Business connectivity market review: Guernsey

Consultation

Document No: CICRA 14/16

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Executive summary

The GCRA is consulting on its review of the market for business connectivity services in Guernsey. The review broadly follows the methodology that is now well established across the EU, adapted to take account of the particular circumstances of the Channel Islands.

The focus of the review is on the provision of leased lines. These are the essential building blocks used to put in place secure, dedicated data transmission connectivity between fixed locations. Retail leased lines are bought by businesses and public sector organisations, while wholesale leased lines are bought by telecoms operators, both to provide their retail offerings and to extend their own networks.

The purpose of the review is to examine the competitive conditions that prevail regarding the delivery of business connectivity services in retail and wholesale markets, on- and off-island. In those areas where competition is found to be deficient, the GCRA has put forward proposals for regulatory action. The GCRA is confident that this market review and the additional regulatory measures it intends to propose will ensure that the benefits of competition are felt by users of business connectivity services in Guernsey.

The GCRA has developed a method for market analysis that can be applied consistently in both Guernsey and Jersey. In the GCRA's view it is important that the conduct of the review and the implementation of any remedies put in place on its conclusion are fair and proportionate, and are targeted at those areas where potential competition problems are greatest. The GCRA is happy that its proposals meet these requirements.

The GCRA's preliminary view of the market for **retail leased lines** is that it should include on-island and off-island circuits, and include leased lines of all bandwidths and all delivery technologies. The GCRA's assessment is that valued-added retail products – such as IP connectivity, Virtual Private Networks (VPNs), data storage and so forth – should be seen as downstream services which are not subject to the same demand and supply characteristics as leased lines, and so do not form part of the same market.

The GCRA has assessed the level of competition in the retail market in Guernsey and has reached the preliminary conclusion that no operator should be designated with Significant Market Power (SMP) in this area. SMP is generally held to be equivalent to the concept of dominance under competition law, and is defined as the ability to behave independently of competitors, suppliers and ultimately businesses and consumers in the particular market. The GCRA has reached this conclusion due to the substantial market share movement that has occurred in the past two years and taking account of likely competitive developments over the medium term.

While the GCRA recognises that issues relating to competition still exist in the retail leased lines market, it takes the view that these may be best tackled by appropriate regulation at the wholesale level. Given the concerns and the outcome of its analysis, it is the GCRA's intention that the focus of regulation of the provision of retail leased line services should be targeted at the wholesale level to address the concerns identified.

In relation to **wholesale leased lines**, the GCRA's preliminary view is that separate wholesale markets exist for on- and off-island leased lines, on the basis that there are significant differences in relation to barriers to entry, supply and pricing conditions between the two kinds of leased lines. As is the case for retail, the GCRA takes the view that this market includes leased lines of all bandwidths and all delivery technologies.

The GCRA's competition assessment in relation to ***on-island wholesale leased lines*** shows that Sure remains the dominant supplier of such services. As a result, CICRA's preliminary view is that Sure should be designated with SMP in this market.

Sure also remains the market leader in the provision of ***off-island wholesale*** leased lines, but the GCRA's assessment is that in this market the extent of alternatives to Sure and the capacity other operators hold does not support a finding of SMP by any operator. However, the GCRA notes concerns regarding off-island connectivity, and proposes to address these by ensuring that potential bottlenecks are removed which prevent customers on Guernsey taking advantage of the potentially competitive supply of off-island connectivity.

In the market in which, according to the GCRA's preliminary view, Sure has been found to have SMP, i.e. the market for on-island wholesale leased lines, it is proposed that a range of **remedies** be imposed on Sure. These measures include obligations on access, non-discrimination, transparency, accounting separation, cost accounting and price control. Should the proposed SMP finding be confirmed, the GCRA proposes to specify in detail the regulatory remedies it intends to impose and to define how they will be implemented in the market.

As part of its suite of remedies, the GCRA is proposing that there is a clear delineation of the point between on-island and off-island wholesale leased lines. It is essential that owners of off-island capacity are able to offer connectivity to customers in Guernsey, and also that customers in Guernsey are able to connect to off-island connectivity in an efficient and cost effective manner.

There should be a seamless transition from off-island to on-island capacity, and to that end there are a number of possible solutions to enable access, which could include ensuring a clear definition to be used in the event that complaints or problems arise to arranging for “carrier neutral” handover (“meet me”) locations for access from on to off-island connectivity.

GCRA will also consider simplifying the licensing requirements for carriers providing off island connectivity to Guernsey licensed telecommunications operators to reduce barriers to entry and open opportunities to non-licensed operators with existing capacity.

1. Introduction

1.1 Purpose of review

The main purpose of a market review is to identify the competitive conditions prevailing in a market by assessing systematically the competitive constraints that are faced by undertakings (licensees) in the market. A market review commences by defining a market, which is then analysed to assess the degree of effective competition. The competition assessment determines whether any undertaking is found to have Significant Market Power (SMP), which is generally held to be equivalent to the concept of dominance under competition law, and is defined as the ability to behave independently of competitors, suppliers and ultimately businesses and consumers in that market. If there is no SMP, the market is effectively competitive and does not require *ex ante* regulation[1]. If there is SMP, then the market is not effectively competitive and *ex ante* regulation should be imposed, at either the wholesale or the retail level, to counteract the potential negative effects of the competition problems that can be caused by the SMP operator.

This market review considers the market for business connectivity in Guernsey. The JCRA is undertaking a parallel review in Jersey, and the consultations will proceed simultaneously.

1.2 Current SMP regulation

In its Decision Notice of February 2008[2], the Office of Utility Regulation (OUR) in Guernsey considered that Sure[3] was dominant in the wholesale fixed line telecommunications market (including, inter alia, on- and off-island leased lines) and the retail fixed line telecommunications market. The OUR identified two baskets of leased line services which were subject to price control regulation. These were:

- Basket 4: on-island wholesale leased lines, RPI-RPI, and
- Basket 5: off-island retail leased lines, RPI-RPI.

[1] *Ex ante* regulation is the application of regulation before an abuse of power has necessarily occurred. The reasoning behind its application is that finding that an operator has SMP means that the operator is likely to have the incentive and motivation to behave in a way which exploits its market power to the detriment of competitors and ultimately to consumers. *Ex ante* regulation can be contrasted with *ex post* regulation, which investigates an incident which has already happened.

[2] *Price Control for Cable & Wireless Guernsey, Decision Notice*, Document No OUR 08/07 February 2008.

[3] Then Cable & Wireless Guernsey.

In addition, wholesale off-island leased lines were subject to a price cap set at retail minus 15%.

Following a review of Sure's wholesale business, the OUR published a set of Decisions[4] addressing Sure's conduct in the leased line markets. The Decisions addressed Sure's processes for the ordering and delivery of wholesale leased lines; a requirement to publish Key Performance Indicators (KPIs); penalties for failure to meet targets; changes to wholesale and retail upgrades and price changes; and establishment of a separate wholesale business structure.

The price control on Baskets 4 and 5, and the retail minus price cap on wholesale off-island leased lines were rolled over from 1 April 2011 to 31 March 2012[5]. In 2012, a review of the price control maintained a freeze on prices in Baskets 4 and 5, and maintained the retail minus control on wholesale off-island leased lines[6]. The review of the price control resulting in a Decision in March 2013 maintained an aggregate price freeze on Baskets 4 and 5, but allowed Sure to rebalance charges within the baskets. It was also decided that the price control period should end on 31 December 2013. The price control on Baskets 4 and 5 was extended in December 2013[7], pending either any changes imposed on the foot of this market review of business connectivity, or in December 2014, whichever is the sooner.

1.3 Background to the Consultation

In preparation for undertaking this market review, the GCRA issued an initial consultation and Call for Evidence on the scope of the review.[8] The GCRA received more than 30 responses. A summary of responses is provided in Annex 1.

Follow up discussions were held with some respondents and other stakeholders. Information collected from responses and discussions has been fully considered and has informed the GCRA's analysis and proposals.

The GCRA has worked closely with operators in the preparation and conduct of this review. Formal data requests were issued to operators active in the leased lines markets in the Channel Islands, and all operators submitted quantitative and qualitative information. In addition, the GCRA invited operators to engage at all

[4] *Review of C&W Guernsey's Wholesale Business, Decision Document,* Document No: OUR 08/16, October 2008.

[5] *Cable & Wireless Guernsey Price Control, Final Decision*, Document No. OUR 11/02, January 2011.

[6] *Cable & Wireless Guernsey price control for 2012-2013, Final Decision*, Document No. CICRA 12/24, March 2012.

[7] *Sure (Guernsey) Ltd., price control 2014 for exchange lines, calls and on-island (wholesale) and off-island (retail) leased lines, Draft Decision*, Document No. CICRA 13/52, December 2013, *Final Decision* Document No. CICRA 14/08, February 2014.

[8] Channel Islands Business Connectivity Market review: Initial consultation and call for evidence on the scope of the review.

stages of the project, in the belief that encouraging operators' input is essential to deliver an outcome which ensures that business connectivity services are provided in a way which best contributes to economic and social development in Guernsey through promoting and maintaining effective competition.

The GCRA would like to thank operators and stakeholders for their engagement with the process so far.

2. Structure of the Consultation

The document is structured as follows:

Section 3:	sets out the background to the market review;
Section 4:	outlines the legal requirements and licensing framework;
Section 5:	describes the GCRA's proposed approach to the market review;
Section 6:	sets out the GCRA's proposed definition of the retail market;
Section 7:	explains the GCRA's preliminary assessment of competition and SMP in the retail market;
Section 8:	sets out the GCRA's proposed definition of the wholesale market(s);
Section 9:	explains GCRA's preliminary assessment of competition and SMP in the wholesale market(s);
Section 10:	sets out remedies which could be applied should there be an SMP finding.

Responses to this consultation document should be submitted in writing to:

GCRA
Suites B1 & B2
Hirzel Court
St Peter Port
Guernsey
GY1 2NH

or by email to info@cicra.gg.

The deadline for responses is **5.00pm** on **2nd June 2014**.

All comments should be clearly marked: ***"Review of the market for business connectivity: Guernsey"***. The GCRA's normal practice is to publish responses to consultations on its website. It should be clearly marked if any part of a response is held to be commercially confidential.

3. Background

This market review encompasses the provision of retail and wholesale business connectivity services over electronic communications networks in Guernsey. In this section, the GCRA sets out a description of what is meant by business connectivity services, what kinds of products and services are made available to businesses in this area and what they are typically used for, what technologies are used to provide these services and what recent trends and developments have occurred in relation to the provision of business connectivity services.

3.1 What is business connectivity?

In addition to telephony and other publicly available electronic communications services, business customers - both public sector organisations and private sector companies - require secure, dedicated data transmission connectivity between different fixed locations. While this type of connectivity can and sometimes is self-provided by end-users (for example, by the use of private radio links), typically it is put in place via the procurement of leased lines, i.e. private circuits providing dedicated symmetric transmission capacity between fixed locations leased from (licensed) providers of communications networks and services ("communications providers").

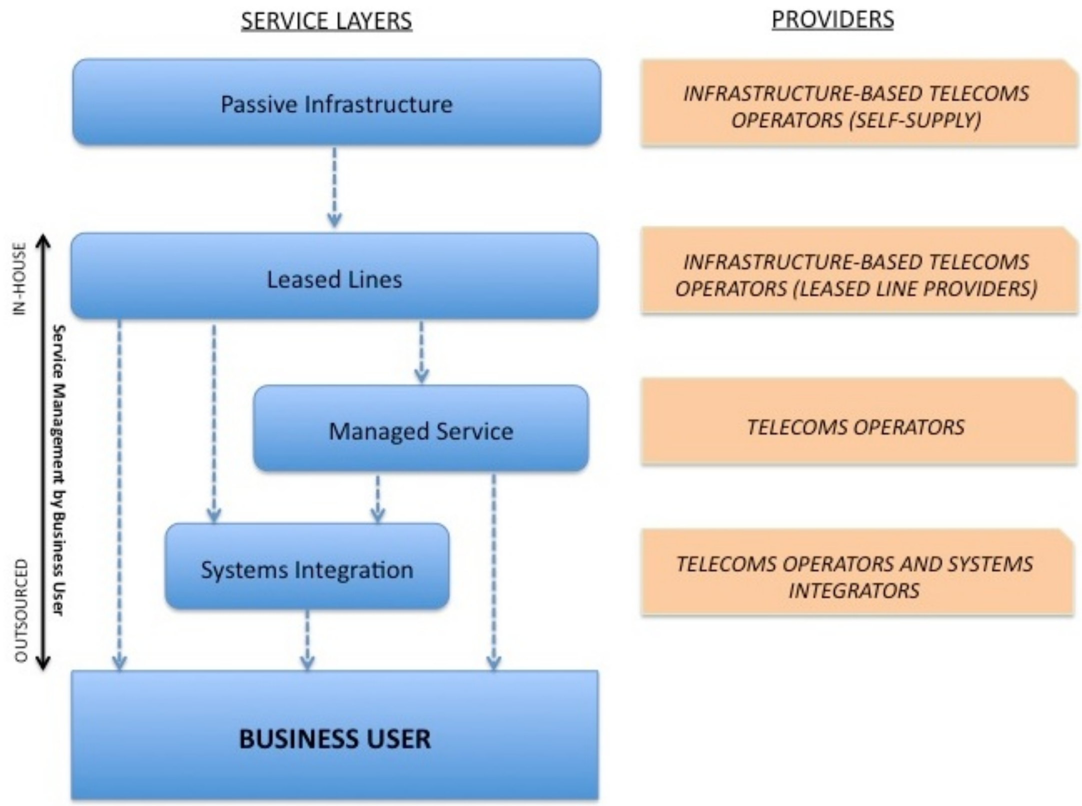
Historically, businesses contracted directly with communications providers for the provision of retail leased lines in order to establish their own private data networks. Although many businesses still procure business connectivity services in this way, the increasing trend is towards the integration of leased line provision with other value-added services. This means that many organisations do not buy leased lines as distinct products, but are purchasing them as components of a larger service.

Value added services include internet access/IP feed[9], private voice and data services, Virtual Private Networks (VPNs), network monitoring and technical support, data storage, disaster recovery, cloud computing and telemetry services. Managed services of this kind are supplied to business customers both by telecoms operators and by systems integrators, the latter by purchasing leased lines from upstream providers and then selling end-to-end business connectivity solutions to end-users.

Figure 1 below illustrates a simplified version of the different service layers and providers involved in the delivery of business connectivity services to end-users.

[9] IP (Internet Protocol) feed is a dedicated connection to the internet provided directly from the customer's site over a permanent link.

Figure 1: Business connectivity service layers and providers



Source: Ibex Consultants

As is shown in Figure 1 above, at one end of this spectrum, some organisations may decide to undertake full outsourcing of all their business connectivity services, by procuring a managed service with or without the involvement of a systems integrator but at the other end, many organisations still opt to procure retail leased lines themselves.

As Figure 1 also shows, there are various types of providers operating at the different service layers. Infrastructure-based players (which in Guernsey is limited to JT, Sure and Newtel) typically also provide services up to and including full outsourcing of business connectivity requirements while other providers operate exclusively at the managed services level or the systems integration level.

Leased lines are made available by network operators in different ways. Retail leased lines are sold directly to end-user businesses as well as to organisations providing managed business connectivity services to businesses. Leased lines are also offered to other communications providers on a wholesale basis, in particular to support the provision of fixed and mobile broadband services.

Retail leased lines are made available in situations where communications providers offer private leased capacity directly to end-users. Businesses or public sector organisations typically choose a leased line for security or for permanently available links with guaranteed quality of service that is supported by a service level agreement ('SLA"). Retail leased lines may also be put in place by end-users to support dedicated point-to-point connections, for example to link a number of offices within the same private network, which could then be used for the provision of voice, data and other value-added services within the organisation in question.

Wholesale leased lines are, by contrast, made available by communications providers to other communications providers who, in turn, provide their own retail communications services. An operator may purchase a wholesale leased line as a network input enabling it to offer a range of different retail services to its customers or else an operator may purchase a wholesale leased line in order to offer a retail leased service to one of its own retail customers.

An example of wholesale leased line usage is where mobile network operators ("MNOs") use them for data transmission connectivity services within their networks. While radio links would commonly be used for connecting mobile base stations to the core network, leased lines are required to enable the transmission of mobile voice and data traffic aggregated from the access layer of mobile networks. With the advent of 4G mobile services, moreover, there is increased demand for fibre access to the base station and so leased lines are being deployed to fulfil this demand too. Fixed broadband providers also avail of wholesale leased line services as an important component of their networks, in order to aggregate and convey data traffic within an across their networks. Increased take-up of both fixed and mobile broadband services has resulted in a corresponding increase in demand for wholesale leased lines by broadband providers in recent years.

Another example would be where communications providers purchase wholesale leased lines specifically to provide their own retail leased line services. This could, for example, be to service a customer location that is outside the operator's own network area, though it is also the case that non-infrastructure-based operators might use wholesale leased lines in this way, i.e. by purchasing leased lines at a wholesale level and then reselling those lines to retail customers without integrating them with any network elements of their own.

Generally, wholesale and retail leased lines are parallel markets – the products are often the same, with the difference being in the pricing. This is in contrast to other communications services, where the wholesale inputs purchased can vary significantly from the retail service provided. For example, a wholesale bitstream input which is used to offer retail broadband does not have the same characteristics or pricing structure as the retail product.

3.2 Leased line technologies

There are two main technologies over which leased lines are provided:

- **Traditional Interface (TI)** leased lines are provided using legacy analogue and digital interfaces. TI leased lines are principally used for private voice and data services, with the analogue variant used for voice and low-bandwidth data transmission while digital variants are typically available in bandwidths ranging from 65 Kbps up to 10 Gbps and so are capable of supporting a wide range of higher bandwidth services;

- **Alternative Interface (AI)** leased lines, which are digital leased lines geared mainly towards the transmission of IP data and are more suitable for the delivery of high bandwidth services than TI leased lines. By far the most common AI leased line technology is Ethernet, which is used for data transmission both within local area networks and more recently also in wide area network environments. Ethernet services are typically available in bandwidths ranging from 10 Mbps to 10 Gbps. Fibre Channel is another AI technology, used for very high bandwidth transmission, for example in the area of data storage network applications.

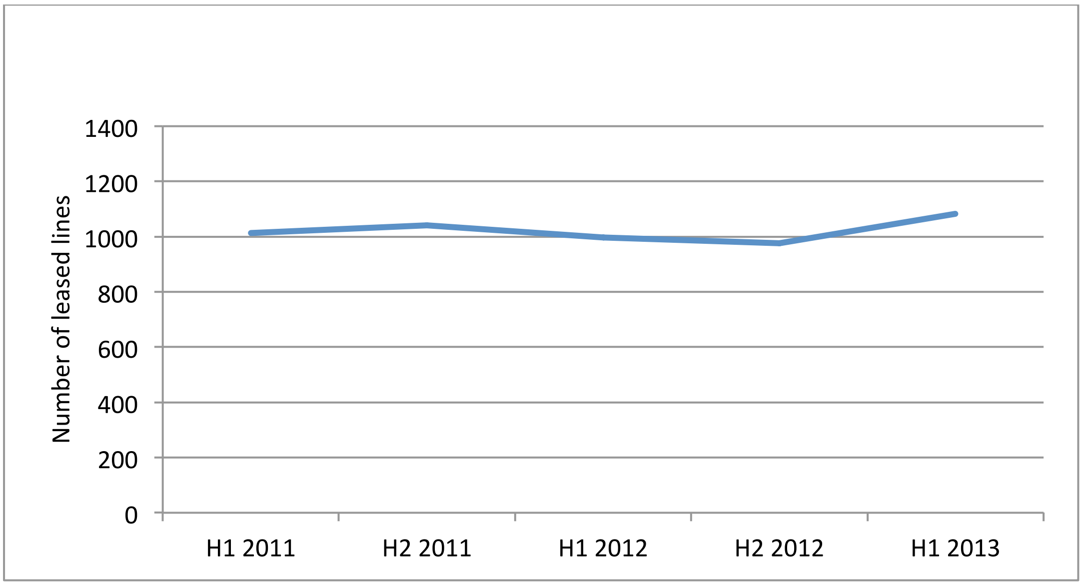
A further potential technology for the delivery of leased lines is Wavelength-Division Multiplexing (WDM) which is suitable for the delivery of very high bandwidth services. WDM-based services may be delivered using TI or AI technologies but the decline in demand for the former in the face of increased demand for the latter means that, for practical purposes, WDM may be viewed as an AI technology that is geared in particular towards the delivery of very high bandwidth leased line services.

3.3 Demand for leased line services

The demand for leased lines bandwidth has increased steadily across the world in recent years, driven by sustained increases in both the penetration and the speed of business and consumer data services. Adoption of remotely hosted computing applications (often known as 'cloud computing'), growing consumption of video content and the rapid growth of e-commerce and of internet applications have all added to businesses bandwidth demands. At the same time, providers of consumer broadband services, both fixed and mobile, have required steadily increasing bandwidth to support the ongoing growth in traffic from their end-users.

The number of leased lines in service within Guernsey has increased modestly over the past two years, as Figure 2 below illustrates.

Figure 2: Retail and wholesale on-island and off-island leased lines, Guernsey



Source: CICRA

Looking towards the future, the growth in demand for leased lines capacity seems set to continue with businesses demanding more bandwidth and as providers of mass-market broadband services invest in super-fast fixed services and 4G mobile services. Data provided by operators and in response to the Call for Evidence shows the same pattern of increasing demand for bandwidth in Guernsey.

The deployment of modern technologies is at the same time helping to drive down the unit costs of providing leased lines bandwidth. The number of services which use legacy time-division multiplex (TDM) technologies has been declining, although they still account for most installed leased lines. Modern Ethernet transmission equipment is now preferred in most new installations because it costs less and supports higher bandwidths. The trend to lower unit cost is also evident in some jurisdictions in the increasing adoption of WDM technology, which can multiply by several times the bandwidth transmissible in an optical fibre.

3.4 Current market structure

At present, retail leased lines are supplied in Guernsey by Sure, Jersey Telecom and Newtel. Resellers, such as systems integrators and others who purchase leased lines from upstream providers as an input to their own services, also supply retail leased line services.

Wholesale leased lines are supplied on- and off-island in Guernsey by Sure, and off-island by Newtel. JT has off-island capacity for its own use, but does not make capacity available on a wholesale basis to other operators.

4. Legal background and licensing framework

4.1 Legal background

Section 5(1) of The Telecommunications (Bailiwick of Guernsey) Law, 2001 (***the Telecoms Law***) provides that the GCRA may include in licences such conditions as they consider appropriate, having regard to objectives set out in Section 2 of the Regulation Law, and the enforcement of the Regulation Law and the Telecoms Law.

The Regulation of Utilities (Bailiwick of Guernsey) Law 2001 (the Regulation Law) sets out the general duties which the States and the Guernsey Competition and Regulatory Authority (GCRA) must take into account in exercising their functions.[10] These include the requirement to protect consumers and other users in respect of the prices charged for, and the quality, service levels, permanence and variety of, utility services; to ensure that utility services are provided in a way which will best contribute to economic and social development; and to introduce, maintain and promote effective and sustainable competition[11].

The Telecoms Law specifically provides that the GCRA may include in any licence conditions that are:

- intended to prevent and control anti-competitive behaviour[12]; and
- regulate the price premiums and discounts that may be charged or (as the case may be) allowed by a licensee which has a dominant position in a relevant market[13].

The GCRA is obliged[14] to publish notice:

- of a proposed decision as to whether a person has a dominant position in a relevant market and of the conditions, if any, proposed to be included in the licence granted or to be granted to that person in relation to the control of that dominant position;
- of a proposed decision to regulate the prices, premiums and discounts that may be charged or (as the case may be) allowed by a licensee which has a dominant position in a relevant market; and
- of a proposed decision to include quality of service conditions in any licence.

[10] Section 2 of the RoU Law.
[11] These broad objectives were maintained in the transfer of functions and responsibilities to GCRA, as set out in the Guernsey Competition and Regulatory Authority Ordinance, 2012.
[12] Section 5(1)(c) of the Telecoms Law.
[13] Section 5(1)(f) of the Telecoms Law.
[14] Section 5 (2) of the Telecoms Law.

The definition of dominance and abuse of dominance is not explicit in the Telecoms Law. However, the Competition (Guernsey) Ordinance 2012 sets out the States' approach to defining abuse of dominance and anti-competitive practice[15]. Conduct is considered to constitute an abuse of dominance if it consists of:

a) *"directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions,*
b) *limiting production, markets or technical development to the prejudice of consumers or any class or description thereof,*
c) *applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage,*
d) *making the conclusion of contracts subject to the acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of the contracts"[16].*

There is a general prohibition on anti-competitive practices, which applies to agreements between undertakings[17] which:

a) *"directly or indirectly fix purchase or selling prices or any other trading conditions,*
b) *limit or control production, markets, technical development or investment,*
c) *share markets or sources of supply,*
d) *apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage,*
e) *make the conclusion of contracts subject to the acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of the contracts".[18]*

In determining questions relating to the abuse of dominance or anti-competitive practices, the GCRA is obliged to take into account the principles laid down by and any relevant decisions of the Court of Justice or General Court of the European Union.[19]

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[15] While the Competition (Guernsey) Ordinance 2012 is primarily concerned with *ex post* competition law, it is common practice throughout Europe to apply the same principles and methodologies to *ex ante* market definition and SMP assessment as would be consistent with competition case law and practice. See, for example, *Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services* ('the SMP Guidelines'), *(2002/C 165/03), 11.7.2002.*
[16] Part I, Section 1 (2), Competition (Guernsey) Ordinance 2012.
[17] Which may or may not be dominant.
[18] Part II, Section 5 (2), Competition (Guernsey) Ordinance 2012.
[19] Section 54, Competition (Guernsey) Ordinance 2012.

4.2 Licensing Framework

Licences are issued to fixed telecommunications providers under Part I, section 1 of the Telecoms Law. All fixed and mobile telecommunications licences include a Part which addresses conditions applicable to dominant operators[20]. If the GCRA has found that a licensee has a dominant position in a relevant market, the provisions of this Part of the licence may apply.

The provisions which are applicable to dominant operators include (but are not limited to) measures addressing the availability and associated terms of Other Licensed Operator (OLO) access to networks and services[21]; the requirement not to show undue preference or to exercise unfair discrimination[22]; the requirement not to unfairly cross subsidise[23], supported by accounting processes to demonstrate compliance; regulation of prices, and transparency around pricing[24].

In addition, the fixed telecommunications licences include conditions specific to the provision of leased circuits[25], which apply where a licensee has been found to be in a dominant position. The conditions applicable to the supply of leased circuits refer to the retail and wholesale markets, and require that a dominant provider offers circuits on publicly advertised and non-discriminatory terms, and in compliance with quality standards and at prices determined by the GCRA.

The fixed telecommunications licences also include a Part which directly obliges the licensee not to engage in any practice which has the object or likely effect of preventing, restricting or distorting competition in the establishment, operation and maintenance of telecommunications networks and services[26].

[20] Part IV of the fixed telecommunications licences.
[21] Condition 24, Fixed telecommunications licences.
[22] Condition 29, Fixed telecommunications licences.
[23] Condition 28, Fixed telecommunications licences.
[24] Condition 31, Fixed telecommunications licences.
[25] Condition 26, Fixed telecommunications licences.
[26] Part V: Fair competition, Fixed telecommunications licences.

5. Approach

5.1 Overall approach

The GCRA and JCRA are publishing parallel consultations on the market for business connectivity in Jersey and in Guernsey. However, the Authorities propose to develop an approach to market analysis which can be applied consistently in Jersey and Guernsey. While the approach recognises the differences in the regulatory frameworks between the islands, and recognises that the markets for business connectivity are currently regulated differently, the approach proposed by the Authorities for this review will be methodologically consistent across both islands.

The legal and regulatory framework was discussed in Section 4 of this document. It was noted that, while the process for undertaking a market review is not explicitly set out in Telecoms Law or Competition Law, both Jersey and Guernsey are required to take into account EU competition law and practice.

In determining questions relating to the abuse of dominance or anti-competitive practices, the GCRA is obliged to take into account the principles laid down by and any relevant decisions of the Court of Justice or General Court of the European Union.[27]

While the GCRA is not obliged to follow EC recommendations, in both Jersey and Guernsey the approach to competition needs to take account of, and be consistent with, the approach throughout the EU. Further, the EU approach constitutes a well-established process and is considered as best practice. The GCRA has therefore decided to adapt the methodology recommended by the European Commission (EC) for defining markets, assessing Significant Market Power (SMP) and, if required, imposing remedies. The market definition and competition assessment methodology is set out by the EU[28] in its SMP Guidelines, and this review has adapted this methodology to the particular circumstances of the Channel Islands.

The GCRA has also taken into account work carried out by European National Regulatory Authorities (NRAs) since the publication of the Guidelines, particularly where the methodology has been developed, and where the EU has engaged in dialogue with NRAs about the implementation of the methodology.

[27] Section 54, Competition (Guernsey) Ordinance 2012

[28] Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services (2002/C 165/03), European Commission, July 2002, ('SMP Guidelines') available at: http://bit.ly/1eOO0GB.

The EU's current recommendation[29] is that, within the business connectivity market, only the market for wholesale terminating segments of leased lines should be considered as susceptible to *ex ante* regulation[30]. However, there is still some *ex ante* regulation of retail leased lines and of the trunk segments of wholesale leased lines in several EU member states (including the UK), indicating that some member states have not come to the same conclusion as the EU on the analysis of the leased line markets.

5.2 Proposed approach to market definition

Product market definition

The GCRA proposes to adopt the broad principles of market definition as set out by the EU. The market definition procedures are designed to identify in a systematic way the competitive constraints encountered by providers of electronic communication networks and services. A relevant product market comprises all products or services that are sufficiently interchangeable or substitutable, from the point of view of a user or a supplier of the products or services.

Market definition is not an end in itself – it is concerned with identifying the boundaries of a market so that the competitive conditions can be assessed, and, if appropriate, *ex ante* regulation[31] can be put in place. The process involves considering constraints arising on both the demand and supply sides of a market and their interaction. The constraints are those which would apply to a so-called 'hypothetical monopolist', such that the hypothetical monopolist would be constrained in price setting behaviour. A method for identifying market boundaries is known as the hypothetical monopolist test (also known as the SSNIP test, Small but Significant Non-transitory Increase in Price test). This test assesses whether a hypothetical monopolist is able to increase price profitably for a product or service unilaterally, without affecting demand for its product. Hence, critical to the market definition process is the degree of substitution identified on the demand and supply sides of the market.

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[29] European Commission Recommendation of 17 December 2007 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 OJ L 344 ('the Recommendation'), available at: http://bit.ly/1gKMhST

[30] Previously, the wholesale market for trunk segments of leased lines, and the retail market for low capacity leased lines were also considered susceptible to *ex ante* regulation.

[31] See Section 1 (and also Glossary at Annex 3) where the term *ex ante* regulation is explained.

Geographic market definition

European guidelines also require the geographic coverage of markets to be considered. Once the product market has been defined, the consideration of the geographic market determines where the geographic boundaries of the market lie. The analysis looks for an area in which the conditions of competition are sufficiently homogeneous, and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different in those areas. Typically, the analysis of the geographic scope of the market would consider whether the market should be larger than the jurisdiction, and also whether there are specific areas within the jurisdiction which are sufficiently different to warrant definition as a separate market. As with the product market analysis, the consideration of the scope of the geographic market takes into account demand and supply factors.

Q1. *Do you agree with the GCRA's proposed approach to market definition? If not, what alternative do you suggest?*

5.3 Proposed approach to competition assessment

When a market has been defined, the next step is to assess the level of competition in that market. The purpose of the competition analysis is to consider whether any operator has Significant Market Power (SMP), and the analysis should look forward 2-3 years, taking into account foreseeable technical and economic developments. The time period allows realistic projections to be made concerning relevant factors in the market such as technological change and movement in market share, and is linked to the time for which any *ex ante* regulation would be expected to be in force before the market would be subject to another review.

If there is no SMP, the market is effectively competitive and does not require *ex ante* regulation. If there is no SMP existing *ex ante* regulation should be removed, and no further *ex ante* regulation should be imposed (regulations such as universal service obligation and other licence conditions will remain). If there is SMP, then the market is not effectively competitive and regulation should be imposed, at the wholesale or the retail level, or both, to counteract the potential negative effects of the competition problems that can be caused by the SMP operator. As findings of collective dominance or SMP are relatively unusual, the EU Framework Directive itself (in Annex II), in addition to the Guidelines, gives a list of criteria to be used in assessing it[32].

[32] http://ec.europa.eu/information_society/policy/ecomm/doc/140framework.pdf.

As noted earlier, Significant Market Power is generally held to be equivalent to the concept of dominance under competition law. In a competitive market, a firm has to concern itself about the possible reactions of competitors: if it raises prices, competitors may draw away enough customers to make the price increase unprofitable. Similarly, a firm in a competitive market must concern itself about the reaction of customers if it raises prices: they may just switch to other suppliers. A dominant firm, on the other hand, does not have to worry about this, because its competitors have insufficient power to attract away a significant proportion of its customers, and its customers have little or no choice but to do business with it. Thus the dominant firm can determine its pricing and output strategy independently of its competitors and its customers.

A dominant firm will normally have a large market share. In the EC's *SMP Guidelines*, it is clear that although a high market share alone is not sufficient to establish the possession of significant market power, it is unlikely that a firm will be dominant without a large market share. The *SMP Guidelines* note that: *"…very large market shares – in excess of 50% - are in themselves, save in exceptional circumstances, evidence of the existence of a dominant position"*[33]

It is important to consider any changes to market shares over time, as this will indicate trends in the market and will contribute to an assessment of whether or not the market may tend towards effective competition over the period of the review. The data we requested from operators as input to the review was provided for the last two years, and this will contribute to an assessment of any changes in the market structure over that time.

However, market share is not the only criterion: a large market share simply makes it possible that the operator concerned *might* be in a dominant position, even when the market share is at a level which could be considered to be presumptive of dominance. Regulators must examine a wide range of characteristics of the market before coming to a conclusion as to the existence of significant market power. The EU lists (non-exhaustive) criteria which can also be used to measure the power of an undertaking to behave to an appreciable extent independently of its competitors, customers and consumers. The depth of analysis to be carried out is related to the market share finding.

In general, the EU approach to competition assessment involves a high level analysis of barriers to entry and expansion. In telecommunications markets, barriers to entry can be significant and are often associated with large-scale investment in infrastructure over a long time, with consequent sunk costs, and could also entail an

[33] SMP Guidelines (op. cit.), Para. 75.

operator's need to achieve economies of scale, scope and density. Another barrier to entry could arise where an SMP operator is vertically integrated; that is where the operator offers a wholesale and a retail service. In this case, an entrant to the market may find it difficult to compete if the SMP operator's retail arm benefits from preferential treatment from its parent company, particularly if the market entrant is dependent on purchasing a wholesale input from the SMP operator, or if the business/offering is structured in such a way that the wholesale part of the business is able to support or cross-subsidise the retail part of the business. A barrier to entry could also arise because of the existence of a scarce resource, such as spectrum. The competition assessment would take into account other factors that could dilute market power, such as countervailing buyer power, where a purchaser buys enough of the operator's services to be able to influence the pricing and market behaviour of the operator.

The conclusion of the competition assessment for each market is a preliminary view as to whether any undertaking has Significant Market Power in the defined market.

Q2. *Do you agree with the GCRA's proposed approach to competition and SMP assessment? If not, what alternative do you suggest?*

5.4 Proposed approach to remedies

Should an undertaking be found to have SMP, the GCRA would then need to consider how best to address this.

The EU approach to remedies generally considers the deployment of a set of regulatory tools to address structural factors such as enabling wholesale access to an incumbent's network, and behavioural recommendations that establish how the SMP operator is expected to conduct itself in the market. It has been standard practice throughout the EU to impose remedies at a high level on the conclusion of a market review, and to further specify in more detail as required. So, for example, if a national regulator proposes that a price control is required following a market review, it may impose this in principle, then consult with operators and stakeholders to detail how it should be implemented.

The GCRA believes that this general approach to remedies has merit, and proposes that it should be adapted for use in the Channel Islands, if a licensed communications provider is found to have SMP. Such an approach is in accord with the licence conditions which can be applied to dominant operators in Guernsey.

Q3. *Do you agree with the GCRA's proposed approach to remedies, should there be a finding of SMP? If not, what alternative do you suggest?*

6. Retail market definition

6.1 Product market

The definition of the relevant product market considers the identification of a set of focal products or services, and then establishes the boundaries of the market. The GCRA has taken account of feedback from the Call for Evidence, in particular the features which purchasers of business connectivity identify as being of most importance, and the extent to which purchasers perceive alternative products and services as interchangeable. Response to the Call for Evidence indicated that, in addition to competitive pricing, the most important features in business connectivity are reliability, service quality and resilience.

Should the retail market be narrowed to reflect delivery technology?

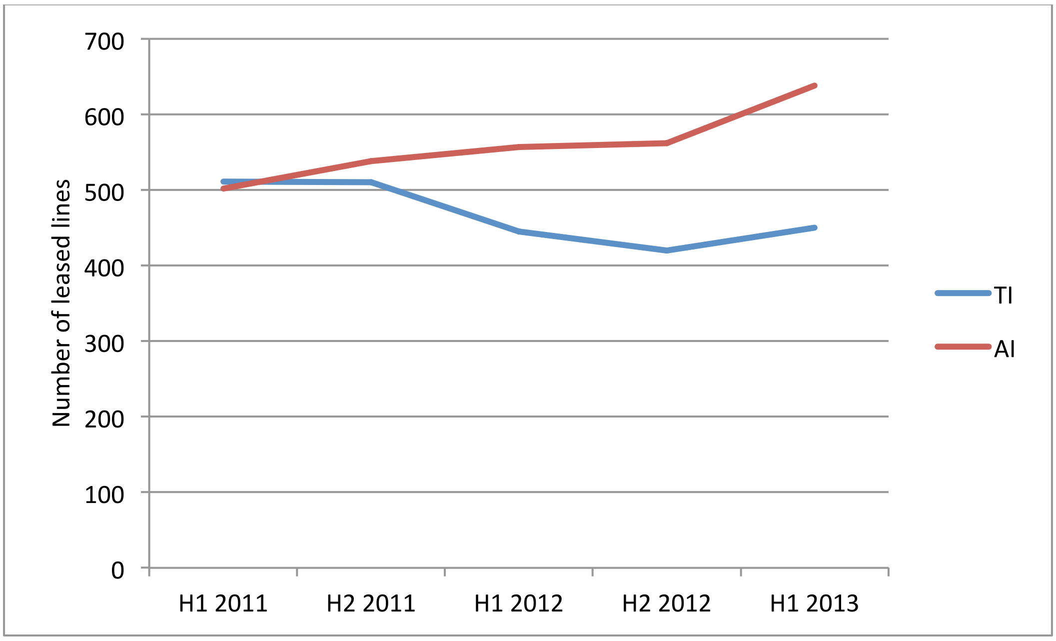
Some NRAs (notably Ofcom) have defined separate markets for traditional interface (TI) and alternative interface (AI) leased lines. "Traditional" is generally defined as SDH/PDH[34], carried mainly over copper but possibly over fibre, while "alternative" is defined as Ethernet, delivered mainly over fibre, but possibly over copper. The reasoning for Ofcom defining separate markets is primarily to reflect the differing price structures and patterns of demand for TI and AI leased lines.

The GCRA has noted a general trend in the Channel Islands and elsewhere away from traditional interface products towards Ethernet (with the trend in this respect within Guernsey illustrated in Figure 3 below), and a parallel trend towards higher bandwidth services, and has considered whether this indicates separate markets for TI and AI products in the Channel Islands.

The GCRA's preliminary view is that Ethernet represents a new and more cost-effective way of delivering a similar service to customers, and that the delivery technology is immaterial. As one of the respondents to the Call for Evidence pointed out, it generally makes little difference to a customer how their service is delivered, so long as the costs and quality are not affected. The GCRA's preliminary view is therefore that TI and AI leased lines belong in the same market.

[34] Plesiochronous Digital Hierarchy (PDH) and Synchronous Digital Hierarchy (SDH), are technical data transmission standards (See Glossary at Annex 3 for further details).

Figure 3: TI and AI retail & wholesale on-island & off-island leased lines, Guernsey



Source: CICRA

Q4.	*Do you agree with the GCRA's preliminary view that the retail market should not be narrowed to reflect the delivery technology used? If not, why not?*

Should the retail market be broadened to reflect the increasing purchase by business customers of a solution rather than a retail leased line?

The GCRA has considered the extent to which the market should be broadened to include some value added elements of the retail purchase. This could include, for example, VPNs and/or IP connectivity. Many organisations use Virtual Private Networks (VPNs) to connect offices or sites. The "Virtual Private" aspect refers to the use of a telecoms operator's public core network, as the business user is actually sharing public infrastructure. Broadly, VPNs can be accessed via the internet or via leased lines. According to Ofcom's consumer survey, in the UK, almost 60% of VPNs are underpinned by broadband, with the remainder split fairly evenly between traditional SDH/PDH leased lines and Ethernet. The GCRA assumes that this distribution may also apply in the Channel Islands.

For the market to be defined more broadly in this way, it would need to be the case that a purchaser of retail leased lines would find a VPN to be a good substitute. The GCRA's preliminary view is that a VPN accessed via internet links would not be a good substitute for a VPN because it would not offer comparable features such as security, performance and reliability. The GCRA notes responses to the Call for Evidence which confirm this view, with, for example, one respondent stating that its use of a VPN over ADSL was the only affordable option, but was far from ideal due to limited upload speeds and variation in performance. This respondent was using additional software to minimise bandwidth use. A VPN which is accessed via leased lines, while being more comparable in terms of functionality, would more correctly be considered to be a downstream service – the VPN is essentially leased lines with the addition of network management.

The GCRA's preliminary view is that a similar argument applies to whether or not IP feed should be included in the same product market as leased lines. IP feed is a downstream service which makes use of leased lines as an input – it is not a substitutable product.

The GCRA's preliminary view is that the market for business connectivity does not include downstream services such as VPNs or IP feed.

Q5.	*Do you agree that the retail market should not be broadened to include downstream services bought in conjunction with leased lines? If not, why not?*

Should the market be broadened to include business connectivity services provided via broadband?

The GCRA has considered whether the market should include business connectivity accessed via broadband. The GCRA assessed whether retail users would be likely to consider retail broadband services as a good substitute for leased lines, to the extent that business connectivity in the form of retail broadband should form part of the same market as retail leased lines.

The GCRA's preliminary assessment is that business connectivity in the form of ADSL broadband may be considered to be a substitute for leased lines in limited circumstances. Businesses which place a high value on two way data exchange between sites would not be likely to find ADSL a substitute due to its asynchronous nature. The contention ratios in ADSL may be an issue, particularly for all but the smallest businesses. Businesses which place a premium on reliability and resilience may not find ADSL adequate. The GCRA's preliminary assessment is supported by Ofcom's consumer survey findings, which reported that 14% of business customers surveyed would find ADSL a good substitute for leased lines, with the remaining 86% citing concerns over bandwidth, contention and reliability.

The GCRA notes that next generation broadband offers increased bandwidth, which may make broadband for business connectivity a more appealing proposition. The GCRA has taken into account a study published recently by the European Commission which proposes that certain high quality DSL services could be considered to be a good substitute for leased lines[35]. However, the GCRA's view is that even next generation broadband does not offer the service characteristics which a purchaser of leased lines would demand, and differences remain such as contention, security, resilience and latency. The GCRA's preliminary view is that next generation broadband would be considered as a substitute by a wider range of businesses than would consider ADSL broadband as a substitute for leased lines, but that this is still insufficient to consider that leased lines and broadband fall within the same product market.

Q6.	*Do you agree that the retail market should not be broadened to include business connectivity services provided over broadband? If not, why not?*

Are all bandwidths in the same market?

The GCRA has considered whether the market should be narrower to reflect differences in demand and/or supply of leased lines of different bandwidths. The consideration depends on the extent to which there is a chain of substitution, in which case retail customers would typically find it acceptable to switch to multiples of lower capacity lines in response to a SSNIP in the price of higher capacity lines.

The GCRA has also considered whether very high capacity connectivity such as WDM falls within the same retail product market. WDM is used in other jurisdictions primarily in the core network and to provide backhaul, but there are now some retail WDM services available. Generally, retail WDM allows an end user to buy end-to-end connectivity, with WDM equipment installed at each end. The GCRA understands from operators that there is currently no WDM service available in the Channel Islands, and that operators have not been asked to provide such products.

The GCRA proposes that the retail leased line market should not be split by capacity. While it would be unlikely that a purchaser of the highest capacity Ethernet circuits would find it acceptable to switch to multiples of the lowest capacity circuits, there is likely to be substitution along the chain of capacities available, even if not from top to bottom. The GCRA's preliminary view is that WDM services would fall within the relevant product market. The reasoning is that WDM would be a good demand and

[35] *Future electronic communications markets subject to ex-ante regulation,* Ecorys for DG Connect, 18th September 2013, available at: http://bit.ly/1i1PCh9 (PDF).

supply side substitute for a very high capacity Ethernet circuit, because the functionality is similar, and in jurisdictions where retail WDM services are already available, the pricing is converging.

Q7.	*Do you agree that all retail leased line bandwidths fall within the same market? If not, why not?*

6.2 Geographic market

A relevant geographic market comprises the area in which the undertakings concerned are involved in the supply and demand of products and/or services, in which the conditions of competition are sufficiently homogeneous and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different in those areas.

BEREC[36] (Body of European Regulators for Electronic Communications) has set out three main criteria for determining whether there is a case for finding that there are separate geographic markets. The criteria are:

(i) the differences in the barriers to entry and in the number of suppliers;

(ii) the homogeneity of the market shares of these suppliers and, and

(iii) the potential differences in prices or services.

The GCRA has considered the following options in terms of the geographic aspect of the retail market:

Are there separate geographic markets for Jersey and Guernsey?

The GCRA has considered whether there is a single geographic market for retail leased lines in the Channel Islands, or separate geographic markets for Jersey and Guernsey. Many customers purchasing retail leased lines are present in both jurisdictions, and their demand characteristics are likely to be similar. Feedback from operators indicated a trend towards pan-Island purchase, which can be seen in the context of organisations looking to centralise their purchasing. Operators also noted that centralisation of purchasing can make the market look even broader than the Channel Islands, and provided examples of companies looking to purchase for Channel Islands and the Isle of Man. However, in response to the Call for Evidence,

[36] *Draft review of the BEREC Common Position on geographical aspects of market analysis (definition and remedies)*, BEREC, 5 December 2013, ('BEREC Report'), available at: http://bit.ly/1pJhtIZ (PDF).

respondents generally viewed purchase in each of the islands as a separate action. Where purchase was pan-island, this was generally as part of a MPLS solution.

The largest suppliers of leased lines in Jersey and Guernsey are JT and Sure, and both operators are present in both islands. However, there is no uniformity of pricing across the islands, and while some functions are centralised or shared, both operators generally treat the islands as distinct geographic units in terms of marketing and operations.

The GCRA's preliminary view is that, while the markets in Jersey and Guernsey may converge at some stage to the extent that they could be considered to be a single geographic unit, this is not the case at present, and is not likely to be the case over the next 2-3 years. The GCRA therefore proposes that there are separate geographic markets for Jersey and Guernsey.

Q8.	*Do you agree that separate geographic markets exist for Guernsey and Jersey? If not, why not?*

Are there separate geographic markets for on-island and off-island retail leased lines?

The GCRA notes that previous market reviews differentiated between retail on-island and off-island leased lines.

First of all, it is important to be clear about what is meant by the retail market in the Channel Islands. The retail market is concerned with the purchase of a retail leased line by a customer based in the Channel Islands from an operator licensed to supply retail leased lines in the Channel Islands. This is an "A ended" leased line. A retail customer in Jersey or Guernsey purchases a retail leased line from its premises to an end-point – that is, it buys end-to-end dedicated capacity. The supplier may provide the leased line using its own infrastructure, or using wholesale inputs purchased from another operator, and this operator may be in the Channel Islands or in another jurisdiction. However, for the Channel Islands operator, this is a wholesale market transaction.

Alternatively, a customer based outside of the Channel Islands may require a leased line starting at its home premises and terminating in the Channel Islands (a "B-ended" leased line). In this case, the Channel Islands operator would typically supply the on-island segment to the operator who has the commercial relationship with the end client. Depending on that operator's licence (that is, whether or not the operator is licensed in the Channel Islands), this supply could be wholesale or retail, but the supply in Guernsey would be of an on-island leased line.

The GCRA considers that a differentiation between retail on-island and retail off-island leased lines would be required if there were differences in the demand and/or supply conditions for a retail leased line which terminates on-island as opposed to off-island. The GCRA proposes that from a demand point of view, the location of the end point is not important – the customer wants end-to-end connectivity, and it doesn't matter to the customer whether the end point is on-island or off-island. From a supply perspective, an operator which is licensed to offer leased lines in Jersey or Guernsey would be able to offer a retail leased line which terminated on-island and a retail leased line which terminated off-island, and indeed current operators do offer this.

The GCRA's preliminary view is that there is no cause to differentiate between a retail market for leased lines which terminate on-island and a retail market for leased lines which terminate off-island.

Q9. *Do you agree that the retail market encompasses both on-island and off-island leased lines? If not, why not?*

Are there particular areas within the islands where the conditions of competition are appreciably different to the extent that they may constitute separate geographic markets?

The GCRA notes that market entrants in Guernsey have built their own infrastructure in certain parts of the island, and considers whether this may reflect differences in competitive conditions in particular areas. Generally, new infrastructure is introduced in the main business centres, such as St Peter Port. The construction of own infrastructure reduces the reliance on purchasing wholesale products from the incumbent.

The GCRA has examined examples where regulators have found sub-national markets, and notes that these are primarily wholesale market definitions and have not applied in the retail market. For example, in the UK, Ofcom found a specific wholesale market for certain capacities of leased lines in the Western, Eastern and Central London area (WECLA), but found a national market for retail leased lines[37].

[37] Ofcom, *Business Connectivity Market Review*, 18 June 2012, available at: http://bit.ly/1dUlCTb.

The definition of a narrower geographic market would involve considering whether an increase in price in one area would attract investment from firms operating in other areas, and whether this would constitute a sufficiently clear and persistent boundary. In Guernsey, operators offer uniform pricing across the island, market their services in a uniform manner, and there is no product differentiation according to geographic area.

The GCRA's preliminary view is that, while there are expected to be variations in demand and supply conditions associated with, for instance groups of customers who are geographically concentrated, these variations do not result in clear and persistent boundaries which would indicate a separate geographic market within Guernsey. A finding of a smaller geographic market within Guernsey would need to be evidenced by data which showed the clear boundary between different areas in terms of demand and supply. It may be that if there is further roll-out of competing infrastructure, there would be a more clearly defined differentiation, but the GCRA's preliminary view is that such clear differentiation is not likely within the next 2-3 years.

Q10. *Do you agree that there are no particular areas within Guernsey where the conditions of retail competition are such that they may constitute separate geographic markets? If not, why not?*

6.3 Summary and preliminary conclusions

Arising from the above analysis, the GCRA's proposed conclusions on the definition of retail product and geographic markets are as follows:

- the retail leased lines market should not be narrowed to reflect the delivery technology used nor broadened to reflect the increasing purchase by business customers of business connectivity solutions rather than retail leased lines;
- all bandwidths used for delivering leased lines are in the same market;
- there are separate geographic markets for Jersey and Guernsey, and
- there are no particular areas within Guernsey where conditions of competition are appreciably different to the extent that they constitute separate geographic markets.

7. Retail market competition and SMP assessment

Section 6 set out the GCRA's proposed definition of retail leased line markets in Guernsey. This section assesses whether the proposed market is likely to be or to become effectively competitive during the period of this review (taken to be up to 3 years), or whether any telecommunications operator has SMP. The GCRA's proposed approach to undertaking the competition assessment was set out in section 5. As has been noted earlier, SMP is taken to be equivalent to the concept of dominance in competition law.

As discussed in section 5, the GCRA's proposed approach to assessing whether or not any operator has SMP draws on the EU approach as set out in the SMP Guidelines. This approach involves a thorough forward-looking analysis of market characteristics. While market shares and trends in market share provide an important indication of how competitive a market is, they are not determinative on their own, particularly in signaling the level of future competition. The GCRA has therefore taken into account a number of other relevant criteria which may constitute barriers to entry and/or expansion in coming to its proposed finding.

7.1 Market share

The GCRA asked operators to provide data on the number of leased lines they supply, and on the revenue. The EU's SMP Guidelines indicate that both volume sales and value sales provide useful information for market measurement[38]. The GCRA's intention was to measure market share using both metrics. However, the revenue data was not consistently available at a sufficiently granular level, and so the primary calculation of market share is based on number of leased lines supplied. This has been supplemented by a consideration of the revenue information where relevant and available.

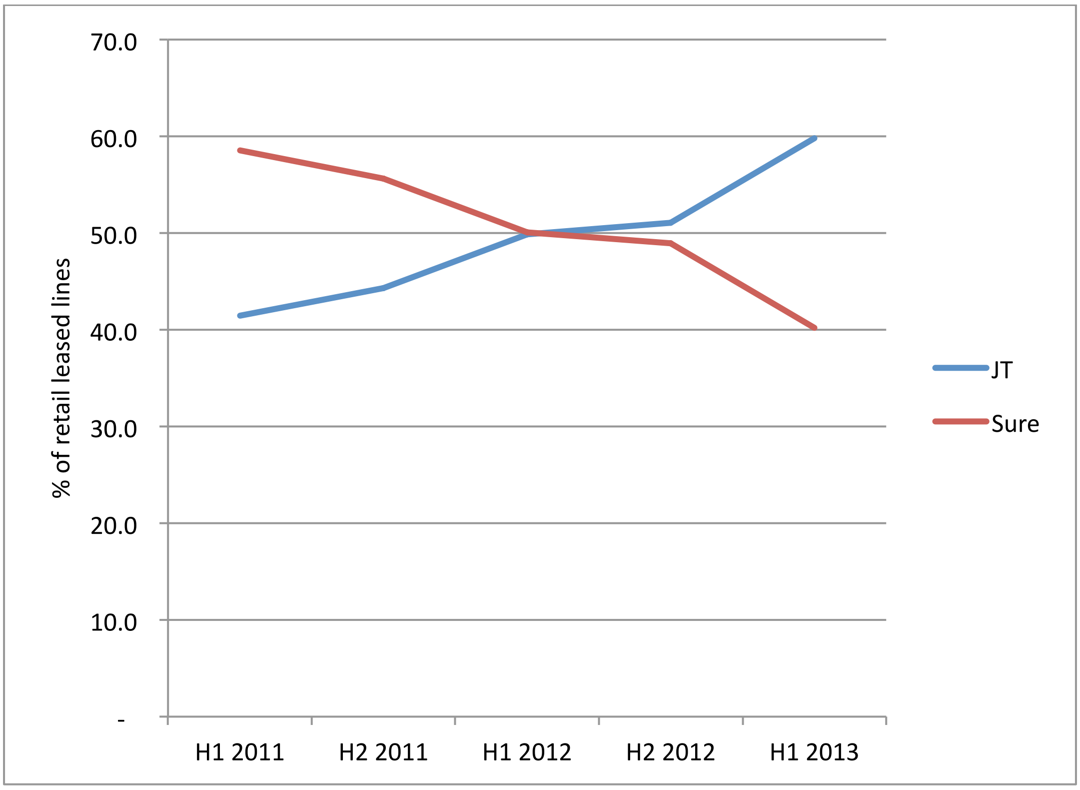
The GCRA requested data disaggregated by type and capacity of circuit, and although the retail market definition proposes a market which is not differentiated according to type of circuit or capacity, the GCRA analysed market shares at a disaggregated level in order to consider whether additional factors needed to be taken into account, either in the market definition or in the competition assessment. The GCRA therefore considers that its approach to calculating market shares has made best use of the data which was made available, and that it presents a realistic view of the retail leased line market in Guernsey.

[38] SMP Guidelines (Op. cit.), Para. 76.

7.2 Current market shares

Figure 4 below illustrates the position regarding market shares for retail leased lines (on-island and off-island) provided in Guernsey over the past two years. As may be seen from Figure 4, JT has supplanted the incumbent operator Sure as the market leader for retail leased lines over the period in question.

Figure 4: Market shares for retail leased lines, Guernsey



Source: CICRA

This market share development appears to have been primarily been driven by JT winning the tender to supply the government with a managed data service comprising a Wide Area Network (WAN) and IP connectivity. Previously, the Guernsey government had bought leased lines directly, and managed its own network. The new contract is a shift to the government contracting for a managed network, in which leased lines are an input. This single contract makes up a significant proportion of the retail leased line market on the island, to the extent that it is possible that whoever holds the contract is likely to be the major supplier of retail leased lines in Guernsey. The GCRA notes that the contract is subject to tender, and that the award of the contract to the market entrant indicates the Government's willingness to change supplier.

According to the EU's SMP Guidelines, dominance concerns normally arise where an undertaking has a relatively stable market share of over 40%, and according to established EU case law, market shares in excess of 50% are in themselves, save in exceptional circumstances, evidence of dominance.

The GCRA's preliminary view is that both Sure's and JT's share of the retail leased line market in Guernsey can be considered to be dependent on the holding or not of the Government contract, given the impact on both market shares of a contract which will be retendered during the lifetime of this review.

The GCRA notes that market shares and trends in market shares indicate how competitive a market has been in the past, and as such are primarily an outcome of the competitive conditions which have prevailed. A persistently high market share usually implies that there have been impediments to effective competition in the market up till now. Because underlying conditions of competition can change, the GCRA considers that in this case market shares are not, on their own, necessarily a reliable indicator of future competition.

For this reason, the GCRA has continued to assess the retail leased lines market in terms of existing and potential barriers to entry.

Having considered the characteristics of the retail leased line market, the GCRA proposes that factors which are likely to be most relevant in the retail leased lines market should include the following:

- Control of infrastructure not easily replicated;
- Economies of scale and scope;
- Profitability;
- Switching;
- Vertical integration;
- Countervailing buyer power.

Control of infrastructure not easily replicated

A telecoms operator wishing to supply a retail leased line needs to establish an end-to-end connection from its customer to the point where the customer wants to connect. The operator can do this either by using/building its own infrastructure, or by purchasing a wholesale input from another telecoms operator. Building access network infrastructure represents a high cost for a telecoms operator, and confers competitive advantage on an operator which already has an extensive access network.

Sure has the benefit of a ubiquitous access network in Guernsey, which means it has the necessary infrastructure (active and passive) to reach almost any site on the island within a reasonably short timeframe and without incurring significant costs. However, in the leased line markets, OLOs can and do extend their networks on a customer-by-customer basis, either by building their own infrastructure or by leasing passive infrastructure (e.g. ducting) from a third party. Generally, only short distances would be cost justified, because the route length is a prime cost driver.

JT has been building its own infrastructure in Guernsey, primarily to service the government contract, but also to use this to build its business customer base. It is expected that, over the lifetime of the contract, it will migrate an increasing number of retail leased lines away from Sure's network and onto its own. The GCRA's assessment is that JT would be unlikely to replicate Sure's ubiquitous network, because its focus is on connecting to particular customers. In the GCRA's view, it is unlikely that any market entrant would seek to replicate Sure's network.

The GCRA's preliminary assessment is that, in the retail leased lines market, JT is in the process of deploying its own network, in the process replicating some parts of Sure's network which allows it to reach more business locations with its own network. Its ability to do this indicates that barriers to entry are not insurmountable.

Economies of scale and scope

Generally, telecoms operators with greater network scale and scope will benefit from lower costs in supplying the retail market. Scale and scope economies may be achieved by the high proportion of fixed and common costs associated with the ownership of network infrastructure. In the leased line market, scale economies are more likely to be achieved in the use of the underlying physical infrastructure, and less so in the provision of dedicated access links to each customer, due to the higher proportion of fixed and common costs in the underlying infrastructure.

In Guernsey, both Sure and JT are likely to benefit from economies of scale due to ownership of an access network. However, the small size of the market limits the economies of scale which can be achieved by any communications provider.

Economies of scope may be achieved where the costs of providing leased line connectivity may be shared across the provision of all connectivity – where, for example, the same physical infrastructure and network services are used to provide a range of downstream retail services. Generally, an operator selling a wide range of communications services will be more likely to be able to achieve economies of scope because it will have lower average costs per service.

In Guernsey, both Sure and JT offer a range of services, and are likely to be able to achieve economies of scope, with Sure offering the broadest range and most likely to be able to take advantage of this.

Profitability

The EU approach to SMP assessment notes that, in an *ex ante* analysis, market power is essentially measured by reference of the power of the undertaking concerned to raise prices by restricting output without incurring a significant loss of sales or revenues[39]. An operator which has SMP therefore, by definition, has the ability and incentive to make excessive profits by raising prices above the competitive level. Conversely, an operator which does not have SMP is constrained by the market, and could not sustain prices which are significantly higher than the cost of capital. Persistently high profits are therefore an indicator of market power[40].

In assessing profitability, the GCRA has examined separated accounting information published by Sure, and has undertaken a comparative analysis of retail leased lines pricing.

The GCRA has considered whether separated accounting information provided by Sure indicates that excessive profits have been made on retail leased lines. The GCRA's analysis of Sure's separated accounting information indicates that the return on mean capital employed to end March 2013 for retail leased lines was very high and amongst the highest returns of all of Sure's retail services. However, the GCRA is aware of the limitations of using separated accounting information to come to a judgement about profitability. The accounting measures of profitability will reflect the choices of the allocation of common costs, and may well be constrained by wholesale regulation. For this reason, the GCRA has used separated accounting information to inform its analysis rather than as a definitive indicator of profitability.

Bearing in mind that the objective is to understand the underlying economic profit associated with an operator's activities in a relevant market, the GCRA also carried out an investigation of pricing of retail leased lines. Responses to the GCRA's Call for Evidence included concerns expressed by businesses and public sector organisations that the price of retail connectivity in Guernsey is more expensive than retail connectivity in other jurisdictions. Some respondents proposed that this disadvantages businesses based in Guernsey, and also deters businesses considering locating to the island. The GCRA undertook a comparative assessment of retail leased lines pricing, and an explanation of this analysis is provided in Annex 2.

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[39] *Ibid.*, Para 73.

[40] Note that persistently low profits do not necessarily indicate an absence of market power – they could, for example, be due to inefficiencies, to undercut competitors or result from transfer pricing issues and/or profit taking elsewhere in the value chain.

Although this review proposes that there is a single market for on-island and off-island leased lines, the GCRA analysed on-island and off-island pricing separately, in order to better understand where any cost drivers may lie. The GCRA notes that Sure is currently subject to a price control in its supply of off-island retail leased lines, which are regulated as Basket 5 with a control of RPI-RPI. This price control has been in place, and rolled over, since 2008.

The GCRA notes that comparing prices of retail leased lines is not straightforward. Many of the responses to the Call for Evidence provided examples of bundled services, which generally include leased lines bundled with other managed services such as IP feed and data hosting. While this is understandably an issue for the respondents, the focus of this review is with the underlying leased line provision, and the GCRA's concern in comparing prices is to determine the extent to which retail leased line pricing contributes to any perceived comparative pricing disadvantage.

The GCRA's preliminary assessment of pricing is that that some types of leased line (notably the highest bandwidth lines) are relatively expensive when compared with other jurisdictions, but that the pricing of other types of circuits (in particular lower bandwidth circuits) compare more favourably with prices in other jurisdictions. This is the case both for on-island leased lines and for off-island leased lines. This is also the case for on-island leased lines that terminate within the same exchange area, and for on-island leased lines which terminate within different exchange areas.

Switching

Switching may be an issue in the retail leased lines market for two main reasons. First, there are costs for both the retail purchaser and the supplier of switching to a new supplier, as physical changes may be required to the connectivity at the customer's premises. Second, retail leased lines are usually supplied on contract. This is for a minimum of one year, but it is standard practice to offer better terms for a longer contract period.

The GCRA's preliminary view is that the impact of contract periods in the leased lines market means that change in competitive conditions can only come about relatively slowly compared with other communications markets, as the majority of retail customers are on contracts of 2 years or more, and there are often penalties associated with switching within the contract period. However, as noted earlier, a single large contract in a market the size of Guernsey can militate against this general trend.

Vertical integration

A vertically integrated supplier of wholesale and retail leased lines could achieve efficiencies due to its presence in the upstream and downstream markets. These efficiencies could be passed on to customers in the form of cheaper prices, saving on transaction or interconnection costs, or enhanced product quality. However, vertical integration can also constitute an entry barrier where the presence of a communications provider at multiple levels of the production or distribution chain raises the cost of new entry (for example, where new entrants perceive the need to enter multiple markets simultaneously) or where the vertically integrated communications provider is able to foreclose competition at one or more levels of the market.

This means that, if a vertically integrated supplier had SMP in the upstream wholesale market, it would have the opportunity to leverage its market power into the retail market. In the retail leased line market, a vertically integrated supplier which had SMP in the upstream wholesale market could, for example, bundle its retail leased lines with other non-regulated services such as IP feed, data storage and/or other value-added downstream service in a way which would restrict a market entrant's ability to compete.

The GCRA has considered whether the vertical integration of any operator would constitute a barrier to entry and/or expansion, and its preliminary view is that vertical integration would confer an advantage. In Guernsey, both JT (where it supplies retail leased lines on its own infrastructure) and Sure are vertically integrated, but other OLOs are not, or are not to the same extent. The GCRA's preliminary view is that the vertical integration of the main suppliers of retail leased lines in Guernsey may restrict market entry, and may provide the incentive and motivation for a vertically integrated operator to leverage power from the wholesale market to the retail market.

Existence of countervailing buyer power

Countervailing buyer power (CBP) is the situation where a purchaser buys enough of an operator's services that it can influence the pricing and market behaviour of the operator. The GCRA has considered whether any buyer has the power to provide an effective constraint on the retail leased lines market in the Channel Islands. The GCRA's preliminary view is that, generally, in leased line markets, countervailing buyer power is not likely to be an effective constraint due to a number of factors, including the high costs of self-supply, the relatively low value of the services, and the limited choice of alternative suppliers.

However, the GCRA's analysis of the pattern of retail market shares over the last 2 years suggests that the States of Guernsey may be able to exercise an element of countervailing buyer power due to its purchase of a large volume of retail leased lines, and the significant effect which this has on the market. The GCRA's preliminary view is that the possible existence of CBP should be taken into account when considering market power at the retail level.

Potential competition

The approach to market definition and SMP assessment is forward-looking and considers the extent to which conditions of competition are likely to change in the relevant market during the lifetime of the review. In addition to this overall approach, it is appropriate to consider specifically the extent to which potential competition in the form of potential market entry and/or expansion may act as a constraint on an SMP operator's pricing and behaviour.

The GCRA has noted that JT is investing in its own infrastructure in Guernsey, and while it is likely to reduce its reliance on Sure's wholesale leased lines, JT's retail market position already reflects its ownership of the government contract. However, JT's retail market position is heavily dependent on its ownership of the government contract. The GCRA's view is that the government has shown that the contract is genuinely contestable, and will be subject to review within the next 2-3 years.

Newtel is also supplying retail leased lines in Guernsey, primarily as part of MPLS contracts. The position of Newtel suggests that it is possible for a market entrant to enter the retail leased line market, although the Newtel example also highlights the importance of wholesale regulation in ensuring the availability and appropriate supply of wholesale inputs.

The GCRA's assessment takes account of the presence and the potential for SMP regulation in the upstream wholesale market for leased lines[41]. This means that if wholesale regulation can address existing and potential barriers to entry in the retail market, then this should be taken into account when considering SMP and possible regulatory remedies in the retail markets.

The GCRA notes that leased lines are currently regulated at the wholesale level in Guernsey, and that Sure is currently subject to wholesale regulatory remedies. The shift in market shares may indicate that wholesale regulation has facilitated

[41] This method of assessment is known as the *Modified Greenfield* approach. This approach assumes that there is no *ex ante* regulation in the market in question, but that upstream *ex ante* regulation is in place.

successful market entry and expansion by JT and Newtel, but the GCRA is aware of the exceptional circumstance of the government contract, and the impact which this contract has on the retail market.

7.3 Conclusions on dominance in the retail leased lines market

The GCRA's preliminary view is actual and potential competition problems may remain in the retail market for leased lines in Guernsey. The GCRA notes concerns expressed by business and public sector customers about the perceived high relative cost of connectivity, and the GCRA's preliminary assessment is that, while this does not apply to all leased lines, it does apply to the highest capacity lines, both on- and off-island. Although there has been market entry and expansion in Guernsey, the continuing concerns expressed by retail customers suggest that the benefits of competition may not be fully passed on to customers in the form of lower prices. However, the GCRA's preliminary view is that competition problems associated with barriers to entry and expansion in the market for retail leased lines could more effectively be remedied in the wholesale market.

In addition, the GCRA has expressed a preliminary view that the States of Guernsey may be able to exercise an element of countervailing buyer power in the retail leased lines market, because of the size and nature of the Government contract, and that this could potentially mitigate any market power. For these reasons, the GCRA proposes that no operator should be designated with SMP in the retail market for leased lines in Guernsey.

If this finding is confirmed following the consultation process, SMP remedies would be withdrawn from the retail market for leased lines in Guernsey. The GCRA notes that this proposed finding is contingent on the review of the wholesale market, and should there be a confirmed SMP finding, the review of appropriate remedies which would be designed to address problems in the retail market as well as the wholesale market.

Q11. *Do you agree with the GCRA's proposal not to designate any operator with SMP in the retail market for leased lines in Guernsey? If not, why not?*

8. Wholesale market definition

8.1 Product market

The wholesale product market for leased lines is constituted by telecoms operators buying and selling leased lines to each other. This may include the purchase of a wholesale leased line which is then used as an input to the purchaser's retail offering, and could include, for instance, a mobile operator buying leased lines to link its radio base stations and switching centres.

The definition of the wholesale market is to an extent derived from the definition of the retail market, but in the GCRA's view, it is important to supplement this by considering other factors which are specific to the wholesale market. This could include differences in competitive conditions in the wholesale market, and could include differences in the products themselves. For example, the use of a leased line for access or backhaul may correspond to differing levels of traffic aggregation in the network, and may give rise to a different outcome in the analysis.

In considering the wholesale market, the GCRA has assessed the following factors:

Are the GCRA's preliminary conclusions in the retail market mirrored in the wholesale market?

In defining the retail market for leased lines, the GCRA concluded that:

- the retail leased lines market should not be narrowed to reflect the delivery technology used nor broadened to reflect the increasing purchase by business customers of business connectivity solutions rather than retail leased lines;
- all bandwidths used for delivering leased lines are in the same market;
- there are separate geographic markets for Jersey and Guernsey, and
- there are no particular areas within Guernsey where conditions of competition are appreciably different to the extent that they constitute separate geographic markets.

The GCRA's position is that each of the above conclusions may also be made in defining the wholesale market for leased lines in Guernsey. As is the case at the retail level, wholesale leased lines provided over Ethernet outstrip TI-based circuits and at the wholesale level leased lines cannot logically be viewed as a substitute for managed business connectivity services. In addition, there is insufficient evidence at this stage to consider that wholesale leased lines and broadband services reside in the same market and the chain of substitution that exists between wholesale leased lines of different bandwidths would indicate that all bandwidths lie in the same wholesale market.

Q12.	*Do you agree that the GCRA's preliminary conclusions outlined above in relation to the retail leased lines market are mirrored in the wholesale market? If not, why not?*

Should dark fibre or duct access form part of the relevant market?

In defining the retail leased lines market, the GCRA considered whether or not downstream services that utilise leased lines as an input, such as VPN, IP feed or wholly managed business connectivity services, should form part of the relevant market. In defining the wholesale market, a similar question occurs in relation to the inclusion within the relevant market of upstream passive infrastructure, such as access to dark fibre or duct sharing.

For such upstream services to form part of the relevant market, they would need to be broadly substitutable for existing wholesale leased line services. It is clear, however, that access to such passive infrastructure would not be a substitute for the kind of dedicated, managed bandwidth available via a leased line. An organisation accessing dark fibre would need to install its own equipment to 'light' the fibre, which would involve additional investment in order to do so. Duct access would enable an organisation to install its own optical fibre along a given route but it would face significant costs both to deploy its own fibre and then to 'light' it.

While access to dark fibre and duct sharing may provide opportunities for organisations to procure their own network elements, the GCRA's preliminary view is that neither types of access are a close enough substitute to warrant their inclusion within the wholesale market for leased lines.

Q13.	*Do you agree that the wholesale market should not be broadened to include dark fibre and/or duct access? If not, why not?*

Are resellers included in the market?

In this context, resellers are companies that buy retail leased lines for the purposes of resale, usually as part of a managed business connectivity service incorporating other value-added elements. The GCRA has considered if these resellers should be included within the wholesale market.

The GCRA's preliminary view is that they should not, because they operate downstream from the wholesale market and so do not exercise an additional competitive constraint at the wholesale level.

Q14.	*Do you agree that resellers should not be included within the market? If you do not agree, why not?*

Should the wholesale market be narrower to reflect customer use of leased lines?

The GCRA has considered whether separate markets should be defined for leased lines which serve different markets. For example, a leased line can be used for mobile backhaul or for supplying a retail customer, which raises the question as to whether or not the conditions of competition are different according to the use to which the leased line is put.

The GCRA's view is that the possibility that a market has a number of different customer bases, and different customer types, is not in itself sufficient to justify a definition of separate markets within it. Further, leased lines and backhaul involve wholesale inputs which are essentially the same, so that a supplier of one could easily switch to supply the other.

The GCRA's preliminary view is that the ultimate use to which a leased line is put does not impact on the market definition, and that the wholesale market for leased lines should include the provision of wholesale leased lines no matter their ultimate use, and that this would include provision for backhaul as well as an input to a range of retail applications.

Q15.	*Do you agree that the wholesale market should not be defined on a narrower basis to reflect customer use of leased lines? If not, why not?*

Should the wholesale market include self-supply?

The GCRA has considered whether or not self-supply of dedicated capacity should be considered as part of the relevant market for wholesale leased lines in Guernsey and Jersey.

From a market definition perspective, the issue of self-supply arises where a vertically integrated firm which currently supplies a product or service to its own retail arm would be likely to switch to supply external wholesale customers, given a small but significant price increase. If such a firm is likely to switch to external supply, then its present self-supply should be considered part of the market. This is because, in this circumstance, the ability to switch supply may act as a constraint on the pricing of existing wholesale leased line products.

In the GCRA's view, self-supply should be considered part of the market where the following conditions apply:

- where the operator already has spare capacity available and there is sufficient evidence that it is in a position to provide services in the wholesale market. This means that such a network must be sufficiently rolled out and be of sufficient capacity and coverage so as to comprise a viable alternative for wholesale customers to that which is currently in place and that the operator controlling it is in a position to supply wholesale services;
- where offering new or additional wholesale capacity does not incur significant investment costs, either in infrastructure or in services such as billing or account management;
- where it is likely and probable that a vertically integrated operator would, absent a regulatory obligation, switch from supplying retail customers to offering wholesale capacity, and
- where a customer could switch relatively easily to purchase a new supplier's product or service, without incurring significant costs (for example, in connecting to the alternative supplier's network).

In essence, the GCRA takes the view that the ultimate consideration is whether an operator would be likely to build its own infrastructure in response to a SSNIP in wholesale leased lines in order to constrain the behaviour of a hypothetical monopolist. If it were a realistic option for a significant proportion of customers to replace wholesale leased lines with their own infrastructure in response to a SSNIP, then there would no longer be a requirement for a wholesale product.

In the GCRA's opinion, such a conclusion is not supportable and hence, bearing in mind the conditions outlined above, it takes the position that self-supply should not be included within the definition of the relevant market at wholesale level.

Q16. *Do you agree that self-supply should not be included in the wholesale market? If not, why not?*

8.2 Geographic market

As noted in the discussion of the retail geographic market, a relevant geographic market comprises the area in which the undertakings concerned are involved in the supply and demand of products and/or services, in which the conditions of competition are sufficiently homogeneous and which can be distinguished from neighbouring areas because the conditions of competition are appreciably different in those areas.

BEREC[42] has set out three main criteria for determining whether there is a case for finding that there are separate geographic markets. The criteria are:

(i) the differences in the barriers to entry and in the number of suppliers;

(ii) the homogeneity of the market shares of these suppliers and, and

(iii) the potential differences in prices or services.

Are there separate geographic markets for Jersey and Guernsey?

As it has done in defining the market for retail leased lines, the GCRA has considered whether there is a single geographic market for wholesale leased lines in the Channel Islands, or separate geographic markets for Jersey and Guernsey.

As the GCRA has already noted in its proposed retail market definition, the largest suppliers of leased lines are JT and Sure, and both operators are present in both islands. However, there is no uniformity of pricing across the islands[43], and while some functions are centralised or shared, both operators generally treat the islands, as distinct geographic units in terms of marketing and operations, each with their own distinct policies in relation to planning and the deployment of infrastructure generally.

The GCRA's preliminary view is that, while the markets in Jersey and Guernsey may converge at some stage to the extent that they could be considered to be a single geographic unit, this is not the case at present, and is not likely to be the case over the next 2-3 years. The GCRA therefore proposes that there are separate geographic markets for Jersey and Guernsey.

> ***Q17.*** *Do you agree with the GCRA's preliminary conclusion that separate geographic markets exist for Jersey and Guernsey? If not, why not?*

Are there separate geographic markets for on-island and off-island wholesale leased lines?

In proposing a definition of the retail geographic market, the GCRA expressed a view that a retail customer buying a retail leased line in Guernsey would be buying end-

[42] BEREC Report (Op. cit.).

[43] The GCRA notes that wholesale price controls currently apply on both Jersey and Guernsey.

to-end connectivity, and that it was largely immaterial where the destination was. For this reason, the GCRA proposed that there are not separate retail on-island and off-island markets.

In considering the definition of the wholesale market, the GCRA has considered whether this holds true also in the wholesale market, or whether there are separate markets at a wholesale level. Referring back to the criteria set out above, the GCRA considers that there are significant differences in the barriers to entry and supply conditions between on-island and off-island leased lines. In particular, a purchaser of an on-island wholesale leased line is for the most part dependent on the incumbent's infrastructure, whereas an off-island leased line may be purchased from alternative suppliers.

The GCRA notes that all suppliers price on-island and off-island wholesale leased line connectivity separately. Suppliers typically price off-island capacity by destination (for example from Jersey to Guernsey, and vice-versa, and to London) with the price of off-island connectivity also varying depending on which sub-sea cable is used for the connection.

In proposing separate geographic wholesale markets for on-island and off-island leased lines, it is essential to provide clarity regarding the boundary of the markets. The GCRA's proposal is that the wholesale on-island leased lines market includes facilities up to, and including, the on-island termination points of international facilities and the local access tails of international circuits. In other words, the on-island market must facilitate access to the off-island market – there must be no gap between the two markets. The GCRA is very clear about its objectives in defining the boundary between the on-island and off-island wholesale markets, and would welcome specific comment on how this may best be expressed.

Q18. *Do you agree that there are separate geographic markets for on-island and off-island wholesale leased lines? If not, why not?*

Are there separate markets for wholesale off-island leased lines between Jersey and Guernsey, and off-island leased lines elsewhere?

The GCRA has considered if a distinction needs to be made between wholesale off-island leased lines providing connectivity between Jersey and Guernsey on the one hand and wholesale leased lines to other off-island destinations on the other.

Inter-island wholesale leased line capacity is available from a number of different suppliers, such as JT, Sure, Newtel and the Jersey Electricity Company (JEC) (which operates the CIEG (Channel Islands Electricity Grid) cables jointly with Guernsey Electricity, GEL), and there is no discernible difference in the supply of off-island capacity between Guernsey and Jersey compared to elsewhere. For this reason, the GCRA's preliminary view is that separate markets do not exist for the provision of wholesale off-island leased lines between Jersey and Guernsey and off-island leased lines elsewhere and that, instead, a single market exists for all off-island wholesale leased lines.

Q19. *Do you agree that separate markets do not exist for wholesale off-island leased lines between Jersey and Guernsey, and off-island leased lines elsewhere? If not, why not?*

Are there particular areas within the islands where the conditions of competition are appreciably different to the extent that they may constitute separate geographic markets?

In its retail market definition, the GCRA noted that market entrants in Guernsey have built their own infrastructure in certain parts of the islands, and considered whether this may reflect differences in competitive conditions in particular areas. The GCRA went on to point out that the definition of a narrower geographic market would involve considering whether an increase in price in one area would attract investment from firms operating in other areas, and whether this would constitute a sufficiently clear and persistent boundary. The GCRA also noted that retail operators in Guernsey offer uniform pricing across each island, market their services in a uniform manner, and there is no product differentiation according to geographic area.

The GCRA's view is that similar issues are at play in the wholesale leased lines market. A finding of a smaller geographic market within Guernsey would need to be evidenced by data which showed the clear boundary between different areas in terms of demand and supply. The GCRA notes that where regulators have found sub-national markets, this has been evidenced by detailed data provided by operators on revenue and other supply factors within clearly defined areas, and is an analysis described by BEREC as a "burdensome process". As a result, the GCRA's preliminary view is that there are no particular areas within Guernsey where the conditions of wholesale competition are such that they constitute separate geographic markets.

Q20. *Do you agree that there are no particular areas within Guernsey where the conditions of wholesale competition are such that they may constitute separate geographic markets? If not, why not?*

8.3 Summary and conclusions

Arising from the above analysis, the GCRA's proposed conclusions on the definition of wholesale product and geographic markets are as follows:

- the wholesale leased lines market should not be narrowed to reflect the delivery technology used nor broadened to encompass passive infrastructure;
- all bandwidths used for delivering wholesale leased lines are in the same market;
- resellers of wholesale leased lines should not form part of the market and the market should not be should not be defined on a narrower basis to reflect customer use of leased lines;
- self-supply should not be included within the wholesale market;
- there are separate geographic markets for Jersey and Guernsey;
- there are separate markets for the provision of on-island and off-island wholesale leased lines in Guernsey, and
- there are no particular areas within Guernsey where conditions of competition are appreciably different to the extent that they constitute separate geographic markets.

9. Wholesale market SMP assessment

In this section, the GCRA undertakes an SMP assessment in relation to the two wholesale markets for leased lines that were defined in Section 8. These are:

- the market for ***wholesale on-island leased lines***, and
- the market for ***wholesale off-island leased lines***.

In this section, the GCRA assesses whether or not the proposed markets are likely to be or to become effectively competitive during the period of this review (taken to be up to three years), or whether any operator has SMP. The GCRA's proposed approach to undertaking the competition assessment was set out in section 5. SMP is taken to be equivalent to the concept of dominance in competition law.

As discussed in section 5, the GCRA's proposed approach to assessing whether or not any operator has SMP draws on the EU approach as set out in the SMP Guidelines. This approach involves a thorough forward-looking analysis of market characteristics. While market shares and trends in market share provide an important indication of how competitive a market is, they are not determinative on their own, particularly in signaling the level of future competition. The GCRA has therefore taken into account a number of other relevant criteria that may constitute barriers to entry and/or expansion in coming to its proposed finding.

Proposed Market for Wholesale On-Island Leased Lines

9.1 Market share

The GCRA asked operators to provide data on the number of wholesale on-island leased lines they supply, and on the revenue. The intention was to measure market share using both metrics. However, the revenue data was not consistently available at a sufficiently granular level, and so the primary calculation of market share is based on number of leased lines supplied. This has been supplemented by a consideration of the revenue information where relevant and available.

9.2 Current market shares

According to the responses to the data request issued to operators, Sure is the main supplier of on-island wholesale leased lines in Guernsey and correspondingly it holds a market share in excess of 95%.

According to the EC's SMP Guidelines, dominance concerns normally arise where an undertaking has a relatively stable market share of over 40%, and according to established EU case law, market shares in excess of 50% are in themselves, save in exceptional circumstances, evidence of dominance.

9.3 Other relevant factors in assessing dominance

While recognising that Sure's high and persistent market share could be considered to be presumptive of dominance, the GCRA has also assessed whether or not other relevant factors support a finding of dominance in this instance. The factors that the GCRA has examined in this regard are as follows:

- Control of infrastructure not easily replicated;
- Economies of scale and scope;
- Profitability;
- Switching;
- Vertical integration;
- Countervailing buyer power;
- Potential competition.

Control of infrastructure not easily replicated

Building access network infrastructure represents a high cost for a telecoms operator, and confers competitive advantage on an operator that already has an extensive access network.

Sure has the benefit of a ubiquitous access network in Guernsey, which means it has the necessary infrastructure (active and passive) to reach almost any site on the island within a reasonably short timeframe and without incurring significant costs. However, in the leased line markets, OLOs can and do extend their networks on a customer-by-customer basis, either by building their own infrastructure or by leasing passive infrastructure (eg ducting) from a third party. Generally, only short distances would be cost justified, because the route length is a prime cost driver.

JT has been building its own infrastructure in Guernsey, primarily to service the government contract, but also to use this to build its business customer base. It is expected that, over the lifetime of the contract, it will migrate an increasing number of retail leased lines away from Sure's network and onto its own. This would mean that JT would be less dependent on the purchase of wholesale leased lines, and consequently the wholesale leased line merchant market is likely to contract. The GCRA's evaluation of data provided by operators indicates that this process is underway, but is at relatively early stage, as evidenced by JT's continuing purchase of wholesale leased lines. The GCRA's assessment is that JT would be unlikely to replicate Sure's ubiquitous network, because its focus is on connecting to particular customers, and that JT does not have the incentive (absent regulation) or motivation to offer a wholesale product on its own infrastructure.

OLOs in Guernsey remain dependant on Sure's wholesale leased lines, both to reach retail customers and to purchase wholesale leased lines as inputs to their own networks. While the GCRA believes that JT's dependency on wholesale leased lines is likely to decrease, this is not the case for other OLOs. The dependency is to a large part determined by Sure's control of infrastructure which is not easily replicated.

Economies of scale and scope

Generally, telecoms operators with greater network scale and scope will benefit from lower costs. Scale and scope economies may be achieved by the high proportion of fixed and common costs associated with the ownership of network infrastructure. In the leased line market, scale economies are more likely to be achieved in the use of the underlying physical infrastructure, and less so in the provision of dedicated access links to each customer, due to the higher proportion of fixed and common costs in the underlying infrastructure.

In Guernsey, Sure is likely to benefit from economies of scale due to its ownership of an access network. The GCRA notes that the small size of the market limits the extent to which any communications provider in Guernsey can benefit from scale economies.

Economies of scope may be achieved where the costs of providing leased line connectivity may be shared across the provision of all connectivity – where, for example, the same physical infrastructure and network services are used to provide a range of downstream retail services. Generally, an operator selling a wide range of communications services will be more likely to be able to achieve economies of scope because it will have lower average costs per service.

In Guernsey, Sure offers the broadest range of services, and is likely to be able to achieve economies of scope.

Profitability

The approach to assessing profitability for the purposes of considering market power was set out in the retail market competition assessment, and is explained in more detail in Annex 2. The GCRA does not have access to separated accounting information which is sufficiently granular to allow it to comment on the profitability of Sure's wholesale on-island leased line business.

Bearing in mind that the objective is to understand the underlying economic profit associated with an operator's activities in a relevant market, the GCRA has examined comparative pricing of wholesale on-island leased lines. To some extent, the comparison of wholesale on-island pricing is less complicated than the comparison of retail pricing, both because in most jurisdictions, wholesale prices are regulated and published, and because wholesale leased lines are generally not bundled with other products and services. However, access to this information in other jurisdictions is often restricted by operators, and it is often only published when part of a regulatory pricing requirement.

The GCRA notes that Sure's current wholesale on-island leased lines are subject to a price control as Basket 4, of RPI-RPI. This price control has been in place, and rolled over, since 2008. The GCRA's preliminary assessment is that Sure's pricing of wholesale on-island leased lines is not out of line with, and in some cases compares favourably with prices charged elsewhere for circuits of lower bandwidths (i.e. lines up to and including 10Mbps) but less favourably for prices charged for higher bandwidth circuits (i.e. 100Mbps and above). This is the case also when Sure's wholesale on-island pricing is compared with JT's wholesale on-island pricing in Jersey.

Switching

Switching may be an issue in the wholesale leased lines market for two main reasons. First, there are costs for both the wholesale purchaser and the supplier of switching to a new supplier, as physical changes may be required to the connectivity. Second, wholesale leased lines are usually supplied on contract. This is for a minimum of one year, but it is standard practice to offer better terms for a longer contract period.

The GCRA's preliminary view is that the impact of contract periods in the leased lines market means that change in competitive conditions can only come about relatively slowly, as the majority of wholesale customers are on contracts of 2 years or more, and there are penalties associated with switching within contract.

Vertical integration

A vertically integrated supplier of wholesale and retail leased lines could achieve efficiencies due to its presence in the upstream and downstream markets. These efficiencies could be passed on to customers in the form of cheaper prices, saving on transaction or interconnection costs, or enhanced product quality, and such efficiencies could be achieved in both the retail and the wholesale markets. However, vertical integration can also constitute an entry barrier where the presence of a communications provider at multiple levels of the production or distribution chain raises the cost of new entry (for example, where new entrants perceive the need to enter multiple markets simultaneously) or where the vertically integrated communications provider is able to foreclose competition at one or more levels of the market.

This means that, if a vertically integrated supplier had SMP in the upstream wholesale market, it would have the opportunity to leverage its market power into the retail market, and could also have the opportunity to leverage its market power from one wholesale market into an adjacent wholesale market. In the discussion of the retail leased line market, the GCRA noted that a vertically integrated communications provider which had SMP in the upstream wholesale market could, for example, bundle its retail leased lines with other non-regulated services such as IP feed, data storage and/or other value-added downstream service in a way which would restrict a market entrant's ability to compete. The GCRA notes that a vertically-integrated communications provider which had SMP in the wholesale on-island leased lines market could leverage its market power into the adjacent wholesale off-island leased lines market. This could be done by, for example, denying access to off-island capacity, or by behaving in such a way that an OLO's ability to compete was compromised.

The GCRA has considered whether the vertical integration of an SMP operator would constitute a barrier to entry and/or expansion in the wholesale on-island leased lines market, and its preliminary view is that vertical integration would confer an advantage, and that an SMP operator would have the incentive and motivation to leverage its market power downstream into the retail market, and horizontally into the wholesale market for off-island leased lines.

Existence of countervailing buyer power

Countervailing buyer power is the situation where a purchaser buys enough of an operator's services that it can influence the pricing and market behaviour of the operator. The GCRA has considered whether any buyer has the power to provide an effective constraint on the wholesale on-island leased lines market in Guernsey. The GCRA's preliminary view is that, in the wholesale on-island leased lines market, countervailing buyer power is not likely to be an effective constraint due to a number of factors, including the high costs of self-supply, the relatively low value of the services, and the limited choice of alternative suppliers.

Potential competition

The approach to market definition and SMP assessment is forward-looking and considers the extent to which conditions of competition are likely to change in the relevant market during the lifetime of the review. In addition to this overall approach, it is appropriate to consider specifically the extent to which potential competition in the form of potential market entry and/or expansion may act as a constraint on an SMP operator's pricing and behaviour.

The GCRA has noted that JT is investing in its own infrastructure in Guernsey, and expects that over the lifetime of this review, JT's dependence on purchasing wholesale inputs from Sure will decrease. It is likely that JT will use this infrastructure for its own mobile backhaul, and for commercial clients, as well as to service the government contract. The GCRA has already taken the impact of the government contract into account when assessing the retail market, as the retail leased lines supplied as part of this contract are now supplied by JT.

In the GCRA's preliminary view, it is unlikely that a communications provider would be able and willing to offer wholesale on-island leased lines without a regulatory obligation to do so. It is possible that a communications provider such as JT may make wholesale capacity available on its own infrastructure, but the GCRA's preliminary view is that this would be more likely as an opportunistic response, and were it to happen that it would in all likelihood be limited in scale.

9.4 Conclusions on dominance in the wholesale on-island leased lines market

Sure, with a stable market share in excess of 95%, is still the *de facto* monopolist in the provision of on-island wholesale leased lines in Guernsey. While this is strongly presumptive of dominance, the GCRA has also considered other factors which might mitigate Sure's market power in this area.

The GCRA considers that Sure's access network confers competitive advantage in the market, along with its ability to take better advantage of economies of scale and scope, and its vertical integration. The GCRA's preliminary view is that Sure's position in the wholesale market for on-island leased lines would confer the ability and incentive to leverage market power into the retail market, and into the adjacent wholesale market for off-island leased lines.

The GCRA has also taken into account the nature of competitive conditions in the retail leased lines market in Guernsey, and notes that the retail market is not stable, and that fluctuations in the market are linked to a single contract. The key impact on the wholesale market of conditions in the retail market is that the wholesale merchant market will contract over the lifetime of this review. However, all OLOs remain dependent on wholesale inputs, both for their retail offerings, and for extending their own networks.

Taking these factors into consideration, the GCRA's preliminary conclusion is that Sure is dominant in the provision of wholesale on-island leased lines within Guernsey.

Q21.	*Do you agree with the GCRA's preliminary conclusion that Sure is dominant in the provision of wholesale on-island leased lines within Guernsey? If not, why not?*

9.5 SMP designation in the wholesale on-island leased lines market

The GCRA proposes that Sure should be designated with SMP in the market for wholesale on-island leased lines in Guernsey.

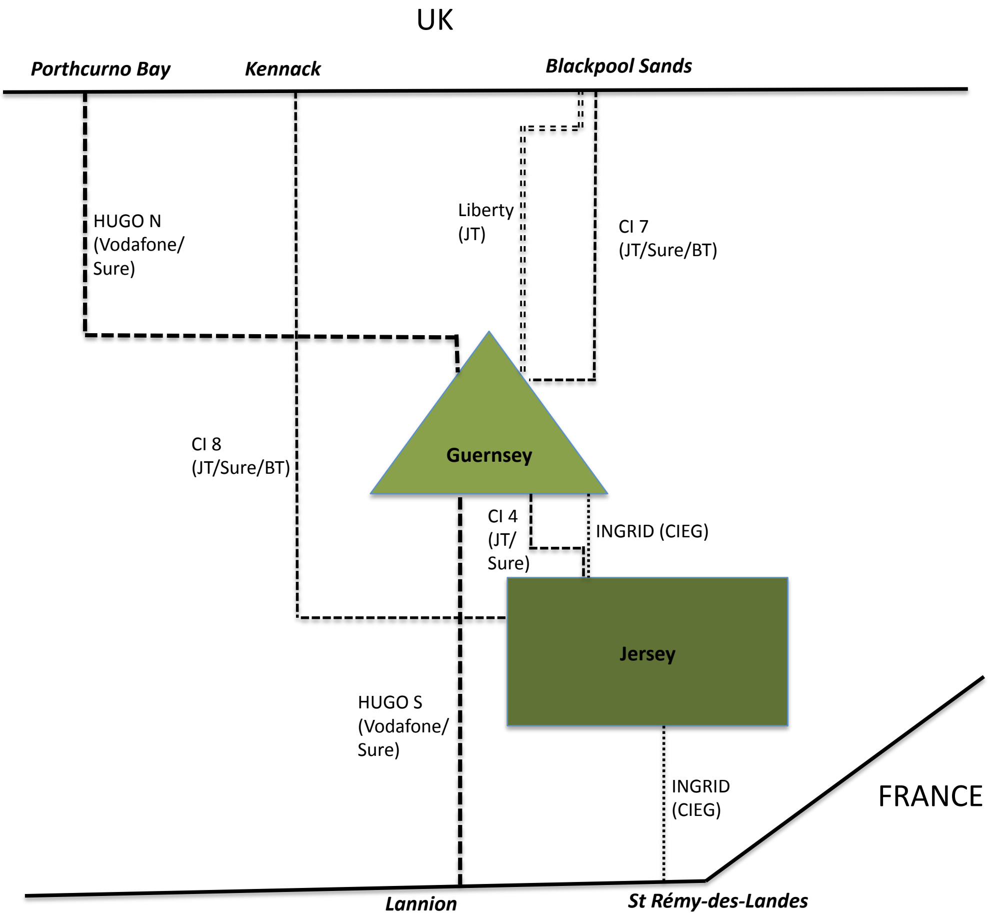
Q22.	*Do you agree with the GCRA's proposal that Sure should be designated with SMP in the market for wholesale on-island leased lines in Guernsey? If not, why not?*

Proposed Market for Wholesale Off-Island Leased Lines

Off-island cables are owned (co-owned) by Vodafone/Sure, JT/Sure/BT and CIEG. Cables connect Guernsey to Jersey, and then on to France, and also directly to the UK and France (via the HUGO cable). JT has its own capacity on all off-island routes, but does not offer a wholesale product from Guernsey. Sure and Newtel offer wholesale off-island leased lines, the former via the capacity it holds on the HUGO cables and the latter the capacity it has on the CIEG cable to France (via Jersey). In addition, off-island operators such as BT have access to off-island capacity via its co-ownership of the CI 7 cable to the UK.

A schematic illustration of all off-island connectivity in place between the Channel Islands, the UK and France is set out in Figure 5 below.

Figure 5: Off-island connectivity in the Channel Islands



Source: CICRA/Ibex Consultants

9.6 Market share

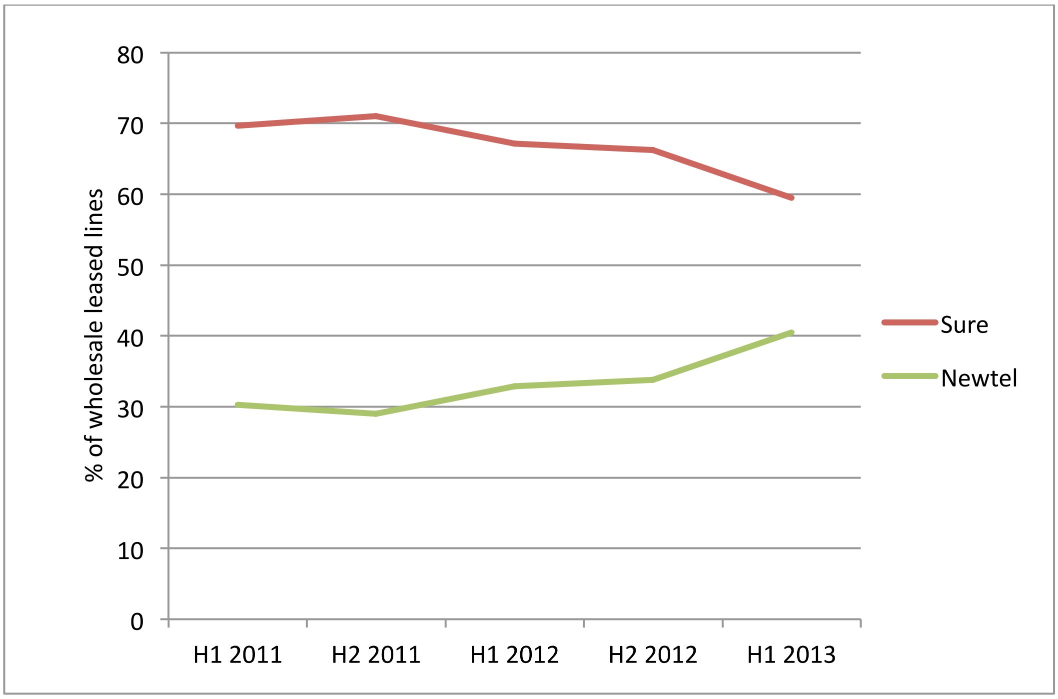
The GCRA asked operators to provide data on the number of wholesale off-island leased lines they supply, and on the revenue. The intention was to measure market share using both metrics. However, the revenue data was not consistently available at a sufficiently granular level, and so the primary calculation of market share is based on number of leased lines supplied. This has been supplemented by a consideration of the revenue information where relevant and available.

For the purposes of this analysis, in calculating market shares, the GCRA considered the merchant market for wholesale off-island leased lines, and did not include self-supply. In the GCRA's view, this gives a useful indication of competitors' reliance on wholesale inputs. The GCRA is, however, mindful of the context as discussed above, where operators also have capacity off-island on a self-supply basis.

9.7 Current market shares

The current position regarding market shares in the wholesale off-island market is illustrated in Figure 6 below.

Figure 6: Market shares, wholesale off-island leased lines market, Guernsey



Source: CICRA

As Figure 6 shows, Sure and Newtel compete in the merchant market for wholesale off-island leased capacity in Guernsey. While JT has its own off-island capacity, it does not sell wholesale capacity off Guernsey to other operators. The incumbent, Sure, is the market leader on 60% market share (based on the number of circuits provided), with the remaining 40% share held by Newtel. Over the past two years, Newtel has gained steadily on Sure in terms of market share held, with its share rising from 30% to 40% between H1 2011 and H1 2013.

According to the EU's SMP Guidelines, dominance concerns normally arise where an undertaking has a relatively stable market share of over 40%, and according to established EU case law, market shares in excess of 50% are in themselves, save in exceptional circumstances, evidence of dominance.

Although market leader Sure's share of the relevant market has been consistently above 60% during the period H1 2011 – H1 2013, its market share has continued to decline over the period and in the past twelve months has fallen more rapidly, with Newtel's corresponding share rising above 40% for the first time over the same period.

The GCRA notes that market shares and trends in market shares indicate how competitive a market has been in the past, and as such are primarily an outcome of the competitive conditions which have prevailed. A persistently high market share usually implies that there have been impediments to effective competition in the market up till now. Because underlying conditions of competition can change, and the GCRA notes that Sure's market share has continued to decline over the past two years, the GCRA considers that in this case market shares are not, on their own, necessarily a reliable indicator of future competition.

For this reason, the GCRA has continued to assess the wholesale off-island leased lines market in terms of existing and potential barriers to entry.

9.8 Other relevant factors in assessing dominance

The GCRA has also assessed whether or not other relevant factors support a finding of dominance in relation to the provision of off-island wholesale leased lines in Guernsey. The factors that the GCRA has examined in this regard are as follows:

- Control of infrastructure not easily replicated;
- Economies of scale and scope;
- Profitability;
- Switching;
- Vertical integration;
- Countervailing buyer power;
- Potential competition.

Control of infrastructure not easily replicated

The GCRA notes that there are parallel off-island sub-sea cables in place, in which five different undertakings – Sure, JT, BT, Vodafone and CIEG the Channel Islands Electricity Grid (CIEG), jointly owned by the Jersey Electricity Company Limited (JEC) and Guernsey Electricity Limited (GEL) – have ownership rights, with another operator (i.e. Newtel) also holding dedicated off-island capacity. Based on this, it is the GCRA's assessment that there is sufficient actual and planned off-island wholesale capacity in place to meet the current and foreseeable future requirements of the Guernsey market for off-island capacity. The GCRA therefore proposes that no operator has control of infrastructure which is not easily replicated.

Economies of scale and scope

As is the case in relation to the control of infrastructure, the existence of parallel off-island sub-sea cables in which five operators have ownership rights means that no single operator is in a position of advantage relative to any other operator to exploit economies of scale or scope in the provision of off-island wholesale leased lines.

Profitability

The GCRA does not have access to consistent and reliable accounting information for each of the operators offering off-island connectivity, and cannot comment on their profitability.

The GCRA notes that Sure's current wholesale off-island offer is subject to a regulated price control of retail minus 15%. The GCRA's preliminary assessment is that Sure's pricing for wholesale off-island leased lines is not out of line and, in some cases, compares more favourably with pricing in other jurisdictions for capacities up to 10Mbps than it does for higher capacity lines, with pricing for the latter appearing to be expensive relative to other jurisdictions.

The GCRA notes that that other suppliers are not subject to price control. However, based on a limited sample, it does not appear that other suppliers are offering connectivity at prices which are significantly lower than the regulated incumbent. This indicates to the GCRA that although a structural assessment of the market suggests that there is excess capacity owned by five different undertakings, this has not significantly impacted on pricing.

Switching

The GCRA's assessment is that purchasers of wholesale off-island leased lines can and do switch between operators, which is evidenced by the observed market share movements noted above. While there are costs associated with this, and issues around the length of typical contract, the GCRA proposes that switching does not constitute a significant barrier in the wholesale off-island leased lines market.

Vertical integration

The GCRA has considered whether the vertical integration of any operator would constitute a barrier to entry and/or expansion in the market for wholesale off-island leased line capacity. While the GCRA's preliminary view is that vertical integration would confer an advantage, no single operator is likely to be in a position to exploit such an advantage in relation to the provision of wholesale off-island leased lines, given the existence of parallel off-island sub-sea cables, in which five different operators have ownership rights.

However, the GCRA notes that there is a potential issue to do with horizontal leverage, where an SMP communications provider which supplies wholesale on-island leased lines may be able to leverage market power into the market for off-island leased lines. For example, an SMP supplier of on-island connectivity may be able to prevent effective access to off-island connectivity, such as by creating a "ransom strip" where artificially high costs are incurred to reach the off-island termination point, or by refusing physical access. The GCRA's intention is that the definition of the wholesale on-island market and any remedies proposed should there be an SMP finding must ensure that this does not happen.

Countervailing buyer power

As it has done in relation to the provision of wholesale on-island leased lines, the GCRA has considered whether any buyer has the power to provide an effective constraint on the wholesale off-island leased lines market in Guernsey. As already noted in relation to wholesale on-island leased lines, the GCRA's preliminary view is that countervailing buyer power is not likely to be an effective constraint in relation to wholesale off-island leased lines. This is due to a number of factors, including the high costs of self-supply, the relatively low value of the services, and the limited choice of alternative suppliers.

Potential competition

The GCRA's preliminary assessment of off-island connectivity is that there is available capacity, and that this capacity is likely to increase rather than decrease, given for example planned expansion by CIEG and on the HUGO cables. The GCRA therefore proposes that there is likely to be sufficient capacity available for the lifetime of this review, and notes that this view was supported by operators and by stakeholders who responded to the Call for Evidence.

The GCRA notes that there is potential for another operator to enter the market for wholesale off-island connectivity, and considers that there are no explicit structural barriers to entry into the off-island market which would prevent this from happening. However, the GCRA has come to this preliminary conclusion subject to appropriate regulation of the wholesale market for on-island leased lines, such that customers on the island are able to access off-island connectivity. There cannot be a "ransom strip" between where on-island connectivity ends and off-island connectivity begins. The GCRA is also considering whether the objective of providing better access to off-island capacity could also be addressed by reviewing the licensing of off-island operators.

9.9 Conclusions on dominance in the wholesale off-island leased lines market

As the GCRA has observed, market shares held by the two providers of wholesale off-island leased lines are not stable and have shown considerable volatility over the past two years. In addition, the GCRA notes the existence of parallel sub-sea cables in which five different operators hold ownership rights and that there is a significant amount of actual and planned sub-sea off-island capacity in place. These factors point strongly to the conclusion that no one operator holds a position of dominance within the relevant market, nor is any operator likely to do so within the timeframe of this review.

However, the GCRA has concern over the pricing of off-island connectivity, particularly of the higher capacity leased lines, and notes that this issue has been raised repeatedly by businesses in Guernsey in the context of the retail market. While the structure of the market for wholesale off-island connectivity indicates that there are two main suppliers, and an additional three owners of capacity who could enter the market, so suggesting that customers have choice, the existence of alternative suppliers does not seem to have as yet impacted significantly on pricing.

The GCRA has considered any additional impediments to customers in Guernsey being able to access high quality cost effective off-island connectivity, particularly for high capacity leased lines. The GCRA notes that, at present, owners of off-island capacity who are not licensed in Guernsey cannot offer services to customers in Guernsey. This generally applies even to services which are limited to off-island connectivity. This means that, although there is sufficient off-island capacity, there may be a bottleneck which prevents customers in Guernsey accessing the capacity. The GCRA is considering whether, in addition to the measures proposed in the wholesale on-island leased line market, it should introduce a specific off-island licence which would allow companies which own off-island capacity to offer wholesale access to that capacity to locally licensed operators, without necessarily offering services on-island as well.

Q23. *Do you agree with the GCRA's preliminary conclusions on dominance in the provision of wholesale off-island leased lines within Guernsey? If not, why not?*

Q24. *Do you agree that a specific off-island licence would assist in ensuring that there is no impediment to accessing off-island capacity? If not, what alternatives do you suggest?*

9.10 SMP designation in the wholesale off-island leased lines market

The GCRA proposes that no operator has SMP in the market for wholesale off-island leased lines.

Q25. *Do you agree with the GCRA's proposal that no operator is or is likely to be dominant in the market for wholesale off-island leased lines in Guernsey? If not, why not?*

10. Proposed remedies in the wholesale market

According to Condition 23 of Sure's fixed telecommunications licence, where the Authority has decided, in accordance with Section 5 of the Telecommunications Law, that a licensee has a dominant position in a relevant market, it may be determined that the provisions of Part IV of the licence (Conditions Applicable to Dominant Operators) apply.

The GCRA has undertaken a review of the market for business connectivity, has defined on a preliminary basis separate markets for retail leased lines; wholesale on-island leased lines; and wholesale off-island leased lines. Following an assessment of competitive conditions in the markets, the GCRA has come to a preliminary view that no operator has SMP in the market for retail leased lines, and no operator has SMP in the wholesale market for off-island leased lines. The GCRA's preliminary view is that Sure has SMP on the market for wholesale on-island leased lines in Guernsey.

In determining questions relating to the abuse of dominance or anti-competitive practices, the GCRA is obliged to take into account the principles laid down by and any relevant decisions of the Court of Justice or General Court of the European Union.[44] The GCRA has taken into account the implications of designating an operator with SMP, such that the SMP designation has no bearing on whether that undertaking has committed an abuse of a dominant position within the meaning of Article 82 of the EC Treaty or national competition laws. It merely implies that, from a structural perspective, and in the short to medium term, the operator has and will have, on the relevant market identified, sufficient market power to behave to an appreciable extent independently of competitors, customers, and ultimately consumers.[45] This means that, in proposing *ex ante* remedies should there be a confirmed SMP finding, the GCRA is not obliged to prove that there have been abuses of dominance, but rather notes that the finding of SMP itself indicates that the SMP operator has the ability and incentive to take advantage of a dominant position.

In order to facilitate reasoned comment on its proposals, the GCRA sets out below its proposals for remedies should the market definition and proposed SMP finding be confirmed following the consultation process. The GCRA notes that any remedies considered should be appropriate and proportionate. The discussion below is to

[44] Section 54, Competition (Guernsey) Ordinance 2012.
[45] SMP Guidelines, Para 30.

facilitate reasoned consideration of the GCRA's proposals, and does not assume a prior acceptance of preliminary views.

Access

An access obligation allows an OLO to have certain types of wholesale access to the SMP operator's infrastructure. In some jurisdictions, Regulators have mandated specific types of wholesale product which are to be offered by the SMP operator, and often support this by specifying on what terms the products will be made available. The overall approach to access proposed by the GCRA is that it should be based on a reasonable request. This is designed to allow operators the maximum flexibility to identify wholesale inputs which would help them to innovate in the market, and not just compete on price, but also recognises the investment undertaken by an SMP operator, and the constraints imposed by the size and scale of the market. This balances the rights of the SMP operator to develop, operate and make a reasonable return on its network, and the rights of the OLO to request access on a reasonable basis.

It should be noted that an obligation to meet reasonable requests for access means that an SMP operator would be expected to meet *all* reasonable requests for access, unless it can demonstrate that it is not technically or economically feasible to do so.

Condition 24.1 of Sure's licence states that:

"The Licensee shall at the request of an Other Licensed Operator or if directed by the Director General, make Equal Access available to that Other Licensed Operator. The Director General may direct the terms upon which such Equal Access shall be provided and the Director General may make subsequent directions modifying or supplementing the regulation of Equal Access".

The GCRA proposes that Sure should be obliged to make equal access available to OLOs in response to a reasonable request for access.

The GCRA proposes to direct the terms upon which equal access shall be provided as follows:

- Sure should be obliged to comply with the access obligation in a manner which is fair, reasonable and timely. The GCRA notes that this applies to the whole process, including the way in which Sure deals with an access request, through to any implementation of an access product;
- Sure should negotiate in good faith with OLOs requesting access;
- Sure should not, without appropriate justification and consultation, withdraw access to facilities already granted.

The GCRA has emphasised in its analysis throughout this review that it is clear that remedies in the wholesale market for on-island leased lines must deliver access to off-island connectivity. The GCRA has considered whether specific SMP conditions need to be applied to ensure that this is the case. The GCRA has identified three broad options as to how best to ensure access to off-island connectivity:

Option 1: impose a broad and general access obligation, which would enable OLOs to request access. This option relies on the market definition of the on-island wholesale leased lines market as including access to off-island capacity in order to ensure that the goal of being able to access off-island connectivity is met.

Option 2: add a condition to the access obligation which deals specifically with the need to ensure that OLOs can request access to facilities required to meet off-island connectivity.

Option 3: add a condition to the access obligation which directs how access to off-island connectivity is to be provided. This could include, for example, an obligation that the SMP operator should provide neutral locations at submarine termination points where an on-island operator could connect directly with off-island capacity.

Q26. *Do you agree with the GCRA's proposals on imposing access obligations? If not, why not?*

Q27. *The GCRA has identified 3 options as to how it could address the requirement to ensure access to off-island capacity. Which of these options would you favour? Why?*

Non-discrimination

A non-discrimination obligation generally has two aspects. First of all, it obliges an SMP operator to treat all OLOs in an equivalent manner – it cannot discriminate between them. Secondly, it obliges the SMP operator to treat OLOs in the same way as it treats its own downstream (or retail) arm. This means, for example, that where an OLO is buying a wholesale input so that it can offer a retail service, it should not be disadvantaged compared with the SMP operator's own retail operation. The onus is on the SMP operator to show that its behaviour is not discriminatory.

The GCRA proposes that a non-discrimination obligation is a necessary obligation to ensure that an SMP operator's behaviour in the market does not disadvantage its actual and potential competitors.

According to Condition 26.2 of Sure's licence:

"The Licensee shall offer to lease out circuits to other licensed operators on terms that are no less favourable than those on which the Licensee makes equivalent leased circuits available to its Associated Companies or its own business divisions."

The obligation not to show undue preference or to unfairly discriminate is emphasised again in Condition 29, which states that:

"The Licensee shall not show undue preference to, or exercise unfair discrimination against, any User or Other Licensed Operator regarding the provision of any Licensed Telecommunications Services or Access. The Licensee will be deemed to be in breach of this Condition if it favours any business carried on by the Licensee or an Associated Company or Other Licensed Operator so as to place Other Licensed Operators competing with that business at an unfair disadvantage in relation to any licensed activity."

The GCRA proposes that Sure shall be obliged not to show undue preference to, or exercise unfair discrimination against, any OLO regarding the provision of on-island wholesale leased lines.

Q28. *Do you agree with the GCRA's proposals on imposing non-discrimination obligations? If not, why not?*

Transparency

A transparency obligation sets out the manner in which an SMP operator should provide information about its activities in the market in which it has been found dominant. Generally, a transparency obligation supports other obligations addressing how the SMP operator is expected to behave, in that the transparency obligation sets out how the SMP operator will demonstrate compliance with its other obligations.

It is the GCRA's view that where an SMP operator offers products on a wholesale market where it has been found to have SMP, these products should be appropriately documented. An OLO should be able to easily access technical information about wholesale products; information about prices and other terms and conditions; and process information including a change mechanism.

Part IV of Sure's licence does not include specific transparency conditions. However, CICRA notes that Condition 24.1 of Sure's licence states that:

"The Director General [GCRA] may direct the terms upon which such Equal Access shall be provided and the Director General [GCRA] may make subsequent directions modifying or supplementing the regulation of Equal Access."

Condition 26.1 of Sure's licence states that:

"The Licensee shall offer to lease out circuits for any lawful purpose:

(a) on publicly advertised conditions and on non-discriminatory terms. This is without prejudice to discounts that are in accordance with Condition 31;

(b) within a reasonable and published period of time from any request;

(c) so as to meet the quality standards required under the Conditions; and

(d) at prices that do not exceed levels determined from time to time by the Director General."

The GCRA considers that the imposition of transparency obligations is essential, both for OLOs seeking to purchase wholesale leased lines, and in facilitating Sure's ability to demonstrate its compliance with its other obligations. The GCRA believes it is appropriate and proportionate that Sure should be obliged to provide information about its supply of wholesale on-island leased liens, and proposes the following:

The GCRA proposes that Sure should be obliged to publish and maintain a Reference Offer for wholesale on-island leased lines, including appropriate technical specifications, and including a mechanism explaining how changes to the Reference Offer will be made and notified.

The GCRA proposes that Sure should be required to publish a standard SLA which would govern Sure's relationship with the OLO. It is increasingly seen as good practice to publish Key Performance Indicators (KPIs), and this could be done as part of the SLA.

The GCRA proposes that Sure should be required to publish prices and non-price terms and conditions for wholesale leased lines. Condition 31.1 of Sure's licence provides that publication of any changes should be made, and the GCRA informed, at least 21 days before changes come into effect. Operators have informed the GCRA that in practice, one month's notice is provided, and the GCRA believes that there is merit in standardising the requirement to publish changes to price and non-price terms and conditions for wholesale on-island leased lines one month before they come into effect.

The GCRA proposes that OLOs and the Regulator should be notified in advance of the launch of a new wholesale product. This is necessary to ensure that OLOs have the same opportunity as the SMP operator's downstream arm to react to changes in the wholesale offer and reflect them in the OLO retail offer. The GCRA suggests that the notice period should be 3 months.

Q29. *Do you agree with the GCRA's proposals on imposing transparency obligations? If not, why not?*

Accounting separation

Generally, accounting remedies are imposed in order to ensure that the SMP operator is not discriminating against OLOs, for example by cross-subsidising some products at the expense of others, and is not leveraging its power in one market into another.

Condition 27 of Sure's licence requires that:

"Within six months of the Licence Commencement Date, the Licensee shall prepare and maintain accounting records in a form that enables the activities specified in any direction given by the Director General [GCRA] to be separately identifiable, and which the Director General [GCRA} considers to be sufficient to show and explain the transactions of each of those activities. The Director General [GCRA] may direct the Licensee as to the basis and timing of such reports as the Director General [GCRA] may require."

The GCRA notes that the production of separated accounts is not an end in itself, but should be designed to demonstrate compliance with other obligations, particularly those relating to transparency, non-discrimination and price controls.

Generally, in the GCRA's view, there must be visibility in how costs are allocated to particular products and services, that the information must be discrete and detailed enough to demonstrate that there is no discrimination, that there is no cross subsidy across Sure's retail products and services, and that the difference between wholesale and retail prices is such that an equally efficient competitor could compete in the market.

The GCRA notes that Sure is currently obliged to provide separated accounting information, and proposes that this obligation should be maintained. The GCRA reserves the right to provide further guidance and direction to Sure in order to ensure that the production of separated accounts meets the GCRA's objectives.

Q30. *Do you agree with the GCRA's proposals on imposing accounting separation obligations? If not, why not?*

Cost accounting and price controls

Cost accounting obligations are generally put in place to ensure that an SMP operator can demonstrate that it is not engaging in practices which would unfairly disadvantage its competitors.

Condition 28.1 of Sure's licence states that:

"The Licensee shall not unfairly cross subsidise or unfairly subsidise the establishment, operation or maintenance of any Telecommunications Network or Telecommunications Services."

Condition 28.2 establishes how this should be done:

"To enable the Director General [GCRA] to evaluate where any unfair cross-subsidisation or unfair subsidisation is taking place, the Licensee shall record at full cost in its accounting records any material transfer of assets, funds, rights or liabilities between a part and any other part of its business, and between it and any Associated Company, and shall comply with any directions issued by the Director General [GCRA] for this purpose."

The GCRA proposes that Sure should be obliged to maintain its current cost accounting obligations, with a view to demonstrating its compliance with other obligations.

Price controls can be established in the retail and/or wholesale markets, and usually limit the price which the SMP operator can charge. Price controls are usually put in place to address the potential for the SMP operator to impose margin squeeze[46], or to cross-subsidise.

Condition 31.2 of Sure's licence states that:

"The Director General [GCRA] may determine the maximum level of charges the Licensee may apply for Licensed Telecommunications Services within a Relevant Market in which the Licensee has been found to be dominant."

[46] A margin (price) squeeze arises when a dominant operator, which provides a wholesale input on which other operators rely in order to compete at the retail level, prices its upstream (wholesale) services and downstream (retail) services in such a way as to prevent others from competing with it at the downstream level.

The GCRA proposes that a price control continues to be necessary in the wholesale market for on-island leased lines, and proposes that this review should make provision in principle for a price control as a necessary and proportionate remedy. The GCRA proposes to review the structure and level of the price control immediately following the final decision. This further specification of the price control remedy would be subject to consultation.

Q31. *Do you agree with the GCRA's proposals for imposing cost accounting and price control remedies?*

Q32. *Are there topics or priorities not covered in this consultation which you would like to raise?*

ANNEX 1: Responses to the Call for Evidence

Review of Questionnaire responses

CICRA received more than thirty responses to the questionnaire, from a wide range of business customers and representative bodies. These range from businesses offering a full range of IT services to representative bodies such as the Chambers of Commerce and IoD to small businesses and individuals.

The purpose of this Annex is to provide a very brief summary of the range of comments CICRA has received from respondents to the survey. A much better idea can be gained from the responses themselves which, with subject to any confidentiality requirements, have been posted on the CICRA website.

In addition to the overview of the market, copies of those responses which can be published – that are not subject to confidentiality requirements - will be placed on CICRA's website, www.cicra.gg.

General responses

Q1. Do you currently purchase specific business connectivity services for your business from either the incumbent operator or from another service provider? If so, which products do you purchase (leased line/private circuit, SDSL or ADSL) and what bandwidth (capacity) do you purchase?

Q2. Does price have a significant impact on your purchasing decision, or are other issues such as service and reliability more important?

Q3. Are you likely to seek to increase capacity in the near future (next 12 to 24 months)? If prices were lower would you purchase more capacity (bandwidth) now or bring forward a planned increase?

Q4. What is your view on the business connectivity market in the Channel Islands? Is the cost of current business connectivity services in the Channel Islands reasonable? Are the service levels and range of products sufficient?

The majority of responses were from business customers who purchase a variety of services ranging from simple ADSL broadband services through SDSL and VDSL broadband services to leased lines of varying capacity from 2Mb to 100Mbps and more plus varying capacities of direct internet access (i.e. IP feed).

Price was highlighted in almost every response, but the overall quality of services featured almost as prominently.

We note that for many customers, the price does not deter them from purchasing services, they buy what they need to make their business function, but it does mean that volume or bandwidth of services purchased is less than they might ideally choose and it is harder to make use of delocalised services[47] – whether simply off-site storage or cloud-based software services.

The majority of customers who addressed this question believed that ADSL services (and by implication also SDSL services) over copper and fibre equivalents are an important part of this review and should be included in CICRA's consideration.

Some respondents indicated that ADSL or equivalent products should provide a suitable alternative to leased lines for many small business customers, but that suitability depended on the quality of the services. Particular issues were the upload speeds of services, across both islands, and, in Jersey, the incumbent's imposition of a data cap.

While respondents did not focus on "missing products" *per se*, a number of respondents and commentators have raised this as an issue. The fact that a number of responses highlight inadequate upload speeds for business services suggests that there is some middle ground in the provision of services which is not currently addressed in the market. This seems to be particularly relevant for smaller businesses, typically "SOHOs" (small office/home office businesses) which are looking to expand their activity but for whom the leap from a standard ADSL service to a leased line is not justified or is too expensive.

When asked about increasing capacity, a majority of responses indicated a desire for more bandwidth or plans to increase capacity in the near future. There were several comments to the effect that "the high cost of connectivity is stifling growth" and that if prices were lower "we would definitely procure additional capacity immediately".

When asked for a general view of the market and whether costs and service levels were reasonable, the responses showed that these issues were of real concern to businesses. There is a very strong perception that prices are high, even referred to as excessive, and that there is a serious lack of choice in the market. Many blamed the lack of competition in the CI for keeping prices high while they are falling elsewhere.

Scope of the review

Q5. In your view, what products and services should be considered as part of this business connectivity market review? Do you broadly agree with the scope of review outlined by CICRA in the main document or are there specific services which should be included or excluded from the review, such as dark fibre, duct access or "wavelength" services?

Q6. Does ADSL provide a suitable alternative to leased lines/private circuits? For example, is the provision of a VPN service over ADSL sufficiently robust for your business to rely on this service?

[47] Cloud-based or remote server-based services in contrast to local office-based services.

Most respondents seem to broadly agree with the scope of the review as set out, the majority want the review to cover leased lines/private circuits, business broadband ADSL and VDSL connections and both copper and fibre products. But a significant number did not want the review to be limited to existing products and wanted the review to consider dark fibre and duct access, and in one case, roaming charges for mobile data. A wider choice of IP carriers and data centre providers was also identified as an important issue.

On the question of whether ADSL provides a suitable alternative to leased lines/private circuits, the range of responses was mixed. For some this was the only financially viable option to support a small office, or those working from home, but for others the service was simply too unreliable or too contended to provide a useful alternative. What was perhaps less clear, for those that could or would consider ADSL broadband services but who had concerns about the quality of services locally, was the suitability of the products on offer or the standards of service provided on existing products. Some business customers would appear to be happy in principle with using ADSL broadband to provide VPN services, but would require, or would like to see, SLAs (service level agreements) to ensure the quality of services delivered.

Pan Channel islands procurement and comparisons with other markets

Q7. If you procure services in both Jersey and Guernsey, do you procure on a pan-Channel Islands basis or separately, and is there a difference in competitiveness between the islands' business connectivity markets?

Q8. If you have experience of telecoms services outside the Channel Islands, how does the price, value and range of business connectivity services here compare?

Q9. Are there any business connectivity services not currently available in the Channel Islands that you would want to be able to access?

Responses showed a range of experiences, for some customers the experience of pan CI procurement was good and simplified the process for them, but for others, differences in the markets led them to an island by island approach.

For customers with experience of procuring telecoms services outside the CI, the main observations were that in the UK there was much more competition and lower pricing. Some commented that the incumbent providers locally have too much control over product availability and the lack of wholesale access such as local loop unbundling (LLU) prevents competitors from innovating. Others note that while the range of services is comparable, the costs locally are significantly higher.

One example offered was the price of direct internet access, where the annual price of IP feed internet access from BT (in London) was quoted as £78 per Mbps of bandwidth, while a similar capacity from a CI provider was £1125 per Mbps per annum.

Specific products and markets

Q10. Should we consider separate markets for traditional interface (TI) products and newer or alternative interface (AI), primarily ethernet products?

Q11. Can the two be easily substituted, or are there reasons for businesses to persist with older technology, such as the cost of switching or in order to support legacy systems that need to be maintained?

Q12. If the two can easily be substituted, is there any reason to require operators to support legacy products or existing TI services? Would it matter to you if TI services were no longer available?

Q13. Are there separate geographic markets within the island, for example, for St Helier in Jersey and St Peter Port in Guernsey, where new entrants have invested in their own infrastructure?

Comments were received to the effect that products could not easily be substituted and there would be a need to maintain legacy products for some time, therefore both AI and TI products need to be considered separately.

Individual customers were not generally well placed to consider whether or not distinct geographic markets exist within each island – without an overview of the island markets as a whole for particular products.

Internet Access/IP feed

Q14. Do you purchase direct internet access/IP feed? If so, do you buy in the Channel Islands, or purchase it elsewhere and then "import" access to the Channel Islands? Is the service bundled with other telecoms or IT services?

Q15. If you do purchase direct internet access/IP feed, is the cost of direct internet access reasonable? And would you purchase more capacity if the price were lower?

Q16. Is there sufficient choice of providers in the Channel Islands? And is the standard of service sufficient?

Q17. If you have experience of buying the service elsewhere, how do costs compare?

Q18. Do you to make compromises in the way you run your business – for example, by the way you arrange your IT services or by locating some staff and services outside the Channel Islands - and would you purchase greater capacity or consider bringing more functions to the Channel Islands if costs were lower?

Q19. Do you have suggestions for how this part of the market could be made more competitive? Would you consider purchasing access in the UK, France or elsewhere and purchasing additional circuit capacity on and off island as an alternative to local DIA/IP feed?

This was highlighted in many responses as a service that is substantially more expensive than elsewhere. The price is potentially beyond the means of some businesses which might want to invest in direct internet connectivity in order to benefit, for example, from access to cloud-based services, software on demand and other products. This would also be the case for businesses requiring the use of the internet for direct contact with customers, which could include e-gaming or online supply of goods and services. This was also a very significant issue for education, as schools make greater use of information technology and fast internet access becomes an essential part of the classroom rather than an additional benefit.

The quality of services was not generally an issue, although there is a question as to whether services are over-specified for the requirements of customers.

Where customers have experience of purchasing elsewhere, the CI were not only seen as expensive but also as slightly awkward to deal with in the sense that while many services could be purchased globally or outsourced to a single provider, this was not the case with CI telecoms services which reflects the restricted and uncompetitive nature of services locally.

On the question of whether businesses made compromises in the way they operate, there was some concern at the way the question was expressed, with businesses arguing that they would not compromise the safety or security of their operations. CICRA accepts the slight ambiguity in the question and recognises that it might perhaps have been addressed more elegantly. The intention was to pick up the concern, raised through previous contact with large customers which has indicated that in some cases businesses have had to compromise their approach to IT services, for example by basing substantial parts of their services or software outside the Channel Islands to reduce costs, when their preferred option would be to base services locally. This has resulted in higher costs to deliver the appropriate service. Customers indicated that lower prices would be likely to attract them to bring more services locally or to bring forward investment in increased capacity.

ANNEX 2: Retail and wholesale leased line pricing

In order to understand further the underlying economic profit associated with an operator's activities in a relevant market, CICRA has carried out an investigation of the pricing of retail and wholesale leased lines in Guernsey and Jersey.

Issues relating to price comparisons

Responses to CICRA's Call for Evidence (see Annex 1) included concerns expressed by businesses and public sector organisations that the price of retail connectivity in the Channel Islands is more expensive than retail connectivity in other jurisdictions. Some respondents stated that this disadvantages businesses based in the CI, and also deters businesses considering locating to the island.

For example, the Guernsey Chamber of Commerce stated that "….the cost of connectivity for our members is disproportionately high compared with other international business locations. Some members have relocated their core IT services to other more competitive jurisdictions in order to continue competing on the world stage". (Call for Evidence).

Digital Jersey expressed a view that "current high pricing" of on- and off-island high bandwidth circuits (and associated IP feed) was damaging to existing businesses and deterred new entrants.[48]

CICRA notes that comparing pricing of business connectivity is not straightforward, for a number of reasons. First of all, it is important to establish that like is being compared with like. As is discussed in the consultation document, the notion of business connectivity potentially encompasses several levels of a value chain, of which services provided over electronic communications networks, in this case retail leased lines, form only part of the overall service being supplied to end-users.

As a result, in order to establish where exactly any problems may lie, it is important to separate out the components of products and services. For example, a retail customer may purchase an IP feed to London. This service typically runs over a leased line, which is the subject of this review, but the customer could be buying a managed service, which may include several different elements (which may include IP connectivity but could also encompass services such as managed VPN, dedicated

[48] Digital Jersey, *Developing Data Connectivity,* Draft 2.0, November 2013.

support, data hosting etc.), or the customer may simply be buying individual components. The focus of this review is solely on the supply conditions (including pricing) of retail and wholesale leased lines, and CICRA has not extended its comparative assessment to consider the status of downstream services. In CICRA's view, it is important to consider any barriers to competition in the underlying services that are also being provided to end-users in the Channel Islands, and to understand the various cost drivers involved in any disadvantageous pricing faced by end-users in relation to the various business connectivity services they purchase from operators in the Channel Islands.

Many of the responses to the Call for Evidence provided examples of bundled services, and it is very difficult to get to an understanding of where the claimed cost differentials may lie. CICRA's first concern, then, is to ensure that there is clarity around what is actually being compared, with a view to establishing where in the value chain any problems might be occurring.

Secondly, it is important to understand the context for any variation in pricing. In CICRA's view, it is not particularly instructive to compare prices for connectivity on Guernsey or Jersey, or off-island from Guernsey and Jersey, with prices on high capacity/high traffic trunk routes between major business centres. This is because the cost of providing connectivity decreases as volume increases, and it would be expected that prices are related to the cost of provision. One interviewee commented that the price of connectivity from Dublin to London dropped dramatically when Google located to Dublin, because Google demanded high volumes of high capacity connectivity.

CICRA notes that businesses which are based in the CI, or are seeking to locate to the CI, are not likely to expect to compare other factors affecting their decision with a major urban centre – the cost drivers of a range of factors will be very different. In this sense, telecoms is no exception. Further, businesses seeking to locate to any area are likely to take a broad range of factors into account, and it would be unusual to rely solely on any one comparative factor.

CICRA's approach has therefore been to consider what elements should be taken into account. For example, the size of the markets in the CI may, at least to some degree, affect potential economies of scale in supplying communications services, and so it may be valid to compare pricing with ***other small markets***. The need to ***cross water*** may affect costs, and so it may be valid to compare pricing ***with other islands***. CICRA has also considered that the reason for the assessment is to question the impact which telecoms prices has on the CI's competitive position, and so it may be valid to compare prices ***with "competitor" jurisdictions***, particularly those which are seeking to attract or maintain ***information intensive industries***.

In addition to considering the comparative prices of retail leased lines, CICRA has examined wholesale leased line pricing. In CICRA's view, it is important to consider where any pricing anomalies may lie, and so to examine the underlying wholesale prices associated with retail services. To some extent, the comparison of wholesale pricing is less complicated because wholesale leased lines are not usually bundled with other products, and also because in most jurisdictions, they are regulated and prices are published.

As with the retail market, CICRA has considered wholesale on-island and wholesale off-island prices. CICRA has included some broad comparative analysis of international pricing in its analysis, but views this as illustrative and subject to the caveats noted above on context. It is important to review prices in major urban centres and on major routes in order to understand how far prices in the CI may diverge, but it is unlikely that prices in the CI for leased lines will compare favourably with prices on major high-bandwidth routes, and it would be unrealistic to expect this.

Approach used in comparing prices

In order to assess pricing, CICRA took the following sources of information into account:

- Responses to the Call for Evidence
- Follow up discussions with some respondents
- Discussions with other businesses based in Guernsey and Jersey
- Discussions with businesses based in "competitor" jurisdictions
- Discussions with telecoms operators based in other jurisdictions
- Analysis of published retail prices, where available
- Analysis by a specialised provider of comparative data

CICRA's intention was not to undertake a comprehensive survey or to create an international pricing benchmark, but rather to seek information which would help to reach a conclusion as to whether or not the cost of retail business connectivity, in particular leased line pricing, is high in the CI compared with similar jurisdictions, and if so, why.

Telecoms operators generally offer a wide range of leased line products, including traditional interface and alternative interface circuits at a range of capacities. For the purposes of this exercise, CICRA has focused on Ethernet (alternative interface) products, and has concentrated mainly on three capacities – 10Mbps, 50 Mbps and 100Mbps. CICRA has also, however, compared prices of lower bandwidth traditional interface 2Mpbs circuits. Some examples are provided of higher capacity connections, where data is available.

Pricing of retail leased lines

The preliminary view, as set out in the consultation documents for Guernsey and Jersey, is that there is a single retail market on each island encompassing both on-island and off-island leased lines. This is because a purchaser is concerned with buying end-to-end connectivity, irrespective of whether the end is on- or off-island.

For the purposes of this pricing assessment, however, CICRA has considered on- and off-island leased lines separately, so that it can review whether there are different cost drivers involved. It should be noted that, in Guernsey, the incumbent operator Sure is currently subject to a price control in its supply of off-island retail leased lines, which are regulated as Basket 5 with a control of RPI-RPI. This price control has been in place, and rolled over, since 2008. Other providers of retail leased lines are not subject to price controls. There is currently no retail price control in Jersey, and no other SMP regulation in the retail leased lines market.

Pricing of on-island retail leased lines

CICRA has compared published retail prices of leased lines in Guernsey, Jersey and the Isle of Man. The Isle of Man was chosen as a good comparator because it has a similar population size to Guernsey, and shares likely cost driver characteristics. For the purposes of this exercise, comparison focused on Ethernet leased lines at 10Mbps, 50 Mbps and 100 Mbps.

Looking first at on-island leased lines, CICRA notes that Sure in Guernsey differentiates between leased lines which terminate in the same exchange area, and leased lines which terminate in a different exchange area. Sure does not, however, charge an installation or connection fee – this is in contrast with the practice of Jersey Telecom (JT) in Jersey as well as with the pricing of leased lines by virtually all of the providers surveyed, which charge a connection or installation fee in the first year. JT differentiates on distance, with a break at 300 metres. This would generally be a smaller radius than same exchange/different exchange, so is not directly comparable.

CICRA's preliminary assessment, taking these specific factors into account, suggests that the published price of Sure's on-island retail leased lines in Guernsey is generally similar to, or cheaper than comparable jurisdictions for lower capacity lines, but generally more expensive for higher capacity lines. This is the case both for retail leased lines which terminate in the same exchange area and for those which terminate in a different exchange area.

In Jersey, for connections of less than 300 metres, JT is cheaper than MT in the IOM, but more expensive than Sure in Guernsey, for circuits at 10 Mbps. However, for higher capacity circuits (100 Mbps and 1Gbps) JT is cheaper than both Sure and MT. For circuits greater than 300 metres, JT is more expensive than Sure and MT for circuits at 10 Mbps, but again cheaper than both for higher capacity circuits.

CICRA notes that responses to the Call for Evidence reported a much greater disparity between prices in the CI and in other jurisdictions than is apparent from an analysis of published prices. It is possible that respondents were considering other elements such as IP feed and data hosting when assessing their connectivity costs, and it is also possible that actual pricing diverged from the published price list.

Pricing of off-island retail leased lines

In considering retail leased lines which terminate off-island, CICRA's assessment for Guernsey is that again, lower bandwidth circuits may be comparable, but higher bandwidth lines are generally more expensive. In Jersey, prices for lower bandwidth circuits are also comparable, though priced slightly higher than Guernsey, while higher bandwidth lines are priced lower than in Guernsey but are still more expensive when compared internationally.

CICRA compared retail prices published on operators' websites with information provided by operators outside the CI, and both JT and Sure prices are consistently higher for higher capacity retail leased lines which terminate off-island, and sometimes, but not always, higher for lower capacity leased lines. This is supported by quotes provided by companies located on and off the islands.

Assessment of retail pricing trends

There are a number of factors which may be taken into account in relation to these pricing trends. It is possible that the published prices of retail leased lines in the CI do not accurately reflect the "real" cost as perceived by customers, as a high proportion of leased lines purchased are bundled with other communications products and services, and the other elements of the bundle may not be priced transparently. It is possible that the cost of off-island connectivity is relatively high, and this will be further considered in examining the wholesale market. In Guernsey, a similar pattern seems to occur in the on-island and off-island markets, in that higher capacity circuits are relatively expensive, and this would suggest that it is not necessarily the "off-island" characteristic which is significant. In Jersey, the circuits which are relatively most expensive are the 10Mbps, under 300 metres circuits, which is the opposite pattern to Guernsey. If pricing was closely reflective of costs, it would be expected that Jersey and Guernsey would have very similar patterns of pricing.

Pricing of wholesale leased lines

CICRA has also undertaken a comparative evaluation of wholesale leased line pricing. Wholesale circuits are, in the main, sold by telecoms operators to other telecoms operators and not to end-users, and so the sale of wholesale leased lines are not typically bundled with the kinds of downstream services that retail leased lines often are. However, because there is a retail-minus price control in Jersey and Guernsey in the on-island market, and many other jurisdictions also have a retail-minus control for leased lines, the pricing in the wholesale market is linked closely to the retail market by virtue of the control.

Approach used

In undertaking its comparative evaluation of wholesale leased line prices, CICRA took the following information sources into account:

- Discussions with telecoms operators based in other jurisdictions
- Analysis of published wholesale pricing, where available
- Analysis by a specialised provider of comparative data

CICRA examined pricing in relation to both on-island and off-island wholesale circuits. Given the small scale of the markets in Guernsey and Jersey, on-island wholesale leased line pricing was typically compared with local access pricing in other jurisdictions. For off-island price comparisons, the cost of a wholesale circuit to the UK was used as the focal point for the cost comparison. CICRA noted that both JT and Sure price by half-circuit off-island. This pricing model does not apply in many other jurisdictions. For the purposes of this exercise, it is assumed that the full circuit is double the price of the half-circuit.

Pricing of on-island wholesale leased lines

As is the case with its pricing of retail leased lines, CICRA notes that Sure in Guernsey differentiates between wholesale leased lines which terminate in the same exchange area and leased lines which terminate in a different exchange area. In common with its pricing of retail leased lines, however, according to its published price list, Sure does not charge an installation or connection fee and, as has already been noted in relation to retail lines, this is in contrast with the practice of both JT in

Jersey and with the pricing of wholesale leased lines by virtually all of the providers surveyed.

Sure's pricing of wholesale leased lines compares favourably with prices charged in similar small jurisdictions for circuits of lower bandwidths (i.e. lines up to and including 10Mbps) but less favourably for prices charged for higher bandwidth circuits (i.e. 100Mpbs and above). As would be expected, given the retail-minus price control, this is a very similar finding to that in relation to retail leased line pricing, with the comparatively lower prices for low bandwidth retail circuits and comparatively higher prices for high bandwidth retail circuits mirrored closely in the wholesale prices charged for circuits of the same bandwidths.

JT's pricing of wholesale leased lines also compares favourably with prices charged in similar small jurisdictions for circuits of lower bandwidths, although its pricing is slightly higher than Sure's (for circuits of 10Mbps and under) and it also charges a once-off connection fee. Unlike Sure, however, JT's pricing of higher bandwidth lines also compares favourably, especially for very high bandwidth 1Gbps lines.

Pricing of off-island wholesale leased lines

Comparative pricing of off-island wholesale leased lines shows a greater divergence than does the pricing of on-island circuits when examining the prices charged by Sure in Guernsey and JT in Jersey compared to prices charged elsewhere.

The focal point used for comparing off-island pricing was the cost of a wholesale leased line to the UK, with the price charged in Guernsey (on a half-circuit basis, using the HUGO cable), and by JT (using the CIEG cable) compared to a number of other jurisdictions in the region.

Once again, the price of lower bandwidth off-island wholesale leased lines generally compares more favourably than that of higher bandwidth circuits. In this instance, however, the divergence in pricing begins to widen sharply at the 10Mbps bandwidth level and it widens to several multiples at the 1Gbps level.

When compared directly to JT's pricing of similar services in Jersey, Sure's prices in Guernsey for off-island wholesale capacity emerge more favourably. For lower bandwidth lines (up to 10Mbps bandwidth), the price charged by Sure in Guernsey was significantly lower than that charged by JT in Jersey (using the CIEG cable) while prices were broadly equivalent for lines of 100Mbps bandwidth. Comparative prices were not available for lines of 1Gbps bandwidth.

Assessment of wholesale pricing trends

As has already been noted the retail-minus price control means that pricing in the retail market is closely connected to pricing in the wholesale market, at least for an SMP operator and for any other operator which is dependent on wholesale inputs. This would apply to most on-island provision of wholesale leased lines, and subsequently to on-island retail leased lines, where market entrants are dependent on the incumbent's infrastructure, even if in the process of building their own.

CICRA's preliminary assessment of wholesale off-island pricing suggests that the price of higher capacity off-island connectivity is relatively high when compared with higher capacity connectivity from other island locations. The assessment has focused on prices to London. While connectivity from other jurisdictions to London mostly involves undersea cables, CICRA notes that routes with a high volume of traffic generally have lower costs and lower prices, so the costs and pricing are not only about the cost of cable – demand also plays a part.

In the market for off-island leased lines, there is no SMP regulation in Jersey. In Guernsey, Sure is subject to a retail-minus price cap for wholesale off-island leased lines. This means that there is limited regulatory restriction on off-island pricing in Guernsey, and no restriction in Jersey. CICRA's preliminary finding is that the prices charged by all operators are relatively high when compared with connectivity from other jurisdictions, but notes that this finding is advanced cautiously due to limited information from wholesale purchasers, not just in the CI but elsewhere. CICRA's preliminary assessment is that operators could share similar cost bases, and so their pricing would be expected to be similar. Alternatively, the pricing structure could reflect custom and practice, such that any reduction in the cost base is not being passed on to customers.

ANNEX 3: Glossary

4G: Fourth-generation mobile telecommunications technology, which enables the delivery of high-speed broadband services over mobile networks. The '4G' standard encompasses the Long Term Evolution (LTE) technology, which is the main 4G technology being deployed worldwide.

Alternative Interface (AI): new types of technologies used for delivering leased lines services, for example *Ethernet* (see below), which contrast with legacy *TI* technologies (see below).

Asymmetric Digital Subscriber Line (ADSL): a broadband technology that enables high-speed data transmission over legacy copper local access telephony networks, using a high data rate in one direction and a lower data rate in the other.

Bandwidth: The physical characteristic of a telecoms system that indicates the speed at which information can be transferred, which in digital systems is measured in bits per second (bps).

Cloud computing: the use of a network of remote servers connected via the internet that store, manage and process data that would otherwise be handled on a local server or computer.

Dark fibre: unused or 'unlit' optical fibre, i.e. fibre which has been deployed within a communication network but which is not connected to active electronic equipment used to facilitate data transmission.

Direct internet access (DIA): a dedicated connection to the internet provided directly from the customer's site over a permanent link (also known as *IP feed* – see below).

Ethernet: a technology used for data transmission. Originally deployed for use in a *LAN* (see below) environment, the technology has also increasingly been used to support *WAN* (see below) connectivity, with Ethernet being used in this instance as a leased line technology.

Ex ante: the application of regulation before an abuse of power has necessarily occurred. The reasoning behind its application is that finding that an operator has SMP means that the operator is likely to have the incentive and motivation to behave in a way which exploits its market power to the detriment of competitors and ultimately to consumers. *Ex ante* regulation can be contrasted with *ex post* regulation, which investigates an incident which has already happened.

Ex post: the use of regulation following a complaint or abuse of market position by an operator. In contrast to *ex ante* regulation (see above).

Internet Protocol: the communications protocol used for transmitting a data packet between a source and a destination on data networks, including the internet (also known as *Direct internet access* – see above).

Internet Protocol (IP) feed: a dedicated connection to the internet provided directly from the customer's site over a permanent link.

Leased line: A permanently connected communications link between two premises dedicated to a customer's exclusive use (see also *Private circuit* below).

Local Area Network (LAN): a network that connects a number of devices that are relatively close together, for example within the same office or building, which enables intercommunication amongst users and access to private voice, email, internet and intranet services and applications.

Modified Greenfield approach: a regulatory approach that works on the assumption that there is no *ex ante* (see above) regulation in the market in question, but takes account of the fact that upstream *ex ante* regulation is in place.

Multi-protocol label switching (MPLS): a mechanism for directing data within and across networks from one network node to the next, with data packets being given a specific forwarding label at the point at which they enter the network, thus enabling more efficient routing.

Plesiochronous Digital Hierarchy (PDH): a technical data transmission standard that enables transmission of data that generally runs at a similar rate to have a slight variation in actual data speed compared to the nominal rate. In recent years, PDH transmission has largely been replaced within telecoms networks by *SDH*, (see below).

Private circuit: an alternative term for a *Leased line* (see above).

Retail Price Index (RPI): a measure of inflation, published monthly by the Office for National Statistics in the UK.

Small but Significant Non-transitory Increase in Price (SSNIP): a theoretical price increase that forms part of the 'hypothetical monopolist' test used in market definition analysis. The price increase in question is usually considered to be in the range of 5 to 10 per cent.

Synchronous Digital Hierarchy (SDH): a technical data transmission standard for the transmission, which has largely replaced traditional PDH (see above) transmission.

SDH is an international standard that enables high-bandwidth synchronous data transmission.

Time Division Multiplex (TDM): a method of putting multiple data streams in a single signal by separating the signal into many segments, each having a very short duration. Each individual data stream is then reassembled at the receiving end based on the timing.

Traditional Interface (TI): legacy technologies used for delivering leased lines services, of which the main one would be *TDM* (see above).

Virtual Private Network (VPN): a private network where connectivity is extended by making use of the internet over which a virtual point-to-point connection is established, with various protocols being used to ensure data security over the public element of the network.

Wave Division Multiplex (WDM): a transmission technology that enables multiple wavelengths of light to share the same fibre optic pair.

Wide Area Network (WAN): a network connecting devices located in geographically dispersed locations, either in the same national area or across national boundaries.

ANNEX 4: Consultation questions

Q1. *Do you agree with the GCRA's proposed approach to market definition? If not, what alternative do you suggest?*

Q2. *Do you agree with the GCRA's proposed approach to competition and SMP assessment? If not, what alternative do you suggest?*

Q3. *Do you agree with the GCRA's proposed approach to remedies, should there be a finding of SMP? If not, what alternative do you suggest?*

Q4. *Do you agree with the GCRA's preliminary view that the retail market should not be narrowed to reflect the delivery technology used? If not, why not?*

Q5. *Do you agree that the retail market should not be broadened to include downstream services bought in conjunction with leased lines? If not, why not?*

Q6. *Do you agree that the retail market should not be broadened to include business connectivity services provided over broadband? If not, why not?*

Q7. *Do you agree that all retail leased line bandwidths fall within the same market? If not, why not?*

Q8. *Do you agree that separate geographic markets exist for Guernsey and Jersey? If not, why not?*

Q9. *Do you agree that the retail market encompasses both on-island and off-island leased lines? If not, why not?*

Q10. *Do you agree that there are no particular areas within Guernsey where the conditions of retail competition are such that they may constitute separate geographic markets? If not, why not?*

Q11. *Do you agree with the GCRA's proposal not to designate any operator with SMP in the retail market for leased lines in Guernsey? If not, why not?*

Q12. *Do you agree that the GCRA's preliminary conclusions outlined above in relation to the retail leased lines market are mirrored in the wholesale market? If not, why not?*

Q13. *Do you agree that the wholesale market should not be broadened to include dark fibre and/or duct access? If not, why not?*

Q14. *Do you agree that resellers should not be included within the market? If you do not agree, why not?*

Q15. *Do you agree that the wholesale market should not be defined on a narrower basis to reflect customer use of leased lines? If not, why not?*

Q16. *Do you agree that self-supply should not be included in the wholesale market? If not, why not?*

Q17. *Do you agree with the GCRA's preliminary conclusion that separate geographic markets exist for Jersey and Guernsey? If not, why not?*

Q18. *Do you agree that there are separate geographic markets for on-island and off-island wholesale leased lines? If not, why not?*

Q19. *Do you agree that separate markets do not exist for wholesale off-island leased lines between Jersey and Guernsey, and off-island leased lines elsewhere? If not, why not?*

Q20. *Do you agree that there are no particular areas within Guernsey where the conditions of wholesale competition are such that they may constitute separate geographic markets? If not, why not?*

Q21. *Do you agree with the GCRA's preliminary conclusion that Sure is dominant in the provision of wholesale on-island leased lines within Guernsey? If not, why not?*

Q22. *Do you agree with the GCRA's proposal that Sure should be designated with SMP in the market for wholesale on-island leased lines in Guernsey? If not, why not?*

Q23. *Do you agree with the GCRA's preliminary conclusions on dominance in the provision of wholesale off-island leased lines within Guernsey? If not, why not?*

Q24. *Do you agree that a specific off-island licence would assist in ensuring that there is no impediment to accessing off-island capacity? If not, what alternatives do you suggest?*

Q25. *Do you agree with the GCRA's proposal that no operator is or is likely to be dominant in the market for wholesale off-island leased lines in Guernsey? If not, why not?*

Q26. *Do you agree with the GCRA's proposals on imposing access obligations? If not, why not?*

Q27. *The GCRA has identified 3 options as to how it could address the requirement to ensure access to off-island capacity. Which of these options would you favour? Why?*

Q28. *Do you agree with the GCRA's proposals on imposing non-discrimination obligations? If not, why not?*

Q29. *Do you agree with the GCRA's proposals on imposing transparency obligations? If not, why not?*

Q30. *Do you agree with the GCRA's proposals on imposing accounting separation obligations? If not, why not?*

Q31. *Do you agree with the GCRA's proposals for imposing cost accounting and price control remedies?*

Q32. *Are there topics or priorities not covered in this consultation which you would like to raise?*