeker.
- The total revenue from access lines sold, sub-divided by type of access, speed and access seeker.

### Retail information

- Total retail broadband costs, sub-divided by department (marketing, customer service, retail stores, etc.).
- Total overheads, and the proportion of these costs that are allocated to the provision of retail broadband services.
- All retail broadband tariffs currently available, as well as any legacy tariffs still being used by customers, along with information on their service characteristics (e.g. price and speed).
- The number of retail broadband customers, sub-divided by retail broadband tariff (i.e. the headline download speed).
- Gross and net churn of retail broadband customers, sub-divided by tariff (i.e. the headline download speed).
- Average revenue per customer, sub-divided by tariff (i.e. the headline download speed).
- Average download usage per month (in GB), sub-divided by tariff (i.e. the headline speed).

520. The precise format for providing this information will be defined during the implementation of the General Determination. Given the overlap between some of the information listed above and the information that will need to be provided in respect of other markets, the Authority considers that it may be appropriate for data across all markets to be provided in a consolidated and consistent format.

### **Obligation to report retail KPIs**

521. In addition to publishing KPIs in respect of wholesale services, SMP operators will be required to publish a small number of retail KPIs.

522. The Authority's objective in requiring the SMP operators to make such information public is to increase public awareness of the quality of service provided by the SMP operators, and to better inform consumers about what services are available. Most importantly, this information should encourage further competition between operators, specifically regarding the quality of their retail service.

523. Two such proposed KPIs are as follows:

- the average actual achieved broadband download speed, sub-divided by tariff (i.e. the headline download speed);
- the number of customer complaints, sub-divided by topic (i.e. reliability, speed, contractual terms, or over-billing).

**Obligation to ensure that customers can choose the right product and do not experience unnecessary difficulties when switching**

524. In order to minimize difficulties in switching, the Authority proposes to require SMP operators to meet certain standards when dealing with consumers who are considering moving to another provider. The obligations under this remedy would seek to ensure that consumers can acquire services that best meet their needs, including value for money. This should subsequently drive effective competition, and ultimately achieve better consumer outcomes, such as lower prices or improved quality of service.
525. The key principles of the Authority's approach to consumer switching are as follows:
- Having a "right to exit" and a maximum permitted contract length;
  - Prohibiting automatically renewable contracts; and
  - Enabling straightforward and timely switching.
526. In addition to the above principles, the Authority plans to ensure that customers can choose their preferred product, even if that product is advertised as being primarily for other types of customers. For example, this remedy would allow businesses to purchase broadband services that are targeted at residential customers. This proposal would avoid unnecessary restrictions of choice and help to ensure that consumers can choose the best-value product.

**The "right to exit" and maximum permitted contract length**

527. The Authority considers it vital that consumers are not unduly locked into contracts and can act swiftly in response to market developments by switching products or providers. The following measures will help to ensure that consumers do not face undue barriers to switching, and therefore ensure that SMP operators face competitive pressure.
528. First, where the contract terms change, operators must allow consumers to leave a contract without incurring any cancellation charges. Such changes would include price increases within the contractual period, or changes to the duration or service conditions of the contract. This "right to exit" will protect consumers against changes that are not clearly articulated at the start of the contract. However, the consumer may be liable in these circumstances for the cost of any subsidized customer premises equipment ("CPE") provided (e.g. a free Wi-Fi router) and the pro-rata cost of the service at the contracted rate.
529. In support of this, the Authority proposes that SMP operators must contact consumers at the point when such a proposed change occurs, to inform consumers that they have the right to exit from their current contract. Additionally, the right to exit should apply even when the consumer has acquired a bundle of services.
530. Second, the Authority mandates that a 14-day "cooling-off" period should apply for all broadband products, to allow the consumer the right to exit the contract at any point during those 14 days without penalty. This period should start from the date on which the contract

is entered into and should run for 14 consecutive calendar days. However, the consumer may be liable in these circumstances for the cost of any subsidized customer premises equipment ("CPE") provided (e.g. a free Wi-Fi router) and the pro-rata cost of the service at the contracted rate.

531. Third, the right to exit should also apply where actual, realized broadband speeds are significantly different from the advertised, headline speeds.
532. The Authority proposes to adopt a definition of a 20% differential applied to either the download or the upload speed. When practically applied, a customer who has acquired services with a reasonable expectation of experiencing 100Mbps download speeds and 20Mbps upload speeds should not experience download speeds below 80Mbps or upload speeds below 16Mbps. A failure to meet either the upload or the download speed would result in a right to exit.
533. If a customer complains to an SMP operator about speeds experienced, the Authority proposes that the SMP operator should have 15 business days to improve the speeds such that they are not "significantly different" from the advertised speeds, before the customer gains the right to exit. The SMP operator must inform the customer about their right to exit at this point.
534. Fourth, the Authority mandates a maximum permitted contract length for retail broadband products of 24 months. Specifically, when contracts are longer than 12 months, an alternative choice with a contract period of 12 months or less must also be offered. This will ensure that consumers have a choice over contract length and are not locked into contracts for excessively long periods.
535. Fifth, each contract must include a provision granting consumers the option to terminate their contract at any time upon payment of a reasonable termination fee (reflecting only the payments to be made during any remaining minimum contract period). This will protect consumers from being unduly locked into contracts and subsequently unable to switch to another provider. Under this scenario, the SMP operator would be entitled to the sum of the remaining payments due as part of the contract and to the return of any equipment that has been loaned to the customer.
536. The operator may also impose a Cost Oriented cancellation charge to cover the costs of administration. However, this administration charge can cover only the actual costs incurred in dealing with the customer cancellation process and is therefore likely to be very small in relation to the contracted amount.
537. Table 8.2 below presents a summary of the fees that may be charged to the consumer upon exit of a broadband contract.

**Table 8.2 - Permissible fees for broadband contract termination**

<b>Timing of contract cancellation</b>	<b>Fees that may be charged to the customer</b>
Within the 14-day cooling-off period	Any subsidized CPE costs, plus the pro-rata cost of the service to date <sup>63</sup>
After the 14-day cooling-off period, but within the minimum contract period (e.g. 12 months)	The customer must pay for the service until expiry of the minimum term, <sup>64</sup> even though the customer may not be utilizing the service <sup>65</sup>
After the end of the minimum contract duration (when the consumer is on a one-month rolling contract with 30 days' notice)	The remaining payments covering the 30-day notice period <sup>66</sup>

**Prohibiting automatically renewable contracts**

538. Under an automatically renewable contract, if the consumer does not proactively switch products or providers at the end of the initial contract period, the contract will “roll over”, incurring a new minimum period. Automatically renewable contracts are therefore a way in which SMP operators seek to “lock in” consumers for longer than their initial contract period.
539. The Authority wishes to prevent consumers from being locked into their contract beyond the initial minimum contract period by unwittingly being rolled over to a new contract without their expressed consent. As such, automatically renewable contracts will be banned for SMP operators.
540. Prohibiting these types of contractual provisions will mean that consumers will face fewer barriers to switching and will encourage competition in the market.
541. The Authority proposes that at the end of the minimum contract period, consumers will by default be placed on one-month rolling contracts on the same terms as their existing contract. Consumers will subsequently be able to break the contract with no more than 30 days' notice.

**Straightforward and timely switching**

542. The Authority considers it vital that consumers are afforded the opportunity to choose their preferred broadband product. This would mean that consumers are able to easily and quickly switch services or service providers and face no unnecessary or disproportionate barriers in switching.

<sup>63</sup> For example, assume that a customer bought a broadband service 20 days ago, and the service was installed and connected 10 days ago so the customer has been able to use the service for 10 days. The customer now decides they no longer wish to utilize the service. Since the customer is within the 14-day cooling-off period, they have the right to cancel the service. In doing so, they would need to pay for the 10 days of service that they have utilized (at the pro-rata contract rate, i.e. 10/31 of the monthly cost) and to cover any costs incurred by the supplier for installation, connection and equipment.

<sup>64</sup> Subsidized CPE costs would not be applicable in this case because any subsidy would be expected to be recovered through the full value of the contract, which may be charged to the customer at this point.

<sup>65</sup> For example, assume that a customer has been on a 12-month contract for exactly 10 months and wishes to exit the contract. Since the customer is not within the cooling-off period, they would be liable for the remaining payments (the monthly cost x 2).

<sup>66</sup> For example, assume that a customer has been on a 12-month contract for exactly 12.5 months (half a month beyond the minimum contract period). The customer wishes to exit the contract and initiates the 30-day notice period. They are therefore liable for the costs of the service for the 30-day notice period.



543. The Authority is proposing two measures to ensure straightforward and timely switching:
- SMP operators must ensure that the switching process is straightforward, requiring as little time and effort from consumers as possible. Operators must also ensure that the switching is efficient and timely, and that consumers do not experience gaps in their service when switching providers. These measures are likely to increase switching and thus competition in the market, and subsequently drive consumer benefits. The Authority will monitor the rates of switching in the market through the information provided by operators.
  - The Authority is proposing that operators be obliged to notify customers when their minimum contract period ends. The Authority is inviting views on this. Such a remedy should encourage consumers to access information in the market, and thus increase competition.

*Allowing customers to choose the most appropriate product or products*

544. The Authority wishes to promote consumer choice and ensure that all consumers can act on information by having the option to choose the most appropriate product or products. As such, the Authority wishes to ensure that no retail customer is discriminated against on the basis of their intended use of a broadband service.
545. The Authority is aware that certain unnecessary barriers to consumer choice may currently exist for some business customers. SMP operators are therefore required not to discriminate between customers buying retail broadband on the basis of their intended use (i.e. whether they are residential or business users).
546. This provision will allow businesses to make use of retail broadband services in circumstances where the businesses consider that this retail service will best suit their requirements, thereby negating the need for them to acquire more expensive leased line services that may not effectively satisfy their requirements.

## **8.4 Mobile**

547. On this basis, the Authority proposes to apply several remedies, which are detailed in this section. Table 8.3 summarizes the remedies proposed in the wholesale and retail mobile markets.

**Table 8.3 - Proposed remedies in mobile markets**

Market	Operator(s) with SMP	Remedy
Wholesale mobile	OneComm, Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to provide wholesale access</li> <li>• Obligation to ensure that wholesale access is provided on FRAND and EOO terms</li> <li>• Obligation to publish wholesale KPIs</li> </ul>
Retail mobile	OneComm, Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to offer mobile services on a stand-alone basis</li> <li>• Obligation to ensure Accounting Separation</li> <li>• Obligation to ensure prices are Cost Oriented</li> <li>• Obligation to provide information to the Authority</li> <li>• Obligation to publish retail KPIs</li> <li>• Obligation to ensure that customers can choose the right products and do not experience unnecessary difficulties when switching</li> </ul>

#### **8.4.1 Wholesale mobile remedies**

548. To address the finding of SMP in the wholesale mobile market, the Authority is considering three obligations on OneComm and the Digicel Group:
- An obligation to provide wholesale access;
  - An obligation to ensure that wholesale access is provided on FRAND and EOO terms; and
  - An obligation to publish wholesale KPIs.
549. Given the Authority's current assessment of the wholesale mobile market, and the provisional finding of SMP for OneComm and Digicel Group, it seems appropriate to provide more clarity on the terms on which wholesale mobile access should be provided.
550. In a similar vein to the broadband analysis, the Authority is of the view that a wholesale mobile access approach should foster competition at the retail level by allowing efficient access seekers to enter the market, while still allowing network operators to receive fair returns on their network investments. This would ensure that sectoral providers remain incentivised to undertake future, economically efficient investments that can deliver benefits to consumers in the long run.
551. Given that the HDS-1 Licensee obligations already cover much of what the Authority would propose with respect to wholesale mobile access, the Authority is of the opinion that further clarity and guidance are required, specifically on how the Authority will assess offers from licensees for wholesale mobile access, as well as a number of complementary obligations.

#### **Obligation to provide wholesale mobile access on FRAND and EOO terms (to complement prevailing licensee obligations)**

552. To ensure that the mobile market is functioning efficiently, and that wholesale services can be effectively used by efficient access seekers, the Authority proposes to require that, in addition to the prevailing licensee obligation, wholesale mobile access is provided on FRAND and EOO terms.

553. Consistent with the HDS-1 licence conditions, and the proposals with respect to wholesale broadband access, if market evidence indicates that network operators are not meeting their FRAND and EOO obligations, the Authority will intervene and determine the terms of access.

#### **Obligation to publish wholesale KPIs**

554. The Authority proposes to oblige the SMP operators to publicly report on several KPIs in order to provide transparency about the operators' service quality to wholesale customers (i.e. MVNOs), as well as evidence on which to assess whether the SMP operators are indeed meeting their FRAND and EOO obligations.
555. The Authority's proposed wholesale mobile KPIs are:
- The number of days taken to port a mobile number, sub-divided by each MVNO, and for the SMP operator's own retail arm;
  - The number of days taken to restore service to a customer, sub-divided by each MVNO, and for the SMP operator's own retail arm; and
  - The number of calls dropped/blocked, sub-divided by each MVNO, and for the SMP operator's own retail arm.

#### **8.4.2 Retail mobile remedies**

556. The Authority wishes to explicitly note that it is minded to remove the requirements for providers to notify the Authority about changes to their tariff portfolio and the prescriptive retail price regulation. Instead, the Authority proposes the following obligations:
- An obligation to offer stand-alone products;
  - An obligation to ensure Accounting Separation;
  - An obligation to set retail prices on a Cost Oriented basis;
  - An obligation to provide information to the Authority;
  - An obligation to publish retail KPIs; and
  - An obligation to ensure that customers can choose the right products and do not experience unnecessary difficulties when switching.

#### **Obligation to offer stand-alone products**

557. The Authority proposes to require SMP operators to offer the mobile element of any of their service offerings on a stand-alone basis (i.e. unbundled from any other products with which the mobile services might be sold). For this purpose, mobile services constitute combinations of allowances of minutes, Internet data and text messages. The stand-alone obligation would require all technical criteria of the bundled offer (e.g. data limits or throttling) to be replicated.
558. The Authority notes that if it sees evidence indicating that SMP operators are seeking to evade this regulation through pricing strategy, the Authority would consider intervening through use of its *ex post* powers.

#### **Obligation to ensure Accounting Separation**

559. The Authority proposes to oblige SMP operators to maintain Accounting Separation. This requirement, in conjunction with the information provision obligations set out below, will

enable the Authority to observe and analyse the costs and revenues of providing mobile services on an end-to-end basis (i.e. including retail and wholesale costs).

### **Obligation to set retail prices on a Cost Oriented basis**

560. The Cost Orientation obligation requires that revenue attributable to mobile services is not significantly and persistently above the FAC of providing mobile services. Furthermore, the Cost Orientation obligation would also mandate that prices not be predatory. As such, the regulated entity will need to ensure that its prices are not significantly and persistently below a price floor.

### **Obligation to provide information**

561. In conjunction with the Accounting Separation obligation, the Authority proposes to require SMP operators to submit information to the Authority every six months. This will enable the Authority to periodically assess whether the SMP operators are meeting their Cost Orientation obligation, as well as other obligations such as not engaging in a margin squeeze. Being informed about market developments, will enable the Authority will be able to respond more quickly to any dispute that may arise.
562. The Authority therefore proposes that SMP operators submit the following information every six months. Furthermore, the submitted information must be audited on an annual basis.

### **Wholesale information**

- Total costs of submarine cable connectivity, sub-divided by CAPEX and OPEX, and the proportion of these costs that are allocated to the provision of mobile broadband services;
- Total costs of the core mobile network, sub-divided by CAPEX and OPEX, and the proportion of these costs that are allocated to the provision of mobile services;
- Total costs of mobile backhaul, sub-divided by CAPEX and OPEX, and the proportion of these costs that are allocated to the provision of mobile services;
- Total overheads, and the proportion of these costs that are allocated to the provision of wholesale mobile services;
- The total number of mobile sites, along with the average cost of each site, sub-divided by CAPEX and OPEX, and by cost group (including allocation of the core network costs, as well as overheads, backhaul costs and maintenance costs);
- Total mobile network termination and data interconnection costs, sub-divided to the extent possible;
- Network coverage, in the form of the number of premises passed by each technology deployed (e.g. 3G, 4G, 5G);
- The number of MVNO subscribers, sub-divided by access seeker; and
- The revenues from wholesale mobile access, sub-divided by access seeker.

### Retail information

- Total retail mobile costs, sub-divided by department (i.e. marketing, customer service, retail stores, etc.);
- The proportion of overhead costs allocated to the provision of retail mobile services;
- All retail mobile tariffs currently on offer, as well as any legacy tariffs still being used by customers, along with information on service characteristics (i.e. price and inclusive allowance of voice/text/data);
- The number of retail mobile customers, sub-divided by pre-pay and post-pay customers and by retail tariff (i.e. the headline download speed);
- Gross and net churn of retail mobile customers, sub-divided by pre-pay and post-pay customers;
- ARPU, sub-divided by tariff pre-pay and post-pay customers; and
- Average download usage per month (in GB), sub-divided by pre-pay and post-pay customers.

563. The precise format for providing this information will be defined by the Authority during the implementation of the General Determination.

### **Obligation to publish retail KPIs**

564. In addition to the requirement to publish KPIs in respect of wholesale services, the Authority is proposing to oblige SMP operators to publish a small number of retail KPIs. The Authority hopes that making such information public will increase market-wide awareness of the providers' quality of service, and better inform consumers about the services available. Furthermore, this information should help to spur further competition between operators, who may wish to compete more vigorously based on the quality of their retail service.

### **Obligation to ensure customers can choose the right product and do not experience unnecessary difficulties when switching**

565. The Authority wishes to ensure that consumers do not experience unnecessary difficulties when switching mobile providers. The Authority will require SMP operators to meet certain standards when they are dealing with consumers considering a move to another mobile provider.

## **8.5 Fixed voice**

566. The Authority is proposing a number of remedies, as set out in Table 8.4 below.

**Table 8.4 - Proposed remedies in the fixed voice markets**

Market	Operator(s)	Remedy
Provision of retail voice call services (i.e. origination from a fixed location)	Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to offer fixed voice services on a stand-alone basis</li> <li>• Obligation to ensure Accounting Separation</li> <li>• Obligation to ensure prices are Cost Oriented</li> <li>• Obligation to provide information to the Authority</li> <li>• Obligation to ensure customers can choose the right products and do not experience unnecessary difficulties when switching</li> </ul>

### **8.5.1 Retail fixed voice remedies**

567. The Authority is proposing to impose the above listed obligations in Table 8.4 on Digicel Group in relation to its fixed voice products.

#### **Obligation to offer stand-alone products**

568. The Authority proposes to require Digicel Group to provide fixed voice services on a stand-alone basis, allowing consumers to subscribe to fixed voice services without buying other bundled services, such as broadband. This remedy ensures that customers can choose the services that they wish to purchase from a range of options, and in what combination.
569. The Authority notes that if it sees evidence that Digicel Group is seeking to evade this obligation through pricing strategy, the Authority would consider intervening, including under ex post powers.

#### **Accounting Separation**

570. The Authority proposes to require Digicel Group to maintain Accounting Separation. This obligation, in conjunction with the information provision obligation (set out below), will enable the Authority to observe the costs and revenues of providing fixed voice services.

#### **Obligation to set retail prices on a Cost Oriented basis**

571. The Authority proposes to require Digicel Group to ensure retail fixed voice service prices are Cost Oriented. The Cost Orientation obligation would require the revenue attributable to fixed voice services to not be significantly and persistently above the FAC of providing those services. Furthermore, the Cost Orientation obligation would also mandate that prices not be predatory and, as such, the provider entity will need to ensure that its prices are not significantly and persistently below a price floor.

#### **Obligation to provide information**

572. The Authority is proposing to require Digicel Group to provide retail and wholesale information. The Authority notes that, although this is a remedy for retail services, it is not unreasonable to also request information on the wholesale services, given that the wholesale services (e.g. network access) are an essential input into the retail services.

573. The Authority proposes that Digicel Group submit the following information every six months. Furthermore, the submitted information must be audited on an annual basis.

Wholesale information

- Total number of calls terminated on the fixed network;
- Total amount of money (if any) received or paid in respect of wholesale termination services; and
- Total fixed voice network costs, sub-divided by CAPEX and OPEX.

Retail information

- Retail fixed voice tariffs currently on offer, including the price of each tariff and the inclusive allowances;
- Total number of fixed voice customers, sub-divided by tariff;
- Total and average revenue, sub-divided by tariff;
- Total number of calls made, sub-divided by calls to other fixed lines/mobile/long-distance;
- Total number of call minutes, sub-divided by calls to other fixed lines/mobile/ long-distance; and
- Allocation of overheads to fixed voice services.

**Obligation to ensure customers can choose the right products and without experiencing unnecessary difficulties when switching**

574. To ensure that consumers do not experience unnecessary difficulties when switching or disconnecting their fixed voice service, the Authority is proposing a remedy underpinned by a number of key principles.

**8.6 Business connectivity**

575. Given the finding that Digicel Group holds SMP in the retail and wholesale supply of high-speed leased lines outside of Hamilton, the Authority is proposing a number of remedies, as set out in Table 8.5 below and described below.

**Table 8.5 - Proposed remedies in business connectivity markets**

<b>Market</b>	<b>Operator(s)</b>	<b>Remedy</b>
Wholesale high-speed leased lines outside of the City of Hamilton	Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to provide wholesale access</li> <li>• Obligation to ensure wholesale access is provided on FRAND and EOO terms</li> <li>• Obligation to publish wholesale KPIs</li> </ul>
Retail high-speed leased lines outside of the City of Hamilton	Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to ensure Accounting Separation</li> <li>• Obligation to provide information to the Authority</li> <li>• Obligation to ensure prices are Cost Oriented</li> </ul>

### **8.6.1 Wholesale business connectivity remedies**

576. To address competition concerns in the wholesale business connectivity market, the Authority is proposing to impose three broad obligations on Digicel Group:

- An obligation to provide wholesale access;
- An obligation to ensure wholesale access is provided on FRAND and EOO terms; and
- An obligation to publish wholesale KPIs.

#### **Obligation to provide wholesale access on FRAND and EOO terms**

577. The Authority proposes to adopt a simplified approach to wholesale access based on the FRAND and EOO obligations.

- Wholesale access in respect of business connectivity services refers to active products. The Authority proposes that the access obligation covers the requirement to meet any reasonable wholesale request, including providing physical infrastructure access to other operators for the purposes of those operators installing their own leased lines;
- At a minimum, all the services that Digicel Group offers to its own retail business division should be available at the wholesale level;
- The obligation to provide services on FRAND terms includes the requirement to ensure that the wholesale price does not lead to a margin squeeze;
- EOO will be monitored on an ongoing basis through an obligation to publish wholesale KPIs (see below); and
- Where access seekers and Digicel Group have made all reasonable effort to reach agreement but have been unable to do so, either party may request the Authority to step in to determine the terms of access that should apply to ensure FRAND and EOO compliance.

#### **Obligation to publish wholesale KPIs**

578. To monitor the service quality that Digicel Group is offering wholesale access seekers, the Authority proposes to require Digicel Group to report publicly, every six months on its website, its performance against the following specific KPIs, sub-divided according to the service offered to access seekers as well as its own retail arm:



- The time taken to connect and/or migrate a retail customer, sub-divided according to the retail division of Digicel Group and for each access seeker;
- The time taken to address network faults (from first identification), sub-divided according to the retail division of Digicel Group and access seekers. Faults are defined here as lost or impaired service due to issues in Digicel Group's network (i.e. those faults that are the responsibility of Digicel Group); and
- The number of faults that require fixing, sub-divided according to the retail division of Digicel Group and access seekers.

579. This obligation will provide transparency about the wholesale service quality offered, as well as an evidential basis on which to assess whether Digicel Group is complying with its FRAND and EOO obligations.

### **8.6.2 Retail business connectivity remedies**

580. To address competition concerns in the retail business connectivity market, the Authority is planning to impose three broad obligations:

- An obligation to ensure Accounting Separation;
- An obligation to provide information to the Authority; and
- An obligation to ensure prices are Cost Oriented

581. These obligations are discussed below.

#### **Accounting Separation**

582. This obligation is discussed in section 8.2.1 above.

#### **Obligation to provide information**

583. The Authority proposes that Digicel Group submit the following information every six months. Furthermore, the submitted information must be audited on an annual basis.

#### Wholesale information

- Total costs of submarine cable connectivity, sub-divided by CAPEX and OPEX, and the proportion of these costs that are allocated to the provision of business connectivity services;
- Total costs of the core network, sub-divided by CAPEX and OPEX, and the proportion of these costs that are allocated to the provision of business connectivity services;
- Total costs of the access network, sub-divided by CAPEX and OPEX, and the proportion of these costs that are allocated to the provision of business connectivity services;

- Total overheads, and the proportion of these costs that are allocated to the provision of wholesale business connectivity services;
- The number of customers, sub-divided according to the retail division of Digicel Group and for each access seeker;
- The number of wholesale access leased lines sold, sub-divided by type of access and by access seeker; and
- Revenue from wholesale access leased lines sold, sub-divided by type of access and by access seeker.

#### Retail information

- Total retail business connectivity costs, sub-divided by department (marketing, customer service, retail stores, etc.);
- Total overheads, and the proportion of these costs that are allocated to the provision of retail business connectivity services;
- All standard retail business connectivity tariffs currently on offer (as well as any legacy tariffs still being used by customers), along with information on their service characteristics (e.g. price, bandwidth, whether symmetric or asymmetric); and
- ARPU, sub-divided by connection/circuit type (i.e. bandwidth).

#### **Obligation to ensure prices are Cost Oriented**

584. The Cost Orientation obligation would require that revenue attributable to broadband services is not significantly and persistently above the FAC of providing those services. Furthermore, the Cost Orientation obligation would mandate that prices are not predatory. As such, Digicel Group will need to ensure that its prices are not significantly and persistently below a price floor.

## 9 TRANSITIONARY PROVISIONS

585. The Authority is proposing that the SMP remedies become effective in accordance with the timelines set forth below:

SMP Remedies	Effective Date	Subsequent Reporting
1 Accounting Separation	First filing required 6 months after the start of the SMP's fiscal year	Every 6 months
2 Cost Orientation	6 months after effective date of GD	Not applicable
3 Information Provision	First filing required June 30, 2020	Every 6 months
4 Consumer switching and choice	3 months after effective date of GD	Not applicable
5 Wholesale Access: FRAND and Margin Squeeze	6 months after effective date of GD	Not applicable

## **10 PROPOSED DECISION**

586. The Authority proposes to adopt the general determination set out in Annex 1.



BERMUDA  
**REGULATORY  
AUTHORITY**

**Proposed Order:**  
**Market Review 2019 Relevant Markets, SMP &  
Remedies**

Order  
Date:[]

587. The Regulatory Authority, pursuant to sections 12, 13 and 62 of the Regulatory Authority Act 2011 and sections 20 through 25 of the Electronic Communications Act 2011, hereby:

(a) Adopts the General Determination attached hereto, defining relevant markets, assessing significant market power within the relevant markets and applying ex ante remedies;

(b) Directs the Chief Executive of the Regulatory Authority to forward the General Determination to the Cabinet Secretary; and

(c) Authorises the General Determination to be effected on the date of its publication in the Official Gazette.

588. So Ordered this [number] day of [month] 2019.

## **APPENDIX B: PROPOSED GENERAL DETERMINATION**



**BERMUDA**  
**Regulatory Authority (Market Review of the Electronic Communications Sector) General Determination**

**BR /2019**

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The Regulatory Authority, in the exercise of the power conferred by section 62 of the Regulatory Authority Act 2011, as read with sections 12, 13 and 59 of that Act and sections 20 to 25 of the Electronic Communications Act 2011, makes the following General Determination:

**Citation**

- 1 This General Determination may be cited as the Regulatory Authority (Market Review of the Electronic Communications Sector) General Determination.

**Interpretation**

- 2 In this General Determination, unless the context otherwise requires, terms shall have the meaning given in the Regulatory Authority Act 2011, the Electronic Communications Act 2011, and the Schedule to this General Determination.

**General Purpose**

- 3 This General Determination:

- (1) Identifies relevant markets that are susceptible to ex ante regulation;
- (2) Assesses relevant markets where significant market power exists; and
- (3) Determines the ex ante remedies that are imposed, modified or withdrawn for the relevant markets.



## **Determination**

- 4 (1) This General Determination is made pursuant to (1) the Review of the electronic communications sector: Ensuring the delivery of benefits for Bermuda via regulation issued by the Regulatory Authority on 17th October 2017; and (2) the Market Review of the Electronic Communications Sector dated 15 February 2019 and the Regulatory Authority's decision on them.
- (2) Taking into account the responses received to the consultation and for the reasons given in its decision, the Regulatory Authority determines that the findings of the market review set forth in the Schedule are consistent with the purposes of the Electronic Communications Act 2011, including to seek to:
- (a) ensure that the people of Bermuda are provided with reliable and affordable access to quality electronic communications services;
  - (b) enhance Bermuda's competitiveness in the area of electronic communications so that Bermuda is well-positioned to compete in the international business and global tourism markets;
  - (c) encourage the development of an electronic communications sector that is responsive to the requirements of users (both individuals and businesses) and provides them with choice, innovation, efficiency and affordability;
  - (d) encourage the development and rapid migration of innovative electronic communications technologies to Bermuda;
  - (e) promote the orderly development of Bermuda's electronic communications sector;
  - (f) encourage sustainable competition and create an invigorated electronic communications sector that will lay the groundwork for the further development of communications-reliant industries;
  - (g) encourage the development and maintenance of resilient and fault-tolerant communications infrastructures;
  - (h) promote investment in the electronic communications sector and in communications-reliant industries, thereby stimulating the economy and employment; and
  - (i) promote Bermudian ownership and Bermudian employment at all levels of the electronic communications sector.

## **Terms and conditions of General Determination**

- 5 (1) The Schedule to this General Determination has effect.
- (2) The Schedule is also published on the Regulatory Authority's website ([www.rab.bm](http://www.rab.bm)) and is available for inspection at the offices of the Authority (1<sup>st</sup> Floor, Craig Appin House, 8 Wesley Street, Hamilton HM 11) during ordinary business hours.

**Effective Date of General Determination**

- 6 This General Determination shall become effective on the day it is published in the Official Gazette.



**REGULATORY  
AUTHORITY**  
OF BERMUDA

**Fairness • Innovation • Integrity**

## **Schedule to Regulatory Authority (Market Review of the Electronic Communications Sector) General Determination**

Draft General Determination

Date:

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## 1 DEFINITIONS

**4G:** Fourth generation of mobile communications technology standards, including the Long-Term Evolution (“LTE”) technology standard, which provides faster mobile data speeds than the 3G standards.

**Access services:** The service which links an end-user to the services of an Internet Service Provider (“ISP”). The link in question comprises local access, backhaul and data stream aggregation, terminating at an ISP’s premises.

**Accounting Separation:** An obligation for the electronic communications sector to produce financial statements that report the performance of each business division of a multi-product entity. Accounting Separation enables the Authority to monitor whether an ICOL holder with significant market power (“SMP”) is compliant with certain price-based obligations, such as to ensure prices are Cost Oriented.

**Access and interconnection (“A&I”):** The physical and logical linking of public electronic communications networks (and any other networks specified by the Authority) by the same or a different sectoral provider in order that facilities or services offered by one sectoral provider may be made available to another sectoral provider, under defined conditions, for the purpose of providing electronic communications services.

**Authority:** The Regulatory Authority of Bermuda, or “RA”.

**Average revenue per user (“ARPU”):** A measurement used to indicate the average monthly revenue earned from a subscriber.

**Backhaul:** Relates to the transmission of data between the core or backbone network and the network “edge”. Examples of backhaul include the transmission of data from mobile telephony masts to data centers to enable end-users of mobile services to access the Internet.

**Bill and Keep:** An approach to call termination pricing whereby communications providers make no payments to each other for call termination (that is, where termination rates are zero).

**Bluewave:** A provider of Wi-Fi-based high-speed Internet to residents and businesses in Bermuda. Bluewave is the brand name of Telecommunications Networks Limited, which is owned by East End Group Limited.

**Broadband:** An Internet service or connection generally defined as being “always on”, providing a bandwidth greater than narrowband.

**Bundle:** Communications services sold together in a package (e.g. broadband and mobile phone, or broadband and subscription TV), in contrast to each service sold on a stand-alone basis.

**CAPEX (capital expenditure):** Funds used by an entity to acquire, upgrade, and maintain assets such as property, industrial buildings, or equipment.

**Chains of substitution:** These exist when end-users perceive variants of a specific product type to be reasonably substitutable. For example, if there are three speeds of broadband in the market (20Mbps, 30Mbps and 40Mbps), consumers may be willing to switch between them if

the price of one increased. If a consumer was on the 30Mbps tariff, and that tariff increased significantly, the consumer might switch down to the 20Mbps tariff if the cost saving was worthwhile.

**Churn:** In this context, means the number of customers lost.

**Coaxial cable:** A transmission line that consists of a tube of electrically conducting material surrounding a central conductor held in place by insulators and that is used to transmit telegraph, telephone, television, and Internet signals.<sup>1</sup> Used by cable networks alongside fibre-optic to deliver broadband services, as well as television services, directly to homes. Coaxial cables are capable of delivering superfast broadband speeds.

**Communications Operating Licence (“COL”):** An individual or class licence granted for the provision of some or all regulated electronic communications services.

**Common costs:** Costs an entity incurs in relation to the provision of multiple services.

**Cooling-off period:** A period of time during which a purchaser may cancel a good or service purchased.

**Core network:** The backbone of a communications network, which carries different services such as voice or data.

**Cost causality:** The attribution of costs to components, services and business divisions strictly in accordance with the activities that cause those costs to be incurred.

**Cost Orientation:** The principle that the price charged for the provision of a service should reflect the costs incurred in providing that service.

**Customer premises equipment (“CPE”):** Electronic equipment that is located in a customer’s premises such as an Internet modem or PayTV set-top box.

**Digicel Group:** A group of companies that includes the following Integrated Communications Operating Licence (“ICOL”) holders: Telecommunications (Bermuda & West Indies) Limited, Transact Limited and Bermuda Telephone Company Limited.

**Digital Subscriber Line (“DSL”):** A family of technologies generically referred to as DSL, or xDSL, capable of transforming ordinary phone lines (also known as “twisted copper pairs”) into high-speed digital lines that support advanced services such as fast Internet access and video-on-demand. ADSL (Asymmetric Digital Subscriber Line), HDSL (High data rate Digital Subscriber Line) and VDSL (Very high data rate Digital Subscriber Line) are all variants of DSL.

**DOCSIS (Data Over Cable Service Interface Specification):** A telecommunications standard used to provide Internet access via a cable modem.

**Ducts:** Existing trenches and pipes which hold copper and fibre lines.

**Duct access:** When the owners of ducts and trenches let other service providers pay to access the owners’ ducts and trenches.

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<sup>1</sup> Retrieved from <https://www.merriam-webster.com/dictionary/coaxial%20cable>

**Earnings before interest and taxes (“EBIT”):** A financial measure of an entity’s operating performance.

**ECA:** Electronic Communications Act 2011.

**EOO:** Equivalence of outputs. Services provided to access seekers are no different to those that SMP operators supply to their own business divisions.

**EU:** European Union.

**Ex ante remedy:** A regulatory obligation imposed by the Authority on one or more sectoral providers with significant market power in order to prevent anti-competitive conduct and promote competition.

**Ex post rules:** Rules set by the RAA and imposed by the Authority (in accordance with sections 84-86 of the RAA) prohibiting certain types of anti-competitive conduct. The Authority may take enforcement action against any sectoral provider which violates those prohibitions, after the violation has occurred.

**Fully Allocated Costs (“FAC”):** An accounting method for attributing all the costs of a company to defined activities such as products and services. Typically, this method will follow the principle of cost causality.

**Fibre-to-the-premise (“FTTP”):** A form of fibre-optic communication delivery in which an optical fibre is run directly into a customer’s premises.

**FibreWire:** Broadband services provided by OneComm as part of its upgraded broadband network that is capable of offering download speeds of up to 200Mbps.

**FRAND:** Fair, reasonable and non-discriminatory.

**Generally accepted accounting principles (“GAAP”):** A collection of commonly followed accounting rules and standards for financial reporting.

**Gigabyte (“GB”):** A measure of digital data size. A multiple of the unit byte for digital information. A gigabyte is approximately one billion bytes. A byte is 8 bits.

**GDP:** Gross domestic product.

**General Determination (“GD”):** A statutory instrument made pursuant to section 62 of the Regulatory Authority Act 2011 (“RAA”). The General Determination is applicable to all sectoral participants, or to such sub-category of sectoral participants as falls within the scope of the statutory instrument.

**Headline broadband speed:** The theoretical maximum data speed that can be achieved by a given broadband connection.<sup>2</sup>

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<sup>2</sup> A number of factors may result in a given customer not experiencing this headline speed in practice. These factors include the quality and length of the physical line from the node to the customer.

**HDS:** High Demand Spectrum.

**HDS-1:** The process for the assignment of HDS-1 Frequencies.

**HDS-1 Frequencies:** The HDS-1 Lots in the 850 MHz, 700 MHz and 2100 MHz bands designated by the Authority as suitable for assignment through HDS-1.

**International financial reporting standards (“IFRS”):** A collection of internationally commonly followed accounting rules and standards for financial reporting.

**Integrated Communications Operating Licence (“ICOL”):** A licence granting the licensee the right to establish, construct and operate one or more electronic communications networks and to provide electronic communications services, on an integrated basis, within the territorial limits of Bermuda and between Bermuda and other countries.

**International Comparison Program (“ICP”):** Led by the World Bank, this program collects and compares price data and gross domestic product (“GDP”) expenditure to estimate and publish purchasing power parities (“PPPs”) of the world’s economies.

**Internet:** A global network of networks, using a common set of standards (e.g. Internet protocol), accessed by users with a computer or other devices via a service provider.

**Internet protocol (“IP”):** A family of protocols describing software that tracks the internet address of nodes, routes outgoing messages and recognizes incoming messages.

**Internet protocol television (“IPTV”):** Television and/or video signals that are delivered to subscribers or viewers using Internet protocol (“IP”). IPTV is typically used in the context of streamed linear and on-demand content, but also sometimes for downloaded video clips.

**Internet Service Provider (“ISP”) services:** The provisioning of access to local and international Internet networks together with the provisioning of Internet services such as web hosting and email accounts.

**Key Performance Indicator (“KPI”):** In the context of this document, a measurable value that demonstrates how effectively key objectives are achieved.

**Leased line:** A transmission facility that is leased by an end-user from a public Electronic Communications service provider which is dedicated to that user’s traffic.

**Link Bermuda Limited (“Link”):** A local company granted an ICOL, formerly Cable & Wireless.

**Long-run incremental costs (“LRIC”):** The costs caused by the provision of a defined increment of output, taking a long-run perspective, assuming that some output is already produced. The “long run” refers to the time horizon over which all costs (including capital investment) are variable.

**Margin squeeze test:** An assessment of the margin that exists between the wholesale and retail prices set by an entity, in order to determine whether the prices are set so that an efficient entity purchasing the wholesale product would be unable to earn a reasonable return.



**Mbps:** Megabits per second, a measure of data transfer speed. A transfer speed of 8Mbps is equal to one megabyte per second.

**Minister:** The Minister of Home Affairs.

**Mobile voice call termination (“MCT”):** A wholesale service offered by a mobile service provider to connect a customer, i.e. a call recipient, on its network.

**Mobile virtual network operator (“MVNO”):** An entity that provides mobile telephony services to its customers, but which does not have allocation of spectrum or its own wireless network.

**Ofcom:** Office of Communications, the national regulatory authority for the broadcasting, telecommunications and postal industries of the United Kingdom.

**One Communications (“OneComm”):** A group of companies that includes the following ICOL holders: BDB Ltd., Bermuda Digital Communications Ltd., Logic (formerly Bermuda Cablevision Limited) and Cable Co. Ltd., collectively operating under the brand name One Communications.

**Operating expenditure (“OPEX”):** The costs of the day-to-day operation of an entity, such as staff costs, repairs and maintenance expenditure, and other overheads.

**Over-the-top (“OTT”):** The delivery of audio-visual content over the “open” Internet rather than over a managed IPTV architecture or through traditional satellite or antenna-based broadcast technologies.

**PayTV:** Subscription-based television services.

**Predatory pricing:** Pricing below a particular measure of cost which may incur short-term losses in order to eliminate, discipline or discourage one or more actual or potential efficient competitors.

**Preliminary Consultation Document:** The document published by the Authority on 17 October 2017, titled the “Review of the electronic communications sector: Ensuring the delivery of benefits for Bermuda via regulation”. The document sets out the Authority’s view, at that time, on which electronic communications markets in Bermuda may require *ex ante* regulation. The document also sets out the Authority’s first consultation on the Sectoral Review.

**Preliminary Report for the Sectoral Review:** The Preliminary Report on the Electronic Communications Sectoral Review, published on 17 April 2018.

**Price purchasing parity (“PPP”):** The rates of currency conversion that equalize the purchasing power of different currencies by eliminating the differences in price levels between countries. In their simplest form, PPPs are simply price relatives that show the ratio of the prices in national currencies of the same good or service in different countries.

**RA:** The Regulatory Authority of Bermuda.

**RAA:** The Regulatory Authority Act 2011.

**Reference access and interconnection offer (“RAIO”):** An offer to provide Access and Interconnection services and facilities being offered, setting out the particular components

according to market needs and all of the terms and conditions for Access and Interconnection to be satisfied by a sectoral provider wishing to enter into an Access and Interconnection agreement.

**RFI:** Request for information.

**RIO:** Reference interconnection offer.

**Second Consultation Document:** The document published by the Authority on 15 February 2019, titled the “Review of the electronic communications sector: Ensuring the delivery of benefits for Bermuda via regulation”. The document sets out the Authority’s view, at that time, on which electronic communications markets in Bermuda may require *ex ante* regulation.

**Sectoral Review:** In the context of this document the 2018 comprehensive review of the Electronic Communications sector pursuant to section 17 of the RAA.

**Significant market power (“SMP”):** A position of economic strength in the relevant market or markets that affords an entity, either individually or jointly with others, the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers, which may provide a basis for the imposition of *ex ante* remedies.

**Small but Significant Non-transitory Increase in Price (“SSNIP”):** A concept used in assessing relevant economic markets, based on identifying the smallest market within which a hypothetical monopolist or cartel could impose a profitable significant increase in price.

**Substitutability:** Where an increase in the price of one product would lead consumers to switch to other competing products or services (“demand-side substitutability”) or lead producers to switch rapidly into the supply of the good in question (“supply-side substitutability”).

**Superfast broadband:** Sometimes known as next generation broadband, superfast broadband delivers headline download speeds of at least 30Mbps.

**Tariff:** Refers to all relevant characteristics of a service. For example, a pre-pay mobile tariff comprises not only the monthly price, but also the included voice, text and data allowances. In addition, the cost for incremental usage of services, the quality and speed of the service, and service/cancellation fees are all also components of the tariff.

**Throttling:** The intentional slowing of an Internet service.

**VAT:** Value-added tax.

**Virtual unbundled local access (“VULA”):** A broadband access remedy that requires a network operator to provide access to its superfast broadband network. VULA provides a connection from the nearest “local” aggregation point to a customer’s premises.

**Weighted Average Cost of Capital (“WACC”):** The rate that a company is expected to pay on average to all its security holders to finance the company’s assets.

**Wi-Fi:** Short-range wireless technologies that allow an over-the-air connection between a wireless device and a base station, or between two wireless devices. Wi-Fi has a range from the base station of approximately 30 meters indoors, and around 1 kilometer outside.

**Wireless broadband:** Also known as “fixed wireless”, wireless broadband that provides Internet connectivity via a wireless radio receiver rather than a physical wire connection. Similar to Internet access via a mobile device (e.g. 4G), wireless broadband technology can offer superfast broadband speeds, allowing it to compete directly with other modern broadband technologies such as coaxial cable and fibre.

**World on Wireless Ltd (“WoW”):** A local company granted an ICOL offering subscription television services.

## **2 INTERPRETATION**

1 For purposes of interpreting this General Determination:

- (a) unless the context otherwise requires, words or expressions shall have the meaning assigned to them by the RAA and the ECA;
- (b) where there is any conflict between the provisions of this General Determination and the ECA or RAA, the provisions of the ECA or RAA, as the case may be (and subject to sections 3(2) and 3(3) of the ECA), shall prevail;
- (c) terms defined herein and in the ECA and RAA have been capitalised;
- (d) headings and titles used herein are for reference only and shall not affect the interpretation or construction of this General Determination;
- (e) references to any law or statutory instrument include any modification, re-enactment or legislative provisions substituted for the same;
- (f) a document referred to herein shall be incorporated into and form part of this General Determination and a reference to such document is to the document as modified from time to time;
- (g) expressions cognate with those used herein shall be construed accordingly;
- (h) use of the word "include" or "including" is to be construed as being without limitation; and
- (i) words importing the singular shall include the plural and vice versa, and words importing the whole shall be treated as including a reference to any part unless explicitly limited.

### 3 LEGISLATIVE AND PROCEDURAL BACKGROUND

2 This General Determination has been undertaken in accordance with section 62 of the RAA and the exercise by the Authority of its powers under Part 4 of the ECA and sections 12, 13 and 59 of the RAA.

3 Section 21 of the ECA sets out the principles and objectives that the Authority must seek to satisfy when determining whether to impose remedies on one or more ICOL holders with SMP in a market, which are to:

- (a) develop or maintain effective and sustainable competition for the benefit of consumers with regard to price, innovation and choice;
- (b) promote investment in the electronic communications sector;
- (c) establish *ex ante* remedies that are effective but proportionate, taking into account the costs of compliance and the ultimate benefits to consumers;
- (d) establish *ex ante* remedies that apply on a technology-neutral and service neutral basis whenever feasible; and
- (e) rely on market forces and to withdraw, reduce or limit *ex ante* remedies in circumstances where the Authority concludes that markets are effectively competitive or likely to become so within a reasonable period of time, taking into account actual and expected market circumstances.

4 The Authority initiated the consultation by publishing the Preliminary Consultation Document on 17<sup>th</sup> October 2017, which invited responses from members of the public, including electronic communications sectoral participants and sectoral providers, as well as other interested parties.

5 The purpose of the Authority's Preliminary Consultation Document was to consult on the relevant markets identified in accordance with section 22 of the ECA that, in the Authority's view, are susceptible to *ex ante* regulation.

6 The Preliminary Consultation Document asked questions on the following topics:

**Question 1:** Do you agree that the 2013 SMP remedies and the Authority's regulation via the same have not led to expected benefits for consumers or optimal outcomes for competition?

**Question 2:** What are your views on the Authority's assessment of the market provided in section 5 [of the Preliminary Consultation Document]?

**Question 3:** Do you agree with the Authority's initial views on relevant markets and SMP, as set out in Section 6 [of the Preliminary Consultation Document]?

**Question 4:** Do you agree with the Authority's proposed remedy options and other regulatory proposals set out in Section 6 and 7 [of the Preliminary Consultation Document]?

**Question 5:** Do you agree that the Authority should regulate against abuse of dominance and market power by SMP operators across a range of market sectors, by the potential use of both *ex ante* and *ex post* regulation?

**Question 6:** Do you believe that there is a need to make changes to the existing MVNO regime? If so, please specifically state what those changes should be.

**Question 7:** Do you think that the submarine cable relevant market should be susceptible to SMP obligations?

**Question 8:** Outside of the SMP *ex ante* remedies, what other regulations and administrative determinations applicable to the electronic communications sector should be made, modified or revoked? Please provide a detailed explanation for the same.

**Question 9:** Are there any areas and issues that you believe have been omitted from this review that should be addressed by the Authority?

7 The response period commenced on 17 October 2017 and concluded on 28 November 2017.

8 The Authority received five responses from the public.

9 On 15 February 2019, the Authority published the Second Consultation Document, which invited responses from members of the public, including electronic communications sectoral participants and sectoral providers, as well as other interested parties.

10 The purpose of the Authority's Second Consultation Document was to further consult on the proposed market definitions, SMP and *ex ante* remedies in accordance with Part 4 of the ECA.

11 The Second Consultation Document asked questions on the following topics:

**Question 1:** Do you agree with the Authority's proposals for relevant markets (as set out in section 4 [of the Second Consultation Document])?

**Question 1.a:** Do you agree with the Authority's proposal not to define a wholesale fixed voice termination market?

**Question 1.b:** Do you agree that it is not appropriate to define any wholesale subscription television markets? If not, what should such market definitions look like, and, on that basis, would OneComm (or any other provider) likely hold SMP?

**Question 1.c:** To what extent do consumers see paid OTT services (such as Netflix, Hulu and Amazon Prime Video) as effective substitutes to more traditional retail PayTV services, such as those offered by OneComm, WoW and Digicel Group?

**Question 1.d:** Do you agree with the Authority’s proposal to define “low-speed” business connectivity as below 20Mbps because of the competitive constraint of retail broadband services at speeds below this level? To what extent will high-speed broadband services act as a comparable/substitutable to leased lines? In other words, is a 200Mbps/20Mbps<sup>3</sup> retail broadband service substitutable for a 20Mbps/20Mbps leased line service?

**Question 2:** Do you agree with the Authority’s proposals for market power assessment (as set out in section 5 [of the Second Consultation Document])?

**Question 2.a:** To what extent does Bluewave impose an effective competitive constraint on OneComm and Digicel Group in the retail and wholesale broadband markets? How does its presence and market impact affect the proposed joint SMP finding?

**Question 2.b:** To what extent do paid OTT services (such as Netflix, Hulu and Amazon Prime Video) and traditional PayTV providers (such as WoW and Digicel Group) impose a competitive constraint on OneComm?

**Question 2.c:** Do you agree with the Authority’s approach to determination of joint SMP (as opposed to single-provider SMP) in mobile and broadband markets?

**Question 3:** Do you agree with the Authority’s proposals for remedies (as set out in section 6)?

**Question 3.a:** Do you agree with the Authority’s proposal to require the SMP operators in the wholesale broadband market to provide wholesale access as set forth in paragraph 530 [of the Second Consultation Document]?

**Question 3.b:** Do you agree with the Authority’s proposals for the publication of the various suggested KPIs by SMP operators in each of the following markets:

- wholesale broadband;
- retail broadband;
- wholesale mobile;
- retail mobile; and
- business connectivity.

**Question 3.c:** Do you agree with the Authority’s proposed lists of information (for each of the wholesale broadband, retail mobile, fixed voice, subscription television and business connectivity markets) that SMP operators will be required to provide to the Authority on a regular basis? Is there any other key information that has not been listed but which should form part of the ongoing information provision?

**Question 3.d:** In relation to retail broadband, what may be considered “significant” when assessing whether the actual/realized broadband speed is “significantly” different from the advised/headline speed? For example, is 20% an appropriate

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<sup>3</sup> In other words, 200Mbps download speed and 20Mbps upload speed.

definition of significant?<sup>4</sup> How should the Authority impose such a condition? For example, how should unforeseeable network issues such as flooding or malfunction, as well as peak-hour network congestion, be taken into account?

**Question 3.e:** The Authority is considering removing the obligation for SMP operators to publish a reference interconnection offer (“RIO”), in complement to the wholesale access obligations (i.e. for broadband, mobile and business connectivity)? Should the Authority remove the RIO obligation? Why or why not?<sup>5</sup>

**Question 3.f:** Do you agree with the Authority’s proposal to remove the current requirements for prior notification of retail prices and with the Authority’s approach to Cost Orientation for retail mobile and broadband markets?

- 12 The response period commenced on 15 February 2019 and concluded on 29 March 2019.
- 13 The Authority received seven responses from the public.
- 14 The Preliminary Consultation Document and the Second Consultation Document shall be referred to collectively as the “Consultation Documents”.
- 15 The Consultation Documents also invited respondents to comment on any part of the Consultation Documents.
- 16 The Authority issued its Preliminary Report, Preliminary Decision and Order on [date] 2019 that invited responses from members of the public, including electricity sectoral participants and sectoral providers, as well as other interested parties.
- 17 The Authority received [x] responses from the public to the Preliminary Report, Preliminary Decision and Order.

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<sup>4</sup> For example, if a retail broadband tariff advertises broadband download speeds of 100Mbps, should an actual/realised broadband speed (for the customer) of less than 80Mbps be considered to constitute “significantly” different?

<sup>5</sup> A RIO would set out the services that the operator is making available, along with the terms and conditions, such as price, lead-time, and the process for addressing any issues.



#### 4 FINAL DETERMINATION

- 18 Pursuant to Section 62(1) of the RAA and in accordance with Sections 20 through 25 of the ECA using the general powers granted to the Authority under section 13 of the RAA, and in accordance with the procedures established for this purpose in section 62 of the RAA, the Authority hereby determines that:
- a) the defined relevant markets and any communications provider identified as having SMP in those markets, whether singly or jointly, shall be adopted as set forth in Annex 1 of this Schedule below;
  - b) the *ex ante* Remedies as set forth in Annex 1 of this Schedule below, shall be imposed upon ICOL holders that have SMP, whether individually or jointly;
  - c) the defined relevant markets, SMP and *ex ante* remedies set forth in the previous 2013 GDs titled the Regulatory Authority (Market Definition and Significant Market Power) General Determination 2013, issued on 29 April 2013, and the Regulatory Authority (Obligations for Operators with Significant Market Power) General Determination 2013, issued on 7 August 2013, shall be withdrawn and replaced with those set forth in this GD; and
- 19 The adoption and implementation of the relevant markets, SMP in those relevant markets and *ex ante* remedies, as set forth in Annex 1 of this Schedule below, is consistent with the purposes of section 5 of the ECA, including to:
- a. ensure that the people of Bermuda are provided with reliable and affordable access to quality electronic communications services;
  - b. enhance Bermuda's competitiveness in the area of electronic communications so that Bermuda is well-positioned to compete in the international business and global tourism markets;
  - c. encourage the development of an electronic communications sector that is responsive to the requirements of users (both individuals and businesses) and provides them with choice, innovation, efficiency and affordability;
  - d. encourage the development and rapid migration of innovative electronic communications technologies to Bermuda;
  - e. promote the orderly development of Bermuda's electronic communications sector;
  - f. encourage sustainable competition and create an invigorated electronic communications sector that will lay the groundwork for the further development of communications-reliant industries;
  - g. encourage the development and maintenance of resilient and fault-tolerant communications infrastructures;
  - h. promote investment in the electronic communications sector and in communications-reliant industries, thereby stimulating the economy and employment; and

- i. promote Bermudian ownership and Bermudian employment at all levels of the electronic communications sector.

## **ANNEX 1: MARKET DEFINITIONS, SIGNIFICANT MARKET POWER & EX ANTE REMEDIES**

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## **I. SUMMARY**

1. The Authority is issuing this General Determination to (i) define electronic communications markets that are susceptible to *ex ante* regulation; (ii) determine whether any electronic communications operators have significant market power (“SMP”) in the defined markets; and (iii) establish the *ex ante* remedies applicable to SMP providers in the defined markets.
2. In conducting this market review of the electronic communications sector, the Authority has followed the process set out in part 4 of the ECA, which prescribes the approach the Authority must take in defining relevant markets, assessing market power, and, in the event of identifying one or more electronic communications providers with SMP, imposing *ex ante* remedies to prevent or deter anti-competitive effects.
3. The rest of this Annex 1 is structured as follows:
  - i. Section II identifies the relevant markets that the Authority has assessed as susceptible to *ex ante* regulation;
  - ii. Section III identifies the SMP operators in the relevant markets identified;
  - iii. Section IV list the *ex ante* remedies and obligations;
  - iv. Section V summarises the remedies to be removed that were imposed by the 2013 market review; and
  - v. Section VI provides a summary of the guidance notes and instructions that will support the implementation of the remedies.

## II. DETERMINATION OF RELEVANT MARKETS

4. The Relevant Product Markets set out in Table 1 below are susceptible to ex ante regulation in Bermuda:

Service type	Relevant markets
<b>Broadband</b>	<ol style="list-style-type: none"> <li>1. Retail provision of fixed broadband Internet connectivity, provided over any technology, and for any speed, on an island wide basis</li> <li>2. Wholesale provision of fixed broadband Internet connectivity, provided over any technology, and for any speed, on an island wide basis</li> </ol>
<b>Mobile</b>	<ol style="list-style-type: none"> <li>3. The island wide provision of retail mobile services (voice, text and data)</li> <li>4. The island wide provision of wholesale mobile access</li> </ol>
<b>Fixed voice</b>	<ol style="list-style-type: none"> <li>5. The island wide provision of retail fixed voice services (i.e. voice call origination from a fixed location)</li> </ol>
<b>Subscription television</b>	<ol style="list-style-type: none"> <li>6. The island wide provision of retail subscription television services</li> </ol>
<b>Business connectivity</b>	<ol style="list-style-type: none"> <li>7. Retail low-speed leased lines in the city of Hamilton and contiguous suburbs</li> <li>8. Retail low-speed leased lines outside of the City of Hamilton and contiguous suburbs</li> <li>9. Wholesale low-speed leased lines in the city of Hamilton and contiguous suburbs</li> <li>10. Wholesale low-speed leased lines outside of the City of Hamilton and contiguous suburbs</li> <li>11. Retail high-speed leased lines in the city of Hamilton and contiguous suburbs</li> <li>12. Retail high-speed leased lines outside of the City of Hamilton and contiguous suburbs</li> <li>13. Wholesale high-speed leased lines in the city of Hamilton and contiguous suburbs</li> <li>14. Wholesale high-speed leased lines outside of the City of Hamilton and contiguous suburbs</li> </ol>
<b>Off-island connectivity</b>	<ol style="list-style-type: none"> <li>15. The provision of off-island connectivity (i.e. international data transmission)</li> </ol>

### III. DETERMINATION OF MARKET POWER

5. Table 2 sets out the operators which have been designated as having SMP in the relevant markets.

**Table 2 – Summary of Market Power**

Service type	Market #	Relevant markets	SMP operator(s)
<b>Broadband</b>	1	Retail provision of fixed broadband Internet connectivity, provided over any technology, and for any speed, on an island wide basis	OneComm and Digicel Group
	2	Wholesale provision of fixed broadband Internet connectivity, provided over any technology, and for any speed, on an island wide basis	OneComm and Digicel Group
<b>Mobile</b>	3	The island wide provision of retail mobile services (voice, text and data)	OneComm and Digicel Group
	4	The island wide provision of wholesale mobile access	OneComm and Digicel Group
<b>Fixed voice</b>	5	The island wide provision of retail fixed voice services (i.e. voice call origination from a fixed location)	Digicel Group
<b>Business connectivity</b>	12	Retail high-speed leased lines outside of the City of Hamilton and contiguous suburbs	Digicel Group
	14	Wholesale high-speed leased lines outside of the City of Hamilton and contiguous suburbs	Digicel Group

#### IV. DETERMINATION ON SMP REMEDIES

6. Table 3 sets out the ex ante remedies that are imposed on the SMP providers who have been identified in Table 2 above.

**Table 3 – Summary of SMP Remedies**

Service type	Market #	Market description	SMP operator	Remedies
Broadband	1	<u>Retail</u> provision of fixed broadband	OneComm and Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to offer broadband on a stand-alone basis</li> <li>• Obligation to ensure Accounting Separation</li> <li>• Obligation to provide information to the Authority</li> <li>• Obligation to ensure prices are Cost Oriented</li> <li>• Obligation to publish retail key performance indicators</li> <li>• Obligation to ensure customers can choose the right products for them and do not experience unnecessary difficulties when switching</li> </ul>
	2	<u>Wholesale</u> provision of fixed broadband	OneComm and Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to provide wholesale bitstream access and virtual unbundled local access</li> <li>• Obligation to ensure wholesale access is provided on fair, reasonable and non-discriminatory terms and that it is equivalent in terms of service output (i.e. equivalence of output)</li> <li>• Obligation to publish wholesale key performance indicators</li> </ul>
Mobile	3	<u>Retail</u> mobile services	OneComm and Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to offer mobile services on a stand-alone basis</li> <li>• Obligation to ensure Accounting Separation</li> <li>• Obligation to provide information to the Authority</li> <li>• Obligation to ensure prices are Cost Oriented</li> <li>• Obligation to publish retail key performance indicators</li> <li>• Obligation to ensure customers can choose the right products for them and do not experience unnecessary difficulties when switching</li> </ul>



	4	<b>Wholesale</b> mobile access	OneComm and Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to provide wholesale access</li> <li>• Obligation to ensure wholesale access is provided on fair, reasonable and non-discriminatory terms and that it is equivalent in terms of service output (i.e. equivalence of output)</li> <li>• Obligation to publish wholesale key performance indicators</li> </ul>
<b>Fixed voice</b>	5	<b>Retail</b> fixed voice services (i.e. call origination)	Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to offer fixed voice services on a stand-alone basis</li> <li>• Obligation to ensure Accounting Separation</li> <li>• Obligation to provide information to the Authority</li> <li>• Obligation to ensure prices are Cost Oriented</li> <li>• Obligation to ensure customers can choose the right products for them and do not experience unnecessary difficulties when switching</li> </ul>
<b>Business connectivity</b>	12	<b>Retail</b> high-speed leased lines outside of the City of Hamilton	Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to ensure Accounting Separation</li> <li>• Obligation to provide information to the Authority</li> <li>• Obligation to ensure prices are Cost Oriented</li> </ul>
	14	<b>Wholesale</b> high-speed leased lines outside of the City of Hamilton	Digicel Group	<ul style="list-style-type: none"> <li>• Obligation to provide wholesale access</li> <li>• Obligation to ensure wholesale access is provided on fair, reasonable and non-discriminatory terms and that it is equivalent in terms of service output (i.e. equivalence of output)</li> <li>• Obligation to publish wholesale key performance indicators</li> </ul>

7. These remedies are described below, together with a high-level explanation of: (i) the concern that the remedy addresses; and (ii) how the remedy will work in practice.

(a) **Accounting Separation**

8. Accounting Separation is a regulatory tool that enables the Authority to ascertain whether there are anti-competitive cross-subsidies among services provided by an SMP operator, or whether the operator is engaging in any form of anti-competitive pricing.

9. This remedy is based on an obligation to prepare separate accounts for each of the business divisions and/or product lines operated by the SMP provider, including retail and wholesale activities where relevant. The provider will bear the responsibility of having to identify and allocate the costs and revenues associated with each business division, as well as the business transactions between the divisions.
10. Accounting Separation is also an important component of a broader objective of the Authority, namely, to ensure that charges for electronic communications services are transparent, non-discriminatory and cost-based (see the section below on Cost Orientation).
11. In implementing Accounting Separation, the Authority mandates the following:
  - Separated accounts must be prepared annually and must be based on a transparent cost allocation method;
  - The transparent cost allocation method must be based on the principle of cost causality.<sup>1</sup> This requires costs to be attributed to components, services and business divisions strictly in accordance with the activities that cause those costs to be incurred. The Authority shall not allow the cost of any financial penalties or of outage compensation paid to customers to be included in such costs;
  - Specifically, allocations under this methodology must not have the intention, or effect, of providing an advantage to the SMP operator at the expense of its competitors;
  - Separated accounts must be prepared in accordance with generally accepted accounting conventions, unless such conventions are shown to be irrelevant;
  - The allocation methodology must be applied consistently between accounting periods. Alternatively, where a change in the method of application can be objectively justified, it must be noted and comparative data provided according to the previous basis of allocation; and
  - The separated accounts must be subject to annual audit.
12. These requirements will ensure that the Authority has a good understanding of the FAC associated with providing the services in question. As such, this remedy will support other remedies that the Authority had mandated in a number of markets, in particular Cost Orientation and the requirement to provide access on FRAND terms, both of which are discussed below.

**(b) Information provision**

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<sup>1</sup> Each cost or revenue item should be reviewed, and the business activity that caused the cost to be incurred or the revenue to be earned should be identified, with the cost or revenue allocated to that business division (e.g. wholesale, retail service or mobile, fixed networks).

13. In order for the Authority to regulate effectively and to monitor compliance with *ex ante* remedies, it is critical that the Authority has market information that is up to date, accurate and provided in a timely fashion.
14. This accurate and timely information is of particular importance in assessing compliance with regulations relating to prices. Timeliness and accuracy are essential in ensuring that prices for products sold are Cost Oriented, as discussed below.
15. Furthermore, such information will support effective regulation more widely, by ensuring appropriate and effective regulation from an *ex post* perspective. In other words, having this information available will allow the Authority to intervene in a timely fashion and with a strong evidence base, should the Authority need to do so.
16. As such, in markets where there is SMP, the Authority is requiring SMP operators to provide information on a regular basis. The sorts of information requirements that the Authority is including in such a remedy are:
  - The menu of tariffs offered to customers, including information such as prices, the services provided (e.g. broadband speed) and contract terms;
  - Customer numbers and revenues associated with each tariff;
  - The costs of providing services, sub-divided by cost type (e.g. fixed, variable and common). The Authority notes that this relates to the Accounting Separation obligation as well; and
  - Customer churn—i.e. the number of new subscribers minus the number of subscribers who have cancelled or not renewed their subscription.
17. The Authority will assess compliance with the non-price dimension of the FRAND obligation by monitoring KPIs which the SMP operator will be required to track and publish on its website in line with its obligation to publish wholesale KPIs.

**(c) Cost Orientation**

18. In markets that lack effective competition, providers with SMP are likely to have the ability and incentive to set prices that can act to distort or restrict competition, as well as exploit consumers. Examples of such pricing practices include excessively high pricing and excessively low (predatory) pricing.
19. Such pricing practices ultimately harm consumers by denying them the benefits that would result from an effectively competitive market.
20. In order to address the risks of such anti-competitive conduct, in addition to the existing regulatory competition powers which the Authority has in a number of markets, including broadband and mobile, the Authority is imposing an obligation on SMP operators to ensure that their retail prices are Cost Oriented.

21. Furthermore, in combination with the retail Cost Orientation obligation,<sup>2</sup> the FRAND requirement on wholesale access will ensure that wholesale access prices are Cost Oriented. This is because the compliance of the sectoral provider with the retail Cost Orientation remedy will be measured against the costs actually incurred by SMP providers, on an end-to-end basis, rather than by reference to notional internal transfer prices. Hence, if the retail price is set with reference to costs, and the FRAND requirement on access ensures that the margin between retail and wholesale prices is also set with reference to costs, it follows that the wholesale access prices will need to be Cost Oriented to comply with this obligation.
22. The Authority notes that while this Cost Orientation remedy does act to constrain retail price-setting to some degree and does seek to address the same concerns as charge controls,<sup>3</sup> the way in which the obligation will be imposed means that the constraint on SMP operators will be very different from a standard charge control. For instance, a traditional charge control would entail:
- Building a detailed costing model to assess the incremental costs of each individual product/tariff on a forward-looking basis, forecasting potential subscribers and the likely incurred costs over the coming years, and making assumptions about asset depreciation;
  - Making assumptions about operational efficiency improvements that could be achieved in the short term and long term;
  - Estimating the costs of each individual product in each respective market (e.g. mobile/broadband tariffs);
  - Assessing the appropriate charge control basket<sup>4</sup> of products, and whether there is a need to impose a sub-cap on each separate basket; and
  - Potentially imposing restrictions on pricing that act to undermine incentives to undertake network investment, given that providers may fear being unable to recover such investments.
23. By contrast, the Cost Orientation shall entail the following:
- The Authority will not require operators to build detailed product costing models, or to conduct any cost forecasting;
  - The Authority will not make any assessment of future efficiency improvements that could be achieved by operators;

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<sup>2</sup> This is because concerns about wholesale prices are largely to do with concern about the ability of access seekers to purchase the wholesale input and compete at the retail level. As such, the Authority simply needs to ensure that the margin between retail and wholesale prices provides sufficient economic space for efficient access seekers to compete at the retail level using that wholesale input.

<sup>3</sup> Charge controls seek to address concerns about an operator's ability to set abusive (e.g. excessively high) prices.

<sup>4</sup> Charge control baskets refer to the grouping together of products such that the operator must ensure compliance of the charge control conditions. As such, the average revenue/price of products in the basket may not exceed the price cap. However, the sectoral providers have freedom to set different prices for the products in the basket.

- The Authority will not regulate prices for individual tariffs or products;
  - The Authority, when considering prices, will include allowances for network investment so that the costs of this investment would be recoverable; and
  - The Authority will take a flexible approach to pricing, to ensure that any regulatory intervention does not risk undermining investment incentives or distorting market outcomes.
24. The Authority sets out below how the Cost Orientation remedy will be applied in practice.
25. In simple terms, the Cost Orientation obligation builds on the Accounting Separation and information provision remedies described above. The Authority will use the information provided by sectoral providers to compare the costs and revenues of the market in question.
26. In the case of broadband, the Accounting Separation remedy shall require broadband accounts to separate the costs and revenues associated with all subscribers utilizing broadband services. This shall include customers subscribing to broadband only, or in combination with other services (i.e. a bundle).
27. With respect to the appropriate cost benchmark for the application of this Cost Orientation remedy, the FAC standard shall apply.<sup>5</sup> The UK telecommunications regulator, Ofcom, describes the FAC standard as follows:<sup>6</sup>
- FAC is an accounting concept designed to ensure that all of a firm's relevant costs (both incremental and common) are attributed to its activities. If a firm set all its charges equal to FAC for each unit, all things being equal, it would be expected to recover (but not over-recover) all its costs, including all of its common costs. These costs typically also include an allowance for a return on capital which is measured at the firm's cost of capital (i.e. its [weighted average cost of capital, or] WACC).*
28. However, the Authority considers that a strict application of the FAC cost standard is not appropriate in this case. If such a test were strictly applied in every calendar year, providers would not be able to account for market variables year on year, such as cost uncertainties and fluctuations. This could ultimately deter sectoral providers from undertaking efficient investment.
29. Given the above, the Authority is likely to find a breach of the Cost Orientation obligation only in cases where revenues are significantly and persistently above FAC.
30. When it comes to assessing compliance with the Cost Orientation obligation, the Authority notes the following:

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<sup>5</sup> One of the key reasons for this proposed cost standard, over other alternatives such as long-run incremental costs ("LRIC"), is that FAC can be derived from simple accounting data, whereas other cost standards require specific costing models to be built.

<sup>6</sup> Ofcom. "Cost orientation: Review", paragraph 3.37 [\[Link\]](#).

- The Accounting Separation remedy will provide the basis for the assessment of compliance, in that it will enable the Authority to see the total revenues associated with subscribers to the service in question, as well as the allocated costs;
  - Given that some customers may utilize the SMP service stand-alone while others take it as part of a bundle, the Authority proposes to assess Cost Orientation on all formats in which subscribers take the SMP service in question, whether on its own or in a bundle;
  - In computing the costs, the Authority will divide the total number of subscribers by the total costs associated with providing the SMP service. The Authority will include in the calculation subscribers who utilize the service on a stand-alone basis, or as part of a bundle. This will afford the Authority the ability to compute the FAC per subscriber for the provision of those SMP services;
  - In computing revenues, the Authority will consider the total revenues across both stand-alone subscribers and bundle subscribers; and
  - Finally, in addition to the service costs of the SMP product in question, the Authority will include the costs associated with providing the other bundle services, in order to compute a full cost basis against which to compare the revenues.
31. The Authority does not intend to apply this test mechanistically. Therefore, even if it does find that revenues are above FAC, this does not automatically mean that the prices are not Cost Orientated. Instead, only in cases where revenues are significantly and persistently above FAC, and there are no compelling explanations for the divergence, will the Authority consider that the operator has not complied with the Cost Orientation obligation.
32. Finally, the Authority clarifies that in order to carry out the test, the Authority will require information on all services within the bundle. If services within the bundle are not regulated, in order to ensure that the services that are regulated (on the basis of Cost Orientation) are compliant with SMP obligations, the Authority will need to gather cost and revenue data on all services within that bundle. In effect, therefore, the imposition of Cost Orientation on a single market (in conjunction with Accounting Separation and information provision) will require the SMP operator to provide cost and revenue breakdowns for all services in the bundle, whether or not these services are subject to *ex ante* regulation.
33. In an assessment of an SMP operator's costs, the Authority will not allow the cost of any financial penalties imposed by regulation or of outage compensation paid to customers for poor quality of service to be taken into account.
34. While the remedies are applied within each SMP market, to the extent that SMP services are sold in bundles, the Accounting Separation and information provision remedies will also apply to markets in which no SMP has been found. This is because the information required to assess Cost Orientation compliance in any one market requires an understanding of the costs of all services included in such bundles.

35. The Cost Orientation obligation will also seek to ensure that prices are not predatory. Predatory pricing occurs when incumbent sectoral providers “use aggressive pricing strategies in order to deter entrants and/or force competitors out of their industry”.<sup>7</sup> Such pricing behavior can be remedied by imposing limits on how low sectoral providers are able to price, i.e. a pricing floor. Predatory pricing floors are usually set on the basis of some cost standard, such as LRIC.<sup>8</sup>
36. The Authority will use a pragmatic approach to assessing predatory pricing, using the available cost information. For example, the cost floor could be based on the cost information which could be computed from the provider’s financial accounts.
37. One approach could be to take the FAC value (as discussed above) and apply a LRIC/FAC ratio, likely to be benchmarked from other regulated jurisdictions where LRIC and FAC values are available, such as the UK. Applying this ratio to the computed FAC will provide an estimate for the LRIC, which could be the basis for the cost floor.
38. Regardless of the specific cost standard used for the price floor, the SMP provider will be responsible for ensuring that its prices are not significantly and persistently below that price floor.

**(d) Wholesale access on FRAND and EOO terms**

39. Market operators with SMP are likely to have the ability and incentive to refuse or restrict access to their networks to other operators who wish to use the network to provide retail services. This restriction can harm consumers by limiting the scope for competition at the service level. As a result, the Authority is proposing to require SMP operators in certain markets (i.e. broadband, mobile and business connectivity) to provide wholesale access to their networks.
40. As part of this obligation, SMP providers will be required to offer commercial terms to access seekers in accordance with FRAND.
41. The FRAND obligation is intended to ensure that SMP providers offer access on price and non-price terms that are fair and reasonable, and do not discriminate between different access seekers, or between the SMP provider’s own retail arm and other sectoral providers. The FRAND obligation also means that SMP providers have to negotiate in good faith with potential and existing access seekers and must therefore meet any reasonable request for access. Therefore, the FRAND obligation is intended to promote efficient and sustainable competition at the service level.
42. In the context of wholesale access and the prices charged for such access, FRAND obligations include the requirement not to initiate a “margin squeeze”. This means that the difference in price between the wholesale access service and the corresponding retail

price charged by the SMP provider must be large enough to cover all relevant and efficiently incurred costs,<sup>9</sup> plus an appropriate profit margin.

43. Furthermore, SMP operators will be required to comply with the EOO obligation and ensure that the wholesale access services provided to an individual access seeker are equivalent to those that it provides to itself and other access seekers.
44. The aim of the EOO obligation is to ensure that access seekers are not disadvantaged (relative to the SMP operators who self-supply) in relation to the quality of the service received. The service provided must be identical on all key service dimensions, including speed, reliability and the time taken to install new lines and fix faults. The SMP operator must thereby not offer a reduced service to access seekers relative to the service that the operator provides to itself.
45. Where both the SMP operator and access seekers have made efforts to reach a commercial agreement but have been unable to do so, the Authority will have the power to intervene and make a determination as to whether or not the terms offered by the SMP operator comply with the FRAND/EOO obligation. Subsequently, the Authority could determine, after due process, the terms of the access agreement.

*Monitoring and process for assessing compliance*

46. The Authority will also act as an arbiter in the case of disputes over the provision of wholesale access. For example, the Authority may receive formal complaints that SMP operators are not negotiating with access seekers in good faith; are failing to provide access upon reasonable request or are not meeting the obligations of offering wholesale access on FRAND terms.
47. Similarly, where both the SMP operator and access seekers have made all reasonable efforts to reach a commercial agreement but have been unable to do so, the Authority will have the power to intervene if requested to do so by one of the parties and to determine whether the terms offered by the SMP operator comply with the FRAND obligation. This includes price and non-price dimensions of the FRAND obligation.
48. If a single iteration of negotiations is insufficient, there must be at least a second iteration during which the parties elaborate on why they consider their proposed terms need to be adjusted to meet the FRAND requirements.
49. If an agreement cannot be reached after the SMP operator and access seeker have made all reasonable efforts, either the SMP operator or the access seeker may request the Authority to step in to determine whether the FRAND terms have been met.
50. The FRAND obligation means that the SMP operators have to negotiate in good faith with access seekers and must meet any reasonable request for access.

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<sup>9</sup> This includes retail costs (e.g. the costs of marketing, customer acquisition and any equipment provided to the customer, such as a broadband modem) as well as any other necessary costs (e.g. the costs of international connectivity).



51. Requests for access may not be refused except for objectively justified reasons, backed up by evidence. Therefore, access requests will be presumed to be reasonable unless the SMP operator demonstrates that they are not reasonable. As such, in the case of a dispute, the SMP operator will need to demonstrate that the access request is not reasonable, rather than the access seeker being responsible for demonstrating that the access request is reasonable.
52. Where an access request has been refused and a formal complaint has been made to the Authority, the Authority will review the evidence that the SMP operator has put forward to demonstrate that the terms of the access request are not reasonable. The Authority will assess whether the refusal to grant access is consistent with the FRAND obligation. In conducting its investigation, the Authority will invite submissions and seek information, potentially from both the access seeker making the complaint and the SMP operator.

(e) **Consumer switching and choosing the right product**

53. The Authority wants to ensure that consumers do not experience unnecessary difficulties when switching providers. The Authority is of the opinion that consumers should be able to exercise choice and take advantage of competition in electronic communications markets by being able to switch providers easily. Unnecessary difficulties in switching providers can give rise to consumers suffering harm, or even prevent switching entirely.
54. Therefore, the Authority will require SMP operators to meet certain minimum standards regarding their management of consumers who are considering moving to another provider. The obligations under this remedy seek to ensure that consumers can purchase services that best meet their needs. This should subsequently drive effective competition and achieve better consumer outcomes, such as lower prices and higher quality.
55. The key pillars of the Authority's approach to consumer switching are as follows:
- **Having a “right to exit” and a maximum permitted contract length:** consumers should be protected from being locked into contracts with burdensome cancellation policies or excessive contract lengths;
  - **Prohibiting automatically renewable contracts:** consumers should be protected from being automatically locked into contracts beyond the minimum contract period. Contracts that automatically “roll over” for another minimum contract period will be prohibited; and
  - **Enabling straightforward and timely switching:** consumers should be able to switch providers easily and quickly, without significant transaction costs.
56. First, where the contract terms change, operators must allow consumers to leave a contract without incurring any cancellation charges. Such changes would include price increases within the contractual period, or changes to the duration or service conditions of the contract. This “right to exit” will protect consumers against changes that are not clearly articulated at the start of the contract. However, the consumer may be liable in these circumstances for the cost of any subsidized customer premises equipment (“CPE”) provided (e.g. a free Wi-Fi router) and the pro-rata cost of the service at the contracted rate.

57. In support of this, SMP operators must contact consumers at the point when such a proposed change occurs, to inform consumers that they have the right to exit from their current contract. Additionally, the right to exit should apply even when the consumer has acquired a bundle of services.
58. Second, the Authority mandates that a 14-day “cooling-off” period should apply, to allow the consumer the right to exit the contract at any point during those 14 days without penalty. This period should start from the date on which the contract is entered into and should run for 14 consecutive calendar days. However, the consumer may be liable in these circumstances for the cost of any subsidized customer premises equipment (“CPE”) provided (e.g. a free Wi-Fi router) and the pro-rata cost of the service at the contracted rate.
59. Third, specifically for the broadband retail market, the right to exit should also apply where actual, realized broadband speeds are significantly different from the advertised, headline speeds.
60. The Authority adopts a definition of a 20% differential applied to either the download or the upload speed. When practically applied, a customer who has acquired services with a reasonable expectation of experiencing 100Mbps download speeds and 20Mbps upload speeds should not experience download speeds below 80Mbps or upload speeds below 16Mbps. A failure to meet either the upload or the download speed would result in a right to exit.
61. If a customer complains to an SMP operator about speeds experienced, the Authority requires the SMP operator to improve the speeds such that they are not “significantly different” from the advertised speeds within 15 business days, before the customer gains the right to exit. The SMP operator must inform the customer about their right to exit at this point.
62. Fourth, the Authority mandates a maximum permitted contract length for retail products of 24 months. Specifically, when contracts are longer than 12 months, an alternative choice with a contract period of 12 months or less must also be offered. This will ensure that consumers have a choice over contract length and are not locked into contracts for excessively long periods.
63. Fifth, each contract must include a provision granting consumers the option to terminate their contract at any time upon payment of a reasonable termination fee (reflecting only the payments to be made during any remaining minimum contract period). This will protect consumers from being unduly locked into contracts and subsequently unable to switch to another provider. Under this scenario, the SMP operator would be entitled to the sum of the remaining payments due as part of the contract and to the return of any equipment that has been loaned to the customer.
64. The operator may also impose a Cost Oriented cancellation charge to cover the costs of administration. However, this administration charge can cover only the actual costs incurred in dealing with the customer cancellation process and is therefore likely to be very small in relation to the contracted amount.

65. In addition to the above, the remedies ensure that customers are always able to choose the product that is most suitable for them, even if the product is advertised as being primarily for other types of customers. For example, businesses shall be able to purchase broadband that is targeted at residential customers. This will avoid unnecessary restrictions on choice of service, and thus help to ensure that consumers can choose the best-value product.

**V. DETERMINATION ON 2013 REMEDIES AND OBLIGATIONS TO BE WITHDRAWN**

66. The Authority hereby withdraws the remedies set forth in the Regulatory Authority (Obligations for Operators with Significant Market Power) General Determination 2013, except to the extent modified by this General Determination.

## **VI. SUMMARY LIST OF GUIDANCE NOTES & INSTRUCTIONS**

67. In relation to the obligations set forth in section IV, the Authority shall issue further advisory guidelines on:
  - i. Cost Orientation
  - ii. Wholesale Access: FRAND and Margin Squeeze
68. In relation to the obligations set forth in section IV, the Authority shall set out further instructions via Administrative Determination in order to implement the following:
  - i. Accounting Separation
  - ii. Information Provision
  - iii. Consumer Switching and Choice